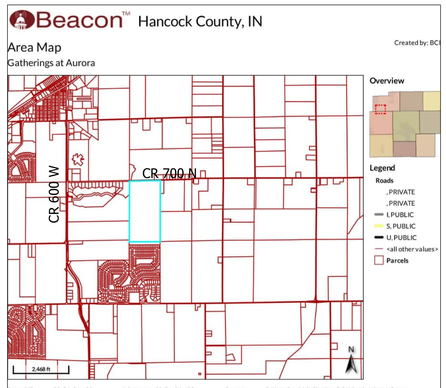
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

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

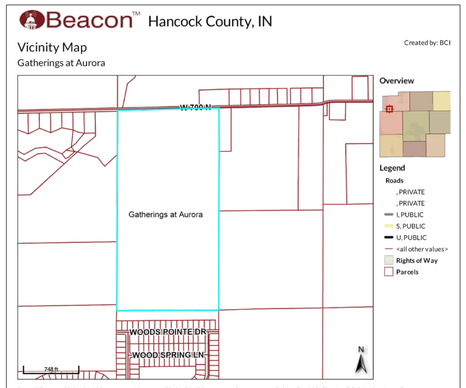
Gathering at Aurora
Section 3
Development Plan

Section 36 - Township 17 North - Range 5 West
Vernon Township, Hancock County

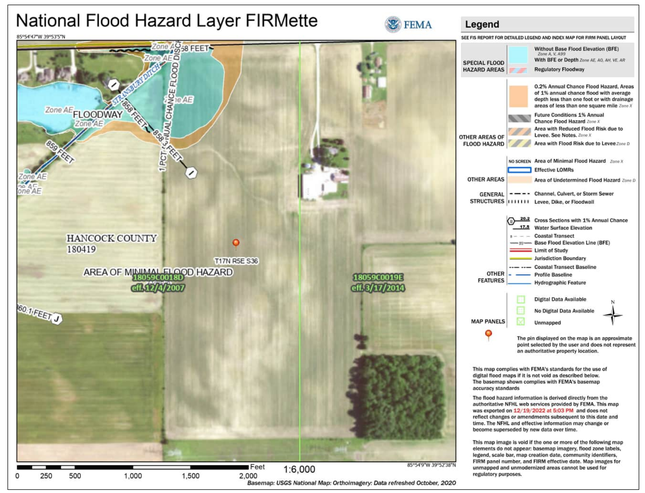
Area Map



Vicinity Map



Flood Map



Utility Provider Contacts

Regulated Drainage System
Hancock County Surveyor's Office
111 South American Legion Place Suite 171
Greenfield, IN 46140
(317) 477-1150
Contact: Chad Coughenour

Storm Sewer
Town of McCordsville
Department of Public Works
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3493
Contact: Ron Crider

Streets
Town of McCordsville
Department of Public Works
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3493
Contact: Ron Crider

Electrical Service
Nine Star Connect
2243 East Main Street
Greenfield, IN 46140
(317) 323-2074
Contact: Eric Meyer
emeyer@ninestarconnect.com

Potable Water Service
Citizens Energy Group - Water CW Authority, Inc
2150 Dr. Martin Luther King, Jr. Street
Indianapolis, IN 46202
(317) 927-4351
Contact: Brad Hostetler

Sanitary Sewer Service
McCordsville Public Works
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3493
Contact: Ron Crider

School System
Mount Vernon Community School Corporation
1806 West State Road 234
Fortville, IN 46040
Contact: Dr. Jack Parker
(317) 485-3100

Post Office
U.S. Postal Service
7397 North County Road 600 West Suite 1000
McCordsville, IN 46055
(317) 336-6446

Natural Gas
Centerpoint Energy
16000 Allisonville Road
Noblesville, Indiana 46061
Contact: Sandra Casey

Internet Service
Nine Star Connect
2243 East Main Street
Greenfield, IN 46140
(317) 323-2074
Contact: Eric Meyer
emeyer@ninestarconnect.com

Cable Services
Bright House Networks
3030 Roosevelt Avenue
Indianapolis, IN 46218
Contact: Joe Burton
joe.burton@charter.com

General Notes:

1. Where any specifications included in these plans conflict with the Town of McCordsville Indiana Construction Standards Specifications and Details, latest edition, the standards of the Town of McCordsville shall prevail.
2. The contractor shall accept the site in its current state and shall remove all trash, rubbish, and debris from the site prior to starting excavation.
3. The contractor shall notify engineer in writing of any changes, errors, or omissions found on the plans or in the field, before work is started or resumed.
4. Do not scale from these plans for survey field locations.
5. All construction activity on this site to performed in compliance with all applicable O.S.H.A. standards for worker safety.
6. The existing site outside the designate demolition area is to be protected and undamaged.
7. The contractor shall be responsible for ensuring the construction site and surrounding areas are free of accumulated debris.
8. The contractor shall notify all utility companies 72 hours prior to construction to verify if any utilities are present. All verifications (location, size & depth) shall be determined by the appropriate utility companies. When excavating in areas near or over existing utilities, the contractor must notify such utility company so a representative of the appropriate utility company can be present to observe activities.
9. The contractor shall obtain a Regulated Drain Encroachment permit from the Hancock County Drainage Board before any work is to take place in the Regulated Drain.
10. Do not close or obstruct streets, walks, drives, facilities, etc. without written permission of the land owner or authority having jurisdiction.
11. When connections are to be made to existing piping and structures or where construction is in the vicinity of existing piping, the location and elevation of the existing piping shall be field verified and notification to the office of Benchmark Consulting, Inc., if the existing piping is found to be different than that illustrated on these drawings.
12. All points of connection of proposed sanitary and storm sewers to existing systems shall be verified vertically from a known benchmark prior to the start of construction. Any discrepancies with information included within these construction plans shall be reported to the office of Benchmark Consulting, Inc.
13. All on-site sanitary, drainage, stormwater and water system improvements, including but not limited to meters, pipes, valves, pits, conduits, and the like shall be privately owned and maintained by the owner of the lot, unless otherwise described on the final plat.

Land Owner:
Beazer Homes
9465 Counselors Row
Indianapolis, IN 46240

Parcel ID Number:
30-01-36-100-003.111-018 & 30-01-36-100-003.110-018

Current Zoning:
PUD - Ordinance No. 101122D - Snider Planned Unit Development

Legal Description

Part of the West Half of the Northeast Quarter of Section 36, Township 17 North, Range 5 East of the Second Principal Meridian, Vernon Township, Hancock County, Indiana, being a portion of the property granted to Beazer Homes Indiana, LLP ("Takedown One") recorded as Instrument Number 202307763 and a portion of the property granted tot Beazer Homes Indiana, LLP ("Takedown Two") recorded as Instrument Number 202410525, both in the Office of the Recorder of Hancock County, Indiana, more particularly described as follows:

Commencing at the Northwest Corner of the Northeast Quarter of said Section 36, Township 17 North, Range 5 East and the northwestern corner of said Takedown One (the following two (2) courses are along the boundary of said Takedown One); (one) thence South 00 degrees 12 minutes 24 seconds West (Basis of Bearings: Indiana State Plane, East Zone, NAD 83) 2641.39 feet along the West Line of the West Half of said Northeast Quarter to the Southwest Coner thereof; (two) thence North 89 degrees 10 minutes 57 seconds East 427.03 feet along the South Line of said Northeast Quarter to the POINT OF BEGINNING of this description; thence North 00 degrees 16 minutes 58 seconds East 1037.75 feet; thence South 89 degrees 43 minutes 02 seconds East 150.00 feet passing from Takedown One into Takedown Two; thence South 00 degrees 16 minutes 58 seconds West 10.00 feet; thence South 89 degrees 43 minutes 02 seconds East 54.00 feet; thence North 00 degrees 16 minutes 58 seconds East 10.00 feet; thence South 89 degrees 43 minutes 02 seconds East 150.00 feet; thence South 00 degrees 16 minutes 58 seconds West 65.00 feet; thence South 89 degrees 43 minutes 02 seconds East 150.00 feet; thence South 00 degrees 16 minutes 58 seconds West 73.00 feet; thence South 89 degrees 43 minutes 02 seconds East 54.00 feet; thence North 00 degrees 16 minutes 58 seconds East 10.00 feet; thence South 89 degrees 43 minutes 02 seconds East 140.00 feet; thence South 00 degrees 16 minutes 58 seconds West 200.00 feet; thence South 89 degrees 43 minutes 02 seconds East 194.09 feet to the East Line of the West Half of said Northeast Quarter coincident with the eastern line of said Takedown Two; thence South 00 degrees 10 minutes 59 seconds West 692.59 feet along said coincident line to the southeastern corner of said Takedown Two and the Southeast Corner of said West Half; thence South 89 degrees 10 minutes 57 seconds West 893.46 feet along the South Line of said West Half and the southern line of said Takedown Two passing through the southern common corner of said Takedown Two and Takedown One and along the southern line of said Takedown One to the POINT OF BEGINNING, containing 18.807 acres, more or less.

Local Jurisdictional Contacts

Planning and Zoning Authority
Town of McCordsville
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3604
Contact: Ryan Crum - Director

Building & Inspection Authority
Town of McCordsville
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3604
Contact: Ryan Crum - Director

Local Law Enforcement
Town of McCordsville
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-2812

Fire & Rescue
Vernon Township Fire Department
600 Vitality Drive
Fortville, IN 46040
(317) 485-7327
Contact: Tara Conely

Sheet Index

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

PRELIMINARY NOT FOR RECORDING
NATHAN A. WHITE
STATE OF INDIANA
PE 10065483
REGISTERED PROFESSIONAL ENGINEER
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Title Sheet

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C100

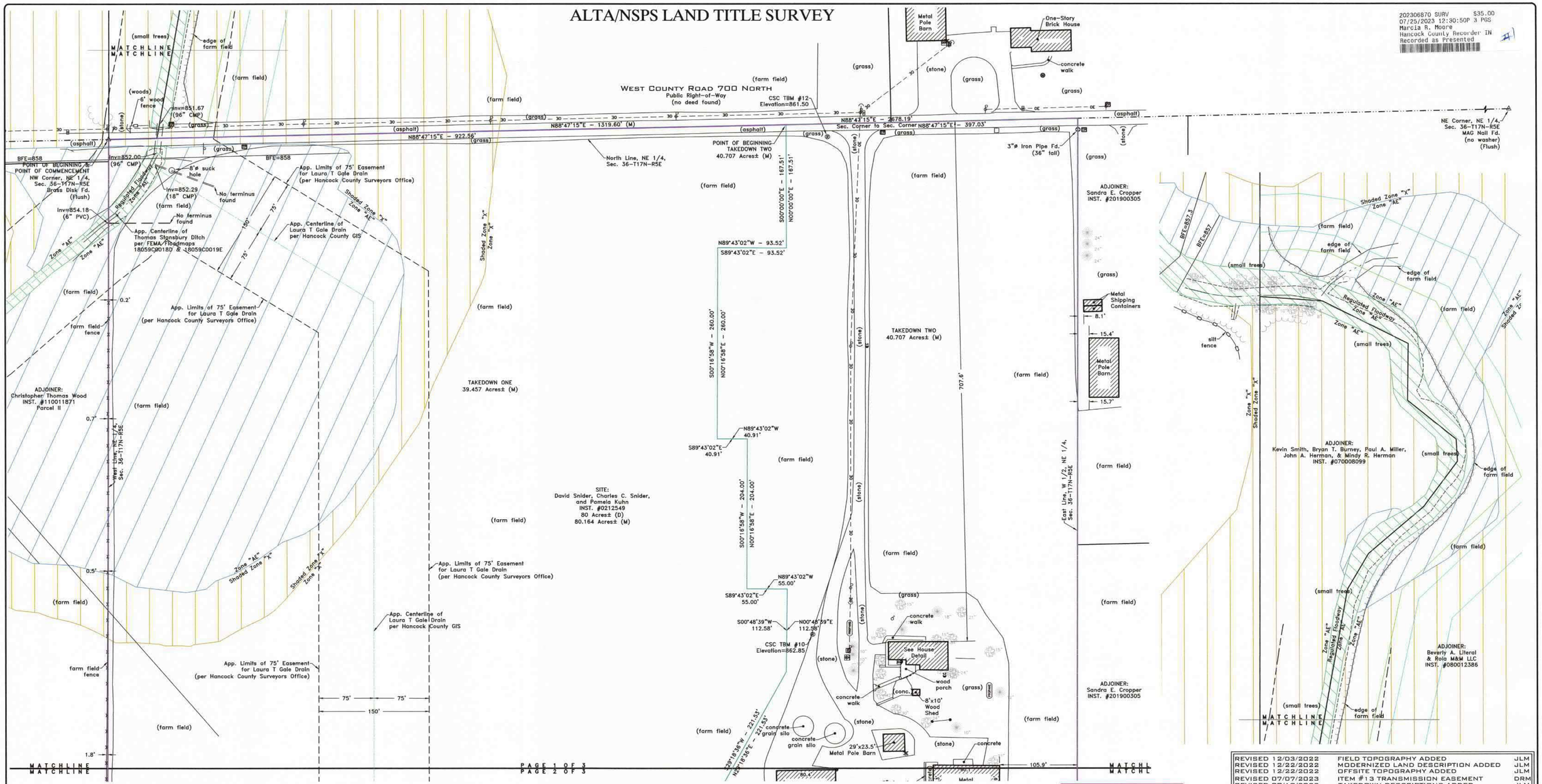
Gatherings at Aurora - Section 3 - 10/21/2024

File Path \Name: D:\Benchmark01\Benchmark\24-Jobs\24006-Gatherings at Aurora, Section 3\dwgs\Covers3.dwg - Date: Oct 21, 2024 - 2:09pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

ALTA/NSPS LAND TITLE SURVEY

202306870 SURV $35.00
07/25/2023 12:30:50P 3 PGS
Marcia R. Moore
Hancock County Recorder IN
Recorded as Presented



REVISED 12/03/2022	FIELD TOPOGRAPHY ADDED	JLM
REVISED 12/22/2022	MODERNIZED LAND DESCRIPTION ADDED	JLM
REVISED 12/22/2022	OFFSITE TOPOGRAPHY ADDED	JLM
REVISED 07/07/2023	ITEM #13 TRANSMISSION EASEMENT	DRM
REVISED 07/10/2023	TAKEDOWN DESCRIPTIONS ADDED	JLM

LEGEND:

DESCRIPTION:	
SIGN / TWO POST SIGN	
WATER VALVE/FIRE HYD/METER	
TELE/FIBER OPTIC/GAS MARKER	
GAS METER / VALVE	
CLEAN-OUT	
ELEC. METER BOX/TRANSFORMER	
ELEC. / TELEPHONE PEDESTAL	
GUARD POST/POST with LIGHT	
AIR CONDITIONER / GENERATOR	
MAGNAIL SET/FOUND	
REBAR SET/FOUND	
SQUARE / ROUND / CURB INLET	
TRAFFIC/COMBO/ POWER POLE	
LIGHT POLE - SQUARE / ROUND	

12" 36"	CONIFEROUS TREE & SIZE DECIDUOUS TREE & SIZE
D S	DRAINAGE /SANITARY MANHOLE
C L	COMBINATION/MISC. LID MANHOLE
	BEEHIVE ROUND/SQUARE INLET
	GUY WIRE / GROUND LIGHT
WTR	UNDG. WATER LINE
G	UNDG. GAS LINE
UT	UNDG. TELEPHONE LINE
UE	UNDG. ELECTRIC LINE
OET	OVERHEAD ELE. & TEL
OETC	OVERHEAD ELE TEL & CAB
OE	OVERHEAD ELECTRIC
VCP	vitrified clay pipe
RCP	reinforced concrete pipe
PVC	polyethylene coated pipe
HDPE	high-density polyethylene pipe
DI	ductile iron pipe

VICINITY MAP
NOT TO SCALE

60 0 30 60
(IN FEET)
1 inch = 60 ft.

"I affirm, under penalties for perjury, I have taken reasonable care to redact each social security number in this document, unless required by law."
Donald R. Mosson

IUPPS - 811 TICKET REQUEST NUMBER(S):
2206296859

UTILITY STATEMENT:
The underground utilities shown have been located from field survey information and existing drawings. Field survey information consisting of paint markings found on the ground per the Indiana Underground Plant Protection Service (IUPPS - 811). The paint markings shown hereon as evidence of probable underground utility locations and are consistent with typical utility markings. However, no utility report was provided to authenticate these markings. The user of this plat/map should rely upon such markings at their own risk. The surveyor makes no guarantees the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant the underground utilities shown are in the exact location indicated, although the surveyor does certify they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

PREPARED FOR:
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE
BROWNSBURG, INDIANA 46112

PREPARED BY: DONALD R. MOSSON
CENTRAL STATES CONSULTING, LLC
P.O. BOX 4
13 WEST PEARL STREET
NORTH SALEM, INDIANA 46165
PHONE: 317-858-8662 FAX: 317-342-2857

CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND TITLE SURVEY
5401 WEST COUNTY ROAD 700 NORTH
MCCORDSVILLE, INDIANA 46055

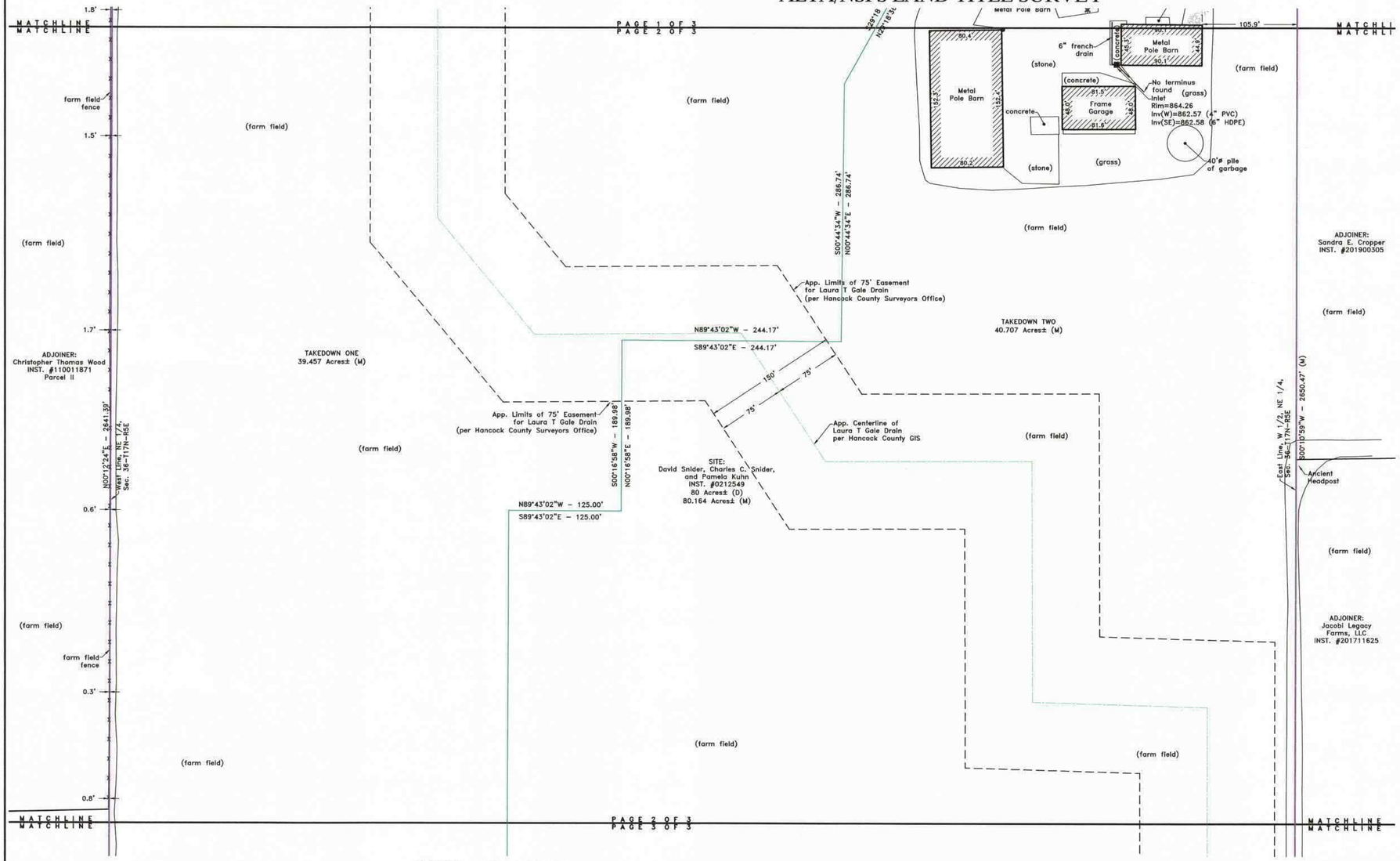
DATE:	07-08-2022
DWN. BY:	JLM
CHKD. BY:	DRM
SCALE:	1" = 60'

PROJECT NUMBER 22-039

SHEET 1 OF 3

ALTA/NSPS LAND TITLE SURVEY

202306870 SURV $35.00
07/25/2023 12:30:50P 3 PGS #2
Marcia R. Moore



SURVEYOR'S REPORT

In accordance with Title 865, Article 1.1, Chapter 12, Sections 1 through 19 of the Indiana Administrative Code, the following observations and opinions are submitted regarding the various uncertainties in the locations of the lines and corners established on this survey as a result of:

A) Variances in the reference monuments;
B) Discrepancies in record descriptions and plats;
C) Inconsistencies in lines of occupation and;
D) Random errors in measurement (Theoretical Uncertainty)

A.) This is a retracement survey of the tract of land granted to David Snider, Charles C. Snider, and Pamela Kuhn, recorded as Instrument Number 0212549 in the Office of the Recorder of Hancock County, Indiana. The herein surveyed property is the West Half of the Northeast Quarter of Section 36, Township 17 North, Range 5 East of the Second Principal Meridian, Vernon Township, Hancock County, Indiana. The Northwest Corner of said Northeast Quarter, the Southeast Quarter of said Section 36, the South Corner of said Section 36, and the Northwest Corner of said Section 36, are all Brass Disks found at the surface. The Northeast Corner of said Northeast Quarter is a MAG Nail without a washer found at the surface. All of the aforementioned corners were found by the references supplied by the Office of the Surveyor of Hancock County, Indiana and accepted as prima facie evidence for purposes of this survey and were used to control the lines of the surveyed parcel. The following two corners did not have references but were held and accepted as prima facie evidence for purposes of this survey and were used to control the lines of the surveyed parcel. The West Corner of said Section 36 is a rebar found at the surface. The Southwest Corner of said Section 36 is a Brass Disk found at the surface. The Southwest Corner of said Northeast Quarter is a "Weihe" capped rebar found 0.1 feet below the surface. The location of the Southeast Corner of the West Half of said Northeast Quarter was determined by holding the locations of physical evidence (i.e. iron pipe, barn, field division lines, and ancient headpost) found along the East Line of said West Half. There appears to be 19.8 feet of uncertainty in this corner due to a "Weihe" capped rebar found at the midpoint of the South Line of said Northeast Quarter. There is 19.5 feet of uncertainty in the Northeast Corner of said West Half, due to the midpoint lying 19.5 feet easterly of the physical location of the East Line of said West Half. Typically, the Half Quarter Section Lines would be determined by connecting the midpoints of the North and South Lines of the Quarter Section. In this case if said midpoints were held the East Line of said West Half would lie 19 feet easterly of the previously stated physical evidence.

B.) Record descriptions of the site were obtained from the First American Title Insurance Company and the Hancock County Recorder's Office (latest research date: July 27, 2021) and mathematically retraced for the purpose of disclosing any gaps and/or overlaps between the lines of these surveyed parcels and their adjoiners. The following observations were found:

1.) There are no apparent gaps, gores, or overlaps in the deeds of the surveyed property and its adjoiners.

C) No significant inconsistencies in the lines of occupation were observed during this survey.

D) The Theoretical Uncertainty (Due to Random Errors in Measurement) of the corners of the subject tract established by this survey is within the specifications for an Urban Survey (0.07 feet + 50 ppm) as defined in IAC 865.

As a result of the above observations, it is my opinion that the uncertainties in the locations of the lines and corners established on this survey are as follows:

Due to variances in reference monuments: 19.8 feet;

Due to discrepancies in the record description: 0 feet;

Due to inconsistencies in lines of occupation: 0 feet;

Due to random errors in measurement: 0.07 feet +/- 50 ppm

Mailing Address of Site: 5401 West County Road 700 North, McCordsville, Indiana 46055

Basis of Bearing System: The bearing of the North Line of the Northeast Quarter of Section 36, Township 17 North, Range 5 East was assumed to be North 88 degrees 47 minutes 15 seconds East and the West Line of said Northeast Quarter was assumed to be North 00 degrees 12 minutes 24 seconds East based upon GPS observations taken at the time of the survey in Indiana State Plane, East Zone, NAD83.

NOTE: Regarding Table A – Item 3; According to the FEDERAL EMERGENCY MANAGEMENT AGENCY, Flood Insurance Rate Map Number 18059C0018D with an effective date of December 4, 2007 and Flood Insurance Rate Map Number 18059C0019E with an effective date of March 17, 2014, this site lies within Zone "X" (Areas of 500-year flooding, areas of 100-year flood with average depths of less than 1 foot or with drainage areas of less than 1 square mile; and areas protected by levees from 100-year flood), Shaded Zone "X" (0.2% Annual chance flood hazard, Areas of 1% annual chance flood with average depth less than 1-foot, or with drainage areas of less than one square mile), "Zone AE" (Special flood hazard areas with base flood elevation of 858 feet), "Zone AE Regulatory Floodway" (Special flood hazard areas).

NOTE: Regarding Table A – Item 6; No zoning report nor zoning letter was provided to me at the time of this survey.

NOTE: Regarding Table A – Item 9; There are no marked parking spaces on this site.

NOTE: Regarding Table A – Item 16; There was no evidence of recent earth moving work, building construction, or building additions observed on this site at the time of the survey.

Date of Latest Field Activity: June 29, 2022

This plat of an ALTA/NSPS Land Title Survey was performed referencing a commitment for title insurance prepared by First American Title Insurance Company as File Number 940192, with Commitment Date of July 27, 2021 at 8:00 A.M. The following items are keyed to Schedule B – Part I (Exceptions) from said commitment for title insurance:

Items 1) through 12) No comment.

Item 13) See TRANSMISSION LINE EASEMENT recorded July 11, 1979 as Instrument Number 79-03448 for the creation of a 150-foot transmission line easement along the southern boundary line of the surveyed property, the majority of the easement lies southerly of the surveyed property, as shown herein. The description reads, in part, "one hundred fifty (150) feet in width which falls within the above-described real estate". The noted "real estate" is confined to The West One-half of the Northwest Quarter of Section 36, Township 17 North, Range 5 East. Therefore, in my professional opinion, the easement only affects the cross-hatched triangular shaped area along the southern boundary. Note: according to Woodhaven Section 8 Secondary Plat (recorded as Instrument Number 202202565) there is a 150-foot-wide transmission line easement, Instrument Number 79-05274, along said southern boundary line, as shown herein. Said Easement is also confined to the limits of the Grantor's property at the time of recording, which was the Northwest Quarter of the Southwest Quarter of Section 36, Township 17 North, Range 5 East. Therefore, the northern limits of the 150-foot-wide easement as depicted in said plat are shown. Again, in my professional opinion, the plat depiction is erroneous and has no affect on the herein surveyed property.

Item 14) through 17) No comment.

There are no: (i) encroachments upon the subject property by improvements on adjacent property; (ii) encroachments on adjacent property, streets or alleys by improvements on the subject property; (iii) no party walls; or (iv) no visible and apparent conflicts or protrusions except as shown herein.

To: Beazer Homes Indiana LLP, an Indiana limited liability partnership; David Snider, and Charles C. Snider, and David R. Snider, as Trustee of the John M. Gunn Irrevocable Trust, U/A dated April 8, 2011, as tenants in common; and First American Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1-5, 6-9, 11(a), 13, and 16-19 of Table A thereof. The field work was completed on June 29, 2022.

Date: July 8, 2022

Donald R. Mosson
Indiana Registration No. 9600013

DONALD R. MOSSON — REGISTERED — No. 9600013 — STATE OF INDIANA — LAND SURVEYOR

RECORD LAND DESCRIPTION

LAND DESCRIPTION
(from Title Commitment)

The West half of the Northeast quarter of Section 36, Township 17 North, Range 5 East, Hancock County, Indiana, containing 80 acres, more or less.

MODERNIZED LAND DESCRIPTION

LAND DESCRIPTION

The West Half of the Northeast Quarter of Section 36, Township 17 North, Range 5 East of the Second Principal Meridian, Vernon Township, Hancock County, Indiana, being the property granted to David Snider, Charles C. Snider, and Pamela Kuhn ("Snider Tract"), recorded as Instrument Number 0212549 in the Office of the Recorder of Hancock County, Indiana, more particularly described as follows:

BEGINNING at the Northwest Corner of the Northeast Quarter of said Section 36, Township 17 North, Range 5 East (the following four courses are along the boundary of said Snider Tract); (one) thence North 88 degrees 47 minutes 15 seconds East (Basis of Bearings: Indiana State Plane, East Zone, NAD 83) 1319.60 feet along the North Line of the West Half of said Northeast Quarter to the Northeast Corner thereof; (two) thence South 00 degrees 10 minutes 59 seconds West 2650.47 feet along the East Line of said West Half coincident with the western boundaries of the tracts of lands granted to Sandra E. Cropper (recorded as Instrument Number 201900305 in said Recorder's Office) and the tract of land granted to Jacobi Legacy Farms, LLC (recorded as Instrument Number 201711625 in said Recorder's Office) to the southwestern corner thereof common with the Southeast Corner of said West Half, being on the northern boundary of Woodhaven Section 8 Plat (recorded as Instrument Number 202202565 in said Recorder's Office); (three) thence South 89 degrees 10 minutes 57 seconds West 1320.49 feet along said northern boundary coincident with the South Line of said West Half to the Southwest Corner thereof being on the eastern boundary of the tract of land granted to Abdolaziz M. and Masoomeh Ardalan ("Ardalan Tract") (recorded as Instrument Number 202200614 in said Recorder's Office); (four) thence North 00 degrees 12 minutes 24 seconds East 2641.39 feet along the West Line of said West Half coincident with the eastern boundaries of the Ardalan Tract, the tract of land granted to Oaklandon Christian Church, Inc. (recorded as Instrument Number 040018585 in said Recorder's Office) and the tract of land granted to Christopher Thomas Wood (recorded as Instrument Number 110011871 in said Recorder's Office) to the POINT OF BEGINNING, containing 80.164 acres, more or less.

VICINITY MAP
NOT TO SCALE

LEGEND:

DESCRIPTION:	
SIGN / TWO POST SIGN	
WATER VALVE/FIRE HYD/METER	
TELE/FIBER OPTIC/GAS MARKER	
GAS METER / VALVE	
CLEAN-OUT	
ELEC. METER BOX/TRANSFORMER	
ELEC. / TELEPHONE PEDESTAL	
GUARD POST/POST with LIGHT	
AIR CONDITIONER / GENERATOR	
MAGNAIL SET/FOUND	
REBAR SET/FOUND	
SQUARE / ROUND / CURB INLET	
TRAFFIC/COMBO/ POWER POLE	
LIGHT POLE – SQUARE / ROUND	

CONIFEROUS TREE & SIZE / DECIDUOUS TREE & SIZE	
DRAINAGE /SANITARY MANHOLE	
COMBINATION/MISC. LID MANHOLE	
BEEHIVE ROUND/SQUARE INLET	
GUY WIRE / GROUND LIGHT	
WTR	UNDG. WATER LINE
G	UNDG. GAS LINE
UT	UNDG. TELEPHONE LINE
UE	UNDG. ELECTRIC LINE
OET	OVERHEAD ELE. & TEL
OETC	OVERHEAD ELE TEL & CAB
OE	OVERHEAD ELECTRIC
VCP	vitrified clay pipe
RCP	reinforced concrete pipe
PVC	polyethylene coated pipe
HDPE	high-density polyethylene pipe
DI	ductile iron pipe

60 0 30 60
(IN FEET)
1 inch = 60ft.

REVISED 12/03/2022	FIELD TOPOGRAPHY ADDED	JLM
REVISED 12/22/2022	MODERNIZED LAND DESCRIPTION ADDED	JLM
REVISED 12/22/2022	OFFSITE TOPOGRAPHY ADDED	JLM
REVISED 07/07/2023	ITEM #13 TRANSMISSION EASEMENT	DRM
REVISED 07/10/2023	TAKEDOWN DESCRIPTIONS ADDED	JLM

"I affirm, under penalties for perjury, I have taken reasonable care to redact each social security number in this document, unless required by law."
Donald R. Mosson

IUPPS - 811 TICKET REQUEST NUMBER(S):
2206296859

UTILITY STATEMENT:
The underground utilities shown have been located from field survey information and existing drawings. Field survey information consisting of paint markings found on the ground per the Indiana Underground Plant Protection Service (IUPPS - 811). The paint markings shown hereon as evidence of probable underground utility locations and are consistent with typical utility markings. However, no utility report was provided to authenticate these markings. The user of this plat/map should rely upon such markings at their own risk. The surveyor makes no guarantees the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant the underground utilities shown are in the exact location indicated, although the surveyor does certify they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

PREPARED FOR:
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE
BROWNSBURG, INDIANA 46112

PREPARED BY: DONALD R. MOSSON
CENTRAL STATES CONSULTING, LLC
P.O. BOX 4
13 WEST PEARL STREET
NORTH SALEM, INDIANA 46165
PHONE: 317-858-8662 FAX: 317-342-2857

CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND TITLE SURVEY

5401 WEST COUNTY ROAD 700 NORTH
MCCORDSVILLE, INDIANA 46055

DATE:	07-08-2022
DWN. BY:	JLM
CHKD. BY:	DRM
SCALE:	1" = 60'

PROJECT NUMBER 22-039

SHEET 2 OF 3

ALTA/NSPS LAND TITLE SURVEY

20230687O SURV $35.00
07/25/2023 12:30:50P 3 PGS #3
Marcia R. Moore

MATCHLINE
MATCHLINE

(farm field)

0.5'

farm field fence

1.3'

(farm field)

0.6'

ADJOINER:
Oaklandon Christian Church, Inc.
INST. #040018585

West Line, NE 1/4, Sec. 36-T17N-R5E

(farm field)

TAKEDOWN ONE
39.457 Acres± (M)

0.3'

0.4'

(farm field)

0.1'

farm field fence

Bent Rebar Fd. (0.4' Up) (0.59'N & 0.34'W of corner)

(farm field)

ADJOINER:
Abdolaziz M. & Masoomeh Ardalan
INST. #202200614

1.3'

11.7'

23.3'

21.4'

20.8'

0.7'

farm field fence

S89°10'57"W – 470.24'

SW Corner, NE 1/4, Sec. 36-T17N-R5 E
"Weihe" Capped Rebar Fd. (0.1' Down)

(grass)

150'

150' Transmission Line Easement
INST. #79-03448
(Item #13)
(Also INST. #79-05274)

150'

150' Transmission Line Easement
as depicted in the plat of Woodhaven
Section Section 8
Secondary Plat
INST. #202202565)

TAKEDOWN ONE - LAND DESCRIPTION

LAND DESCRIPTION

The West Half of the Northeast Quarter of Section 36, Township 17 North, Range 5 East of the Second Principal Meridian, Vernon Township, Hancock County, Indiana, being the property granted to David Snider, Charles C. Snider, and Pamela Kuhn ("Snider Tract"), recorded as Instrument Number 0212549 in the Office of the Recorder of Hancock County, Indiana, more particularly described as follows:

BEGINNING at the Northwest Corner of the Northeast Quarter of said Section 36, Township 17 North, Range 5 East; thence North 88 degrees 47 minutes 15 seconds East (Basis of Bearings: Indiana State Plane, East Zone, NAD 83) 922.56 feet along the North Line of the West Half of said Northeast Quarter; thence South 00 degrees 00 minutes 00 seconds East 167.51 feet; thence North 89 degrees 43 minutes 02 seconds West 93.52 feet; thence South 00 degrees 16 minutes 58 seconds West 260.00 feet; thence South 89 degrees 43 minutes 02 seconds East 40.91 feet; thence South 00 degrees 16 minutes 58 seconds West 204.00 feet; thence South 89 degrees 43 minutes 02 seconds East 55.00 feet; thence South 00 degrees 48 minutes 39 seconds West 112.58 feet; thence South 29 degrees 18 minutes 36 seconds West 221.53 feet; thence South 00 degrees 44 minutes 34 seconds West 286.74 feet; thence North 89 degrees 43 minutes 02 seconds West 244.17 feet; thence South 00 degrees 16 minutes 58 seconds West 189.98 feet; thence North 89 degrees 43 minutes 02 seconds West 125.00 feet; thence South 00 degrees 16 minutes 58 seconds West 996.00 feet; thence South 89 degrees 43 minutes 02 seconds East 115.00 feet; thence South 00 degrees 16 minutes 58 seconds West 107.00 feet; thence North 89 degrees 43 minutes 02 seconds West 86.80 feet; thence South 00 degrees 16 minutes 58 seconds West 138.92 feet to the South Line of the West Half of said Northeast Quarter, coincident with the southern boundary of said Snider Tract and the northern boundary of Woodhaven Section 8 Plat (recorded as Instrument Number 202202565 in said Recorder's Office); thence South 89 degrees 10 minutes 57 seconds West 470.24 feet along said coincident line to the Southwest Corner thereof being on the eastern boundary of the tract of land granted to Abdolaziz M. and Masoomeh Ardalan ("Ardalan Tract") (recorded as Instrument Number 202200614 in said Recorder's Office); thence North 00 degrees 12 minutes 24 seconds East 2641.39 feet along the West Line of said West Half coincident with the western boundary of said Snider Tract and the eastern boundaries of the Ardalan Tract, the tract of land granted to Oaklandon Christian Church, Inc. (recorded as Instrument Number 040018585 in said Recorder's Office) and the tract of land granted to Christopher Thomas Wood (recorded as Instrument Number 110011871 in said Recorder's Office) to the POINT OF BEGINNING, containing 39.457 acres, more or less.

S00°16'58"W – 996.00'
N00°16'58"E – 996.00'

(farm field)

SITE:
David Snider, Charles C. Snider, and Pamela Kuhn
INST. #0212549
80 Acres± (D)
80.164 Acres± (M)

(farm field)

N89°43'02"W – 115.00'
S89°43'02"E – 115.00'

S00°16'58"W – 107.00'
N00°16'58"E – 107.00'

N89°43'02"W – 86.80'
S89°43'02"E – 86.80'

S00°16'58"W – 138.92'
N00°16'58"E – 138.92'

19.4'

(farm field)

farm field fence

S89°10'57"W – 1320.49' (M)

(grass)

Woodhaven Section 8 Plat
INST. #202202565

Common Area "Z"
Variable Width
Drainage & Utility Easement

South Line, NE 1/4, Sec. 36-T17N-R5E

TAKEDOWN TWO - LAND DESCRIPTION

LAND DESCRIPTION

The West Half of the Northeast Quarter of Section 36, Township 17 North, Range 5 East of the Second Principal Meridian, Vernon Township, Hancock County, Indiana, being the property granted to David Snider, Charles C. Snider, and Pamela Kuhn ("Snider Tract"), recorded as Instrument Number 0212549 in the Office of the Recorder of Hancock County, Indiana, more particularly described as follows:

Commencing at the Northwest Corner of the Northeast Quarter of said Section 36, Township 17 North, Range 5 East (the following four courses are along the boundary of said Snider Tract); (one) thence North 88 degrees 47 minutes 15 seconds East (Basis of Bearings: Indiana State Plane, East Zone, NAD 83) 922.56 feet to the POINT OF BEGINNING of this description; (two) thence continue North 88 degrees 47 minutes 15 seconds East 397.03 feet along the North Line of the West Half of said Northeast Quarter to the Northeast Corner thereof; (three) thence South 00 degrees 10 minutes 59 seconds West 2650.47 feet along the East Line of said West Half coincident with the western boundaries of the tracts of lands granted to Sandra E. Cropper (recorded as Instrument Number 201900305 in said Recorder's Office) and the tract of land granted to Jacobi Legacy Farms, LLC (recorded as Instrument Number 201711625 in said Recorder's Office) to the southwestern corner thereof common with the Southeast Corner of said West Half, being on the northern boundary of Woodhaven Section 8 Plat (recorded as Instrument Number 202202565 in said Recorder's Office); (four) thence South 89 degrees 10 minutes 57 seconds West 850.25 feet along said northern boundary coincident with the South Line of said West Half; thence North 00 degrees 16 minutes 58 seconds East 138.92 feet; thence South 89 degrees 43 minutes 02 seconds East 86.80 feet; thence North 00 degrees 16 minutes 58 seconds East 107.00 feet; thence North 89 degrees 43 minutes 02 seconds West 115.00 feet; thence North 00 degrees 16 minutes 58 seconds East 996.00 feet; thence South 89 degrees 43 minutes 02 seconds East 125.00 feet; thence North 00 degrees 16 minutes 58 seconds East 189.98 feet; thence South 89 degrees 43 minutes 02 seconds East 244.17 feet; thence North 00 degrees 44 minutes 34 seconds East 286.74 feet; thence North 29 degrees 18 minutes 36 seconds East 221.53 feet; thence North 00 degrees 48 minutes 39 seconds East 112.58 feet; thence North 89 degrees 43 minutes 02 seconds West 55.00 feet; thence North 00 degrees 16 minutes 58 seconds East 204.00 feet; thence North 89 degrees 43 minutes 02 seconds West 40.91 feet; thence North 00 degrees 16 minutes 58 seconds East 260.00 feet; thence South 89 degrees 43 minutes 02 seconds East 93.52 feet; thence North 00 degrees 00 minutes 00 seconds West 167.51 feet to the POINT OF BEGINNING, containing 40.707 acres, more or less.

(farm field)

App. Limits of 75' Easement for Laura T Gale Drain (per Hancock County Surveyors Office)

App. Centerline of Laura T Gale Drain per Hancock County GIS

150'

75' 75'

App. Limits of 75' Easement for Laura T Gale Drain (per Hancock County Surveyors Office)

(farm field)

(farm field)

Northern line of the 150' Transmission Line Easement as depicted in the plat of Woodhaven Section Section 8 Secondary Plat INST. #202202565)

App. Centerline of Laura T Gale Drain per Hancock County GIS

10" HDPE

(farm field)

24.8'

16.1'

"DRM PS 9600013" Capped 5/8" Rebar Set (Flush)

farm field fence

S89°10'57"W – 850.25'

"Weihe" Capped Rebar Fd. (Flush)

(grass)

Northern line of the 150' Transmission Line Easement as described in INST. #79-03448 (Item #13) (Also INST. #79-05274)

Beehive Inlet
Rim=861.39
Inv(N)=858.34
Inv(SE)=858.43

Regulated Drainage Easement (per Plat)

10" HDPE

Beehive Inlet
Rim=861.52
Inv(NW/SC)=858.54
Inv(S)=858.50

10" HDPE

10" HDPE

150'

150'

MATCHLINE
MATCHLINE

(farm field)

60 0 30 60
(IN FEET)
1 inch = 60ft.

6" PVC
36" tall
standpipe
Inv=857.57

ADJOINER:
Jacobi Legacy Farms, LLC
INST. #201711625

(woods)

East Line, W 1/2, NE 1/4, Sec. 36-T17N-R5E

TAKEDOWN TWO
40.707 Acres± (M)

(farm field)

App. Limits of 75' Easement for Laura T Gale Drain ARM (per Hancock County Surveyors Office)

App. Centerline of Laura T Gale Drain ARM per Hancock County GIS

75'

150'

75'

(farm field)

App. Limits of 75' Easement for Laura T Gale Drain ARM (per Hancock County Surveyors Office)

150'

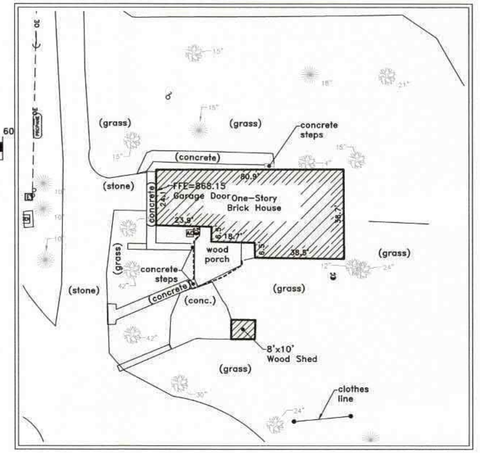
75' 75'

App. Limits of 75' Easement for Laura T Gale Drain (per Hancock County Surveyors Office)

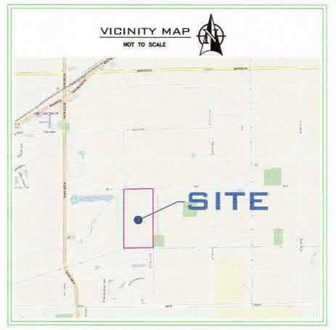
App. Limits of 75' Easement for Laura T Gale Drain (per Hancock County Surveyors Office)

(woods)

HOUSE DETAIL
NOT TO SCALE



VICINITY MAP
NOT TO SCALE



LEGEND:

	DESCRIPTION:
	SIGN / TWO POST SIGN
W	WATER VALVE/FIRE HYD/METER
	TELE/FIBER OPTIC/GAS MARKER
G	GAS METER / VALVE
	CLEAN-OUT
E	ELEC. METER BOX/TRANSFORMER
EP / TP	ELEC. / TELEPHONE PEDESTAL
	GUARD POST/POST with LIGHT
AC / HH	AIR CONDITIONER / GENERATOR
M	MAGNAIL SET/FOUND
R	REBAR SET/FOUND
	SQUARE / ROUND / CURB INLET
TP / LP	TRAFFIC/COMBO/ POWER POLE
	LIGHT POLE – SQUARE / ROUND

	DESCRIPTION:
12" / 36"	CONIFEROUS TREE & SIZE / DECIDUOUS TREE & SIZE
D / S	DRAINAGE /SANITARY MANHOLE
C / T	COMBINATION/MISC. LID MANHOLE
	BEEHIVE ROUND/SQUARE INLET
	GUY WIRE / GROUND LIGHT
WTR	UNDG. WATER LINE
G	UNDG. GAS LINE
UT	UNDG. TELEPHONE LINE
UE	UNDG. ELECTRIC LINE
OHT	OVERHEAD ELE. & TEL
OETE	OVERHEAD ELE TEL & CAB
OE	OVERHEAD ELECTRIC
VCP	vitrified clay pipe
RCP	reinforced concrete pipe
PVC	polyethylene coated pipe
HDPE	high-density polyethylene pipe
DI	ductile iron pipe

REVISED 12/03/2022	FIELD TOPOGRAPHY ADDED	JLM
REVISED 12/22/2022	MODERNIZED LAND DESCRIPTION ADDED	JLM
REVISED 12/22/2022	OFFSITE TOPOGRAPHY ADDED	JLM
REVISED 07/07/2023	ITEM #13 TRANSMISSION EASEMENT	DRM
REVISED 07/10/2023	TAKEDOWN DESCRIPTIONS ADDED	JLM

"I affirm, under penalties for perjury, I have taken reasonable care to redact each social security number in this document, unless required by law."
Donald R. Mosson

WOODS POINT DRIVE
50' Public Right-of-Way

LOT 358 LOT 357 LOT 356 LOT 355 LOT 354 LOT 353 LOT 352 LOT 351 LOT 350 LOT 349 LOT 348 LOT 347 LOT 346 LOT 345 LOT 344 LOT 343 LOT 342 LOT 341

IUPPS - 811 TICKET REQUEST NUMBER(S):
2206296859

UTILITY STATEMENT:
The underground utilities shown have been located from field survey information and existing drawings. Field survey information consisting of paint markings found on the ground per the Indiana Underground Plant Protection Service (IUPPS - 811). The paint markings shown hereon as evidence of probable underground utility locations and are consistent with typical utility markings. However, no utility report was provided to authenticate these markings. The user of this plat/map should rely upon such markings at their own risk. The surveyor makes no guarantees the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant the underground utilities shown are in the exact location indicated, although the surveyor does certify they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

PREPARED FOR:
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE
BROWNSBURG, INDIANA 46112

PREPARED BY: DONALD R. MOSSON
CENTRAL STATES CONSULTING, LLC
P.O. BOX 4
13 WEST PEARL STREET
NORTH SALEM, INDIANA 46165
PHONE: 317-858-8662 FAX: 317-342-2857

CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND TITLE SURVEY

5401 WEST COUNTY ROAD 700 NORTH
MCCORDSVILLE, INDIANA 46055

DATE:	07-08-2022
DWN. BY:	JLM
CHKD. BY:	DRM
SCALE:	1" = 60'

PROJECT NUMBER
22-039

SHEET 3 OF 3

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

General Notes:

1. Where any specifications included in these plans conflict with the standards specifications and details of the local jurisdiction, the standards of the local jurisdiction shall prevail.
2. The contractor shall accept the site in its current state and shall remove all trash, rubbish, and debris from the site prior to starting excavation.
3. The contractor shall notify Benchmark Consulting, Inc in writing of any changes, errors, or omissions found on the plans or in the field, before work is started or resumed.
4. Do not scale from these plans for survey field locations.
5. All construction activity on this site to performed in compliance with all applicable O.S.H.A. standards for worker safety.
6. The existing site outside the designate work area is to be protected and undamaged.
7. The contractor shall be responsible for ensuring the construction site and surrounding areas are free of accumulated debris.
8. The contractor shall notify all utility companies 72 hours prior to construction to verify if any utilities are present. All verifications (location, size & depth) shall be determined by the appropriate utility companies. When excavating in areas near or over existing utilities, the contractor must notify such utility company so a representative of the appropriate utility company can be present to observe activities.
9. Do not close or obstruct streets, walks, drives, facilities, etc. without written permission of the land owner or authority having jurisdiction.
10. When connections are to be made to existing piping and structures or where construction is in the vicinity of existing piping, the location and elevation of the existing piping shall be field verified and notification to the office of Benchmark Consulting, Inc., if the existing piping is found to be different than that illustrated on these drawings.
11. All points of connection of proposed sanitary and storm sewers to existing systems shall be verified vertically from a known benchmark prior to the start of construction. Any discrepancies with information included within these construction plans shall be reported to the office of Benchmark Consulting, Inc.
12. If errors or omission are found once construction activated have commenced it is the responsibility of the contractor to notify, in writing, the Office of Benchmark Consulting, Inc. And the Owner.
13. The contractor shall protect and not destroy the base survey control points during demolition and construction.
14. The contractor shall verify all dimensions in the field prior to the start of construction. The contractor shall be responsible for all field dimensions. If any discrepancies are found in these plans from actual field conditions, the contractor shall notify Benchmark Consulting, Inc immediately.

Demolition Plan General Notes

1. Review the local jurisdiction standard detail sand specifications prior to commencement of any construction.
2. Do not scale from these plans for survey field locations.
3. The contractor shall notify all utility companies 72 hours prior to construction to verify if any utilities are present. All verifications (location, size & depth) shall be determined by the appropriate utility companies. When excavating in areas near or over existing utilities, the contractor must notify such utility company so a representative of the appropriate utility company can be present to observe activities.
4. All construction activity on this site to performed in compliance with all applicable O.S.H.A. standards for worker safety.
5. Prior to starting demolition, it is the responsibility of the contractor to obtain all permits required by local governmental agencies.
6. All erosion control measures shall be in place prior to commencing demolition.
7. Prior to demotions activates contractor is to install any temporary site fencing noted in these plans.
8. Any tree preservation fencing or barriers required are to be installed prior to any demolition activates.
9. Plant materials to remain, to be protected by tree fence which encompasses its drip line. No construction equipment, materials or debris shall be located within tree protection boundaries. No demolition can occur until tree protection is approved by the owner.
10. The contractor shall be responsible for removal and disposal off-site of all items shown on the demolition plan including items encountered during excavation of building foundations and utility placement.
11. The contractor shall remove and dispose of all existing structures, fences, concrete, asphalt pavement and other miscellaneous appurtenances off site, unless noted to remain on the Contract drawings.
12. Demolition items include but are not limited to demolition items indicated on this plan. It is the contractor's responsibility to remove or relocate items which interfere with new construction.
13. Demolish foundations and other below grade construction, including concrete slabs, to a depth of not less than 48 inches below lowest foundation level.
14. Completely fill below grade areas and voids resulting from demolition of structures, with compacted granular backfill.
15. The use of any type of explosives will not be permitted.
16. The contractor shall coordinate with the local utility companies for the disconnection and removal of services to any existing structures.
17. Items of salvageable value to the contractor may be removed with the owner or his/her representative's permission. The contractor shall not store these items on site.
18. Trash or debris are not to be burned on site.
19. Ensure minimal interference to roads, sidewalks and any other adjacent occupied facilities. Access to site and surrounding buildings is to be maintained at all times.
20. Do not close or obstruct roads, sidewalks or any other occupied facilities without permission from the local authority having jurisdiction and or property owners.
21. Work site shall remain safe for all site workers and owners employees.
22. The existing site outside the designate demolition area is to be protected and undamaged.
23. The contractor shall be responsible for ensuring the construction site and surrounding areas are free of accumulated debris.
24. Promptly repair damage to adjacent facilities caused by demolition and construction operations. All utilities to be removed shall be disconnected and capped at the nearest connection point.
25. Contractor shall use measures to control dust at all times.

Site Plan General Notes

1. All curve radii are measured to the back of curb.
2. Pavement dimensions are measured to the face of curb or edge of pavement.
3. Remove all existing trash, debris and rubble throughout the site.
4. All conduits to the new building are to be provided by the contractor. Coordinate with architectural, irrigation and mechanical plans.
5. See architecture plans for final building dimensions.
6. All dimensions are to the building face at grade.
7. Expansion joints are to be placed at all walk intersections and between walks and platforms. Sidewalk scores are the be equally spaced between expansion joints and perpendicular to sidewalk at five (5) foot intervals or less with an expansion joint every forty (40) feet or less.
8. Service locations for electric power, telephone, cable television and natural gas service are to be coordinated with final mechanical plans and utility providers.
9. All parking stripes are to be 4" painted (white). ADA accessible parking stripes shall be 4" painted (blue).
10. All dimensions are parallel with, or perpendicular to base lines, property lines or building lines, unless otherwise noted.
11. Resurface or reconstruct at least to original conditions all areas where the existing pavement or lawns are damaged during construction from traffic by contractors, subcontractors or suppliers after construction work is complete.
12. Existing pavement to be saw cut in all areas where indicated new pavement to join existing pavement.
13. The edge of the existing asphalt pavement shall be properly sealed with a tack coat material in all areas where new asphalt pavement is indicated to join existing asphalt.
14. Concrete saw cutting shall be done as soon as poured concrete has cured and can support weight. Provide a neat cut which is true in alignment.
15. All joints are to continue through the curb.
16. Contractor shall use a Preformed Joint-filler conforming to ASTM D 1751 around the perimeter of any block out in the concrete paving.
17. All construction joints shall be sawn, cleaned of debris, blown dry and immediately sealed with the appropriate sealant according to manufacturer's directions.
18. All materials to be in accordance with local department of transportation standard specifications relative to material, mix, placement and workmanship
19. All sidewalks shall comply with ADA standards. Maximum cross slope of 1:50 and maximum longitudinal slope of 1:20.
20. Chamfer all ends of curbs.

Grading Plan General Notes

1. Topographic information, as provided, shall be utilized to confirm existing topographic conditions prior to the commencement of any construction activities. Any discrepancies encountered between the existing topography shown and actual site conditions, which could affect the design and/or balance of the site, shall be reported to the office of Benchmark Consulting, Inc.
2. The contractor shall notify all utility companies 72 hours before construction is to start to verify if any utilities are present on site. All verifications (location, size and depth), shall be made by the appropriate utility companies. When excavating around or over existing utilities, the contractor must notify the utility company so a representative of that utility company can be present to instruct and observe during construction. Subcontractors are responsible for locations of utilities for their own work.
3. Site grading shall not proceed until erosion control measures have been installed.
4. The excavating contractor must take particular care when excavating in and around existing utility lines and equipment. Verify cover requirements by utility contractors and/or utility companies so as not to cause damage.
9. All known utility locations shown are approximate. It is the contractors' responsibility to contact all affected utility companies and the local utility protection service prior to any excavation.
10. Where two elevations are shown at the curb line, the top elevation shall represent the top of curb and the bottom elevation the edge of pavement.
11. All proposed spot elevations or contour lines are the final pavement or final dirt grade elevation.
12. See appropriate details to determine subgrade elevations below finish grade elevations indicated.
13. Prepare subgrade and subgrade drainage system in accordance with geotechnical engineering investigation report, unless otherwise instructed by the owner.
14. All fill area shall be compacted to at least 95 percent of the maximum dry density (ASTM D-1557). Fill under the footings shall be compacted to at least 95 percent of the maximum dry density (ASTM D-1557) or as noted in the geotechnical report.
15. All grades shall meet existing grade at the property line.
16. Contractor to adjust all existing surface infrastructure (hydrants, valves, handholes, castings, irrigation system, utility pedestals, etc.) As required to meet proposed grade at his/her own cost.
17. After stripping topsoil material, proof roll shall be performed by a loaded tandem pneumatic tire dump truck minimum gross vehicle weight of 15 tons. The tires shall be operated at inflation pressures between 70 and 80 psi unless otherwise noted by the geotechnical engineer. The tires shall be inflated with air only, no liquid shall be used. The proof roll shall be completed under inspection of geotechnical engineer or his designee to determine locations of any pockets of unsuitable material. The necessity for subdrains and/or removal of any unsuitable material will be determined at the time of construction.
18. Provide positive drainage without ponding in all areas. After installation, contractor to test for, and correct, if any, standing water conditions.
19. See appropriate details to determine subgrade elevations below finish grade elevations indicated.
20. Trenches for all utility lines shall be backfilled completely with select granular material if within 5 feet of pavement.
21. Contractor to perpetuate any subsurface drain tiles or pipes encountered during construction and provide positive outlet to downstream receiving system. Contractor to notify the Benchmark Consulting, Inc with any circumstances where this cannot be accomplished.
22. Due to site constraints, the earthwork for the site as designed may or may not balance. It is the contractor's responsibility to review the existing conditions and include in their bid all earthwork costs including imports and/or exports necessary to make the site balance.Contractor to stabilize exposed earth as indicated by the stormwater pollution prevention plan or governing authority.

Utility Plan General Notes

1. Review the local jurisdictions standard details and specifications prior to commencement of any utility construction.
2. The Standard Specifications of the Town of McCordsville apply to all storm sewer connections.
3. The Standard Specifications of the Citizens Energy Group apply to all potable water connections.
4. The Standard Specifications of the Town of McCordsville apply to all sanitary sewer connections.
5. Site utilities shall not proceed until erosion control measures have been installed.
6. The contractor shall notify all utility companies 72 hours before construction is to start to verify if any utilities are present on site. All verifications (location, size and depth), shall be made by the appropriate utility companies. When excavating around or over existing utilities, the contractor must notify the utility company so a representative of that utility company can be present to instruct and observe during construction. Subcontractors are responsible for locations of utilities for their own work.
7. Sanitary sewer and potable water mains shall have a minimum of ten (10) feet of horizontal separation and a minimum of eighteen (18) inches vertical separation between the outside of the pipe walls.
8. Proposed 6" sanitary sewer service laterals shall be SDR-35, schedule 80 or schedule 40, P.V.C. Pipe conforming to ASTM D2241 and shall meet defection standards as required of ASTM D-3303.
9. Service locations for electric power, telephone, cable television and natural gas service are to be coordinated with final mechanical plans and utility providers.
10. Contact the office of Benchmark Consulting, Inc. Prior to re-routing of any field tiles.
11. Where proposed utilities cross existing utilities the existing utility shall be "pot holed" to verify their location and elevation. Contractor shall do this as early in the project as possible. Contact the office of Benchmark Consulting, Inc. of any conflicts are discovered.
12. All new storm sewer inlets are to have a concrete collar installed with payment.
13. The excavating contractor must take particular care when excavating in and around existing utility lines and equipment. Verify cover requirements by utility contractors and/or utility companies so as not to cause damage.
14. Contractor to adjust all existing surface infrastructure (hydrants, valves, handholes, castings, irrigation system, utility pedestals, etc.) As required to meet proposed grade.
15. All utility materials and installation shall conform to local standards for each utility agency having jurisdiction.
16. Trenches for all utility lines shall be backfilled completely with select granular material if the top of the trench is within 5 feet of pavement.
17. Contractor shall coordinate installation of utilities and conduits to avoid conflicts and provide required minimum depths of cover. The contractor shall provide any additional bends with thrust blocks required to assure proper installation of water mains and laterals.
18. In the event of a conflict between water lines and storm drains, the contractor shall either adjust the water line downward in such a manner so that the pipe manufacturer's recommendations on pipe deflection and joint stress are not exceeded or the contractor shall provide appropriate bends and crossings.
19. All coordinates and dimensions are to the centerline of utilities and structures.
20. All proposed storm sewer and drainage appurtenances shall be in conformance with the local jurisdiction stormwater specifications, latest edition. Discrepancies between the plans and the stormwater specifications shall not alleviate the contractor from adhering to the requirements as set forth in the stormwater specifications.

Erosion Control Plan General Notes

1. The contractor, owner and/or their designated agents shall assume full responsibility for ensuring site construction on this project is completed in full conformance with the requirements of the Indiana Construction Stormwater General Permit.
2. All erosion control measures and methods to be in compliance with Town of McCordsville Standards and Specifications . The Town of McCordsville reserves right to require additional onsite controls deemed necessary to maintain compliance with the Indiana Construction General Stormwater Permit and the Town's Stormwater Management Ordinance. All erosion and sediment control, best management practices and pollution prevention measures must be installed and maintain in accordance with the Indiana Stormwater Quality Manual.
3. Install silt fence perimeter sediment control barrier prior to beginning earth or demolition moving activities.
4. This plan shall not be considered all inclusive. The contractor shall take all necessary precautions to prevent soil sediment from leaving the site. Additional erosion control measures may be required by State, County or Town officials if field conditions warrant.
5. Additional erosion and sediment control measures shall be installed if deemed necessary by on site inspection.
6. Land alteration which strips the land of vegetation, including regrading, shall be done in a way that will minimize erosion.
7. Sediment laden water shall be detained by erosion control practices as needed to minimize sedimentation in receiving water. No storm water shall be discharged from the site in a manner that causes erosion at the point of discharge.
8. Inspect erosion control measures weekly and within 24 hours of the start or conclusion of a rainfall event of $\frac{1}{2}$" or more. Repair and replace measures as required.
9. Silt fence perimeter sediment barrier to remain in place until such time as all disturbed areas of site have been stabilized. Sediment deposits to be removed when at a maximum of one-third of fence height.
10. Tracking of sediment onto abutting road system shall be prevented to the greatest extent possible. Vehicles shall be cleaned of mud and debris as required to prevent tracking. Mud and debris which is tracked onto the road system shall be removed by scraping and/or sweeping and placed in a protected area.
11. If installation of storm drainage system should be interrupted by weather or nightfall, the pipe ends shall be covered with filter fabric.
12. Unvegitated areas that are left idle or scheduled to be left inactive must be temporarily or permanently stabilized with measures appropriate for the season to minimize erosion potential. To meet this requirement, the following apply:
    (1) Stabilization must be initiated by the end of the seventh day the area is left idle. The stabilization activity must be completed within fourteen (14) days after initiation. Initiation of stabilization includes, but is not limited to, the seeding and/or planting of the exposed area and applying mulch or other temporary surface stabilization methods where appropriate. Areas that are not accessible due to an unexpected and disruptive event that prevents construction activities are not considered idle.
    (2) Areas that have been compacted may be excluded from the stabilization requirement when the areas are intended to be impervious surfaces associated with the final land use, provided run-off from the area is directed to appropriate sediment control measure.
13. All soil removed from the site is to be taken to a permitted site with adequate erosion control measures in place.
14. Waste and unused building materials shall not be allowed to be carried from the site by storm water runoff. Proper disposal of all waste and unused building materials is required.
15. Topsoil replacement shall take place from March 1 to October 31. Stockpile topsoil at all other times of the year. Permanent and final vegetation and structural erosion control devices shall be installed within seven (7) days after final grading or as soon as possible.
16. Install inlet protection around inlets immediately upon completion of the structure. Remove inlet protection for paving operation. Replace inlet protection after paving is complete. Inlet protection shall remain in place until vegetation is established on seeded areas behind the curb.
17. Prior to completion of the project, contractor shall clean out all storm drainage structures and restore all ditches and ponds to designed grades.
18. Contractor is responsible to maintain all erosion control measures until site is stabilized. Once site is stabilized the contractor is to remove sediment trapping devices (i.e. Drop inlet protection, rock check dams, concrete washout basin).

Existing Condition Notes

Existing Topography provided by: Central States Consulting, Inc
Project #: 22-039
Dated: 12/22/2022

Geotechnical Report:
Alt & Witzig Project 23IN0158 Dated May 26, 2023

Environmental Report:
None provide to Benchmark Consulting, Inc

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

Floodway Mapping: The site is located in zones "AE" & "X" per community panel 180599C0018D; effective December 14, 2007

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Gatherings at Aurora - Section 3 - 10/21/2024

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE — STATE OF INDIANA — PE 10006548 — PROFESSIONAL ENGINEER
PRELIMINARY PLAT
NOT FOR CONSTRUCTION
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

General Notes

DATE: 10/21/24 | CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C001

File Path\Name: D:\Benchmark\01\Benchmark\24_Jobs\24005-Gatherings at Aurora Section 3\dwgs\0001.dwg - Date: Oct 21, 2024 - 2:05pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

Know what's below. Call before you dig.

- Fiber Optic Marker Post
- Telephone Marker Post
- Utility Pedestal
- Telephone Pedestal
- Electric Hand Hold
- Electric Transformer
- Pole Guy Wire
- Utility Pole Existing
- Overhead Electric
- Overhead Cable Communications
- Overhead Telephone
- Overhead Utility Lines
- Gas Main
- Underground Electric Lines
- Fiber Optic Lines
- Under Ground Telephone Lines
- Under Ground Communications
- Gas Meter
- Gas Marker Post
- Gas Valve
- Water Main & Fire hydrants
- Water Service Line
- Water Valve
- Water Air Release Valve
- Single / Double Water Meter
- Fire Protection Line & FDC
- Sanitary Sewer Marker Post
- Sanitary Sewer Main and Structure
- Sanitary Sewer Lateral & Clean Out
- Sanitary Sewer Force Main
- Sanitary Sewer Air Release Valve
- Sanitary Sewer Structure Number
- Storm Sewer BMP / SQU
- Storm Sewer Main & Drainage Manhole
- Storm Sewer Endsection
- Roll Curb Inlet
- Round yard Inlet
- Rectangle Area Grate
- Wing Wall Outlet
- Chairback Curb Inlet
- Storm Sewer Structure Number
- Sub Surface Drain
- Roof Drain
- Swale Flow Line
- Ground Contour
- Ground Elevation Shot
- Tree Line
- Chainlink Fence
- Wood Fence
- Farm Field Fence
- Normal Pool / Water Surface

- TBM
- Electric Service Lines
- Electric Transformer
- Telephone Service Lines
- Communications Service Line
- Gas Service Line
- Gas Meter
- Water Main & Fire Hydrants
- Water Service Line
- Water - Gate / Butterfly
- Water Air Release Valve
- Single / Double Water Meter
- Blow Off Assembly
- Pipe Plug
- Pipe Reducer
- Tee Fitting
- Mechanical Joint Sleeve
- Cross Fitting
- Bend Fitting
- Adapter
- Kicker Support Blocking
- Fire Protection Line & FDC
- Sanitary Sewer Main and Structure
- Sanitary Sewer Lateral & Clean Out
- Sanitary Sewer Force Main
- Sanitary Sewer Air Release Valve
- Sanitary Sewer Structure Number
- Storm Sewer BMP / SQU
- Storm Sewer Main & Drainage Manhole
- Storm Sewer Endsection
- Roll Curb Inlet
- Round yard Inlet
- Rectangle Area Grate
- Wing Wall Outlet
- Chairback Curb Inlet
- Storm Sewer Structure Number
- Sub Surface Drain
- Roof Drain
- Swale Flow Line
- Finished Ground Contour
- Finished Pavement Elevation
- Finished Top of Curb / Gutter Elevations
- Match Existing
- Grade Break
- Surface Flow Direction
- Normal Pool
- Building Set Back Line
- Street Light

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE — STATE OF INDIANA — PE 10806548 — PROFESSIONAL ENGINEER — PRELIMINARY NOT FOR CONSTRUCTION
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

General Legend

DATE: 10/21/24 | CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C002

Gatherings at Aurora - Section 3 - 10/21/2024

File Path\Name: D:\Benchmark\01\Benchmark\24 Jobs\24006- Gatherings at Aurora Section 3\dwgs\0000.dwg – Date: Oct 21,2024 – 2:04pm

EARTH WORK:

A. GENERAL

1. Earthwork includes clearing, grubbing, subgrade preparation, removal of trees and vegetation (including stumps), protection of trees to remain, stripping and storage of topsoil, fill compaction and rough grading of entire site as indicated on drawings.

2. The contractor shall notify engineer in writing of any changes, errors, or omissions found on the plans or in the field, before work is started or resumed.

3. Contractor shall provide and place any additional fill material from off the site as may be necessary to produce the grades required as shown on the drawings. Fill obtained from off site must be suitable soil as defined in the specifications or as otherwise approved by owner.

4. The contractor shall accept the site in its current state and shall remove all trash, rubbish, and debris from the site prior to starting excavation.

5. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain owner's property, cleared materials shall become contractor's property and shall be removed from project site.

6. Do not close or obstruct streets, walks, drives, facilities, etc. without owner permission or authority having jurisdiction.

7. All erosion control measures shall be in place prior to commencing earthwork and clearing operations. Erosion control measures should be protected and maintained throughout construction.

8. Contractor shall carefully maintain all benchmarks, monuments, and other reference points. If disturbed, contractor shall engage a professional land surveyor for replacement of reference points.

9. Where these specifications conflict with the Town of Brownsburg Construction Standards Specifications and Details, the standards of the local jurisdiction having authority shall prevail.

B. MATERIALS

1. Contractor to provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

2. Satisfactory (or suitable) soils: soil classification groups GW, GP, GM, SW, SP, and SM according to ASTM D-2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation and other deleterious material.

3. Unsatisfactory (or unsuitable) soils: soil classification groups GC, SC, CL, ML, OL, CH, MH, OH, and pt according to ASTM D-2487, or a combination of these groups. Unsatisfactory soils also includes satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

C. Execution

1. Contractor shall locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place. Do not interrupt utilities serving facilities occupied by owner unless permission is granted. Notify owner at least two days in advance of proposed utility interruptions.

2. Remove obstructions, trees, shrubs, and other vegetation as required for new construction. Strip topsoil to depth as required in the field to prevent intermingling with underlying subsoil or other waste materials. Stockpile topsoil away from excavations without intermixing with subsoil and grade stockpiles to drain surface water.

3. Remove existing above and below-grade improvements as indicated and necessary to facilitate new construction.

4. Protect subgrades and foundation soils from freezing temperatures, frost, and ponding water.

5. Excavate to indicated elevations and dimensions for all structures, walks, pavements, and utility trenches.

6. Contractor shall furnish and operate all dewatering measures required to facilitate new construction and in accordance with all local, state, and federal regulations.

7. Proof roll subgrade below building pavements with a pneumatic-tired dump truck to identify soft pockets and areas of excess yielding. Do not proof roll wet or saturated subgrades. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities as directed by engineer or owner representative, without additional compensation.

8. Backfill all utility trenches beneath pavement (and within 5') with granular material.

9. Soil fill: use satisfactory soil material under all walks, pavements, steps, ramps, building slabs, footings, and foundations.

10. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified unit weight.

11. Compaction of soil backfills and fills are to be in accordance with geotechnical recommendations. Where no geotechnical report exists, compact all fill material below structures, pavements, walks, utility trenches and steps (and within 5 feet of said areas) to 95 percent of the maximum dry unit weight according to ASTM D-1557 (modified proctor density). Compact all fill materials below turf or unpaved areas to 85 percent of the maximum dry unit weight according to ASTM D-1557 (modified proctor density). All fill materials to be compacted in maximum 8-inch lifts.

12. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
    - 12.1. Turf or unpaved areas: plus or minus 1 inch
    - 12.A. Walks: plus or minus 1/2 inch.
    - 12.B. Pavements: plus or minus 1/2 inch
    - 12.C. Inside building lines: finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

13. Quality Control: Qualified Geotechnical Engineer to be engaged as testing agency as directed by Owner.

14. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded , rutted settled, or where they lose compaction due to subsequent construction operations or weather.

Storm Sewer:

A. General

1. Storm sewer includes all pipes, fittings, manholes, cleanouts, transition couplings, catch basins, inlets, end sections, and outlets.
2. The contractor shall notify engineer in writing of any changes, errors, or omissions found on the plans or in the field, before work is started or resumed.
3. Contractor shall locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place. Do not interrupt utilities serving facilities occupied by owner unless permission is granted. Notify owner at least two days in advance of proposed utility interruptions.

B. Products

1. PE pipe and fittings: PE drainage pipe and fittings NP 3 to NPS 10, AASHTO M 252M, type 8, with Smooth waterway for coupling joints. PE drainage pipe and fittings NPS 12 to NPS 60, AASHTO M 294M, Type S, with smooth waterway for coupling joints.

2. PVC pipe and fittings: pipe: ASTM F 949, PVC, or ASTM O-3034, F-1336, F-679, corrugated pipe with bell and spigot ends for gasketed joints.

   Fittings: ASTM 949, PVC molded or fabricated, socket type.

   Gaskets: ASTM f 477, elastomeric seals.

3. Concrete pipe and fittings: Reinforced concrete sewer pipe and fittings meeting ASTM C 76 with bell and spigot ends and gasketed joints with ASTM C 443 rubber gaskets. Pipe to be Class III unless otherwise indicated on plans.

4. Comply with ASTM C 1173, elastomeric sleeve-type reducing or transition coupling, for jointing underground non pressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant metal tension band and tightening mechanism on each end.

5. Cleanouts: Cast Iron Cleanouts: ASME A112.36.2M round, gray-iron housing with clamping device and round, secured, scoriated, gray-iron cover. Heavy duty top loading is required. Plastic cleanouts: PVC body with PVC threaded plug.

6. Manholes and catch basins: Standard reinforced precast concrete manholes meeting ASTM C 478. Minimum 48--inch diameter unless otherwise indicated. Base section to be minimum 6-inch thickness and 4-inch thickness for walls and base riser section. Reinforced concrete grade rings, 6-9 inch total thickness, to match diameter of manhole frame and cover. Manhole frames and covers as indicated on drawings. Pipe connectors should be provided to meet ASTM C293, resilient, of size required, for each pipe connecting to the base section.

7. Concrete: Cast-in-place concrete according to CI 318 and ACI 350/350R and in accordance with the following:
   - 7.1. Cement: ASTM C 150, type III
   - 7.2. Fine aggregate: ASTM C 33, sand
   - 7.3. Coarse aggregate: ASTM C 33, crushed gravel
   - 7.4. Water: Potable

8. Portland cement design mix: 4,000 psi minimum with 0.45 maximum water/cementious materials ratio. Reinforcing fabric to meet ASTM a 185/A 185M, steel, welded wire fabric, plain. Reinforcing bars to meet ASTM a 615/a 615M, grade 60 deformed steel.

9. Manhole channels to be formed with an invert slope of 2 percent through the manhole and benches at 4 percent, sloped to drain into channel.

10. Inlets: Provide inlets with heavy duty castings as shown on drawings.

11. Outlets: Concrete end section with toe walls shall be provided at all pipe ends and or indicated on drawings. Rip rap aprons to be installed at all end sections to dimensions indicated. Size to be INDOT Revetment gradation unless otherwise indicated on drawings.

C EXECUTION

1. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and other couplings according to manufacturer's written instructions.

2. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of micro-tunneling.

3. Install piping pitched down in direction of flow. Install pe corrugated sewer piping in accordance with ASTM D 2231. Install PVC piping according to ASTM D 2321 and ASTM F 1668. Install reinforced concrete sewer piping in accordance with ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual".

4. Pipe Joint Construction: Join corrugated pe pipe according to ASTM D 3212 for push on joints. Join PVC corrugated sewer piping in accordance with ASTM D 2321 for elastomeric seal joints. Join reinforced concrete pipe according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints. Join dissimilar pipe materials with non-pressure type flexible couplings.

5. Contractor to inspect interior of piping and manholes for defects. Defects requiring correction include the following:
   - 5.1. Alignment: Less than full diameter of inside of pipe is visible between structures.
   - 5.2. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
   - 5.3. Damage: Crushed, broken, cracked, or otherwise damaged piping.
   - 5.4. Infiltration: Water leakage into piping.
   - 5.5. Exfiltration: Water leakage from or around piping replace defective piping using new materials and repeat inspection until defects are within allowances specified.

6. Test new piping systems, and parts of existing systems that have been altered, extended, repaired, for leaks and defects. For gravity flow storm drainage piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
   - 6.1. Exception: Piping with soil tight joints unless required by local jurisdiction.
   - 6.2. Options: Test plastic piping according to o ASTM F 1417
   - 6.3. Option: Test Concrete piping according to ASTM C 924

7. Submit testing reports as required by Owner or local jurisdiction.

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

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
General Notes

Gatherings at Aurora - Section 3 - 10/21/2024

DATE:	CHECKED BY:
10/21/24	N.A.W.

PROJECT NUMBER: 24006

SHEET # C003

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

North

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

GRAPHIC SCALE
100 0 50 100
(IN FEET)
1 inch = 100 ft.

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE
STATE OF INDIANA
PE 10006548
PRELIMINARY NOT FOR RECORDING
PROFESSIONAL ENGINEER
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

Phasing Plan

DATE:	CHECKED BY:
10/21/24	N.A.W.

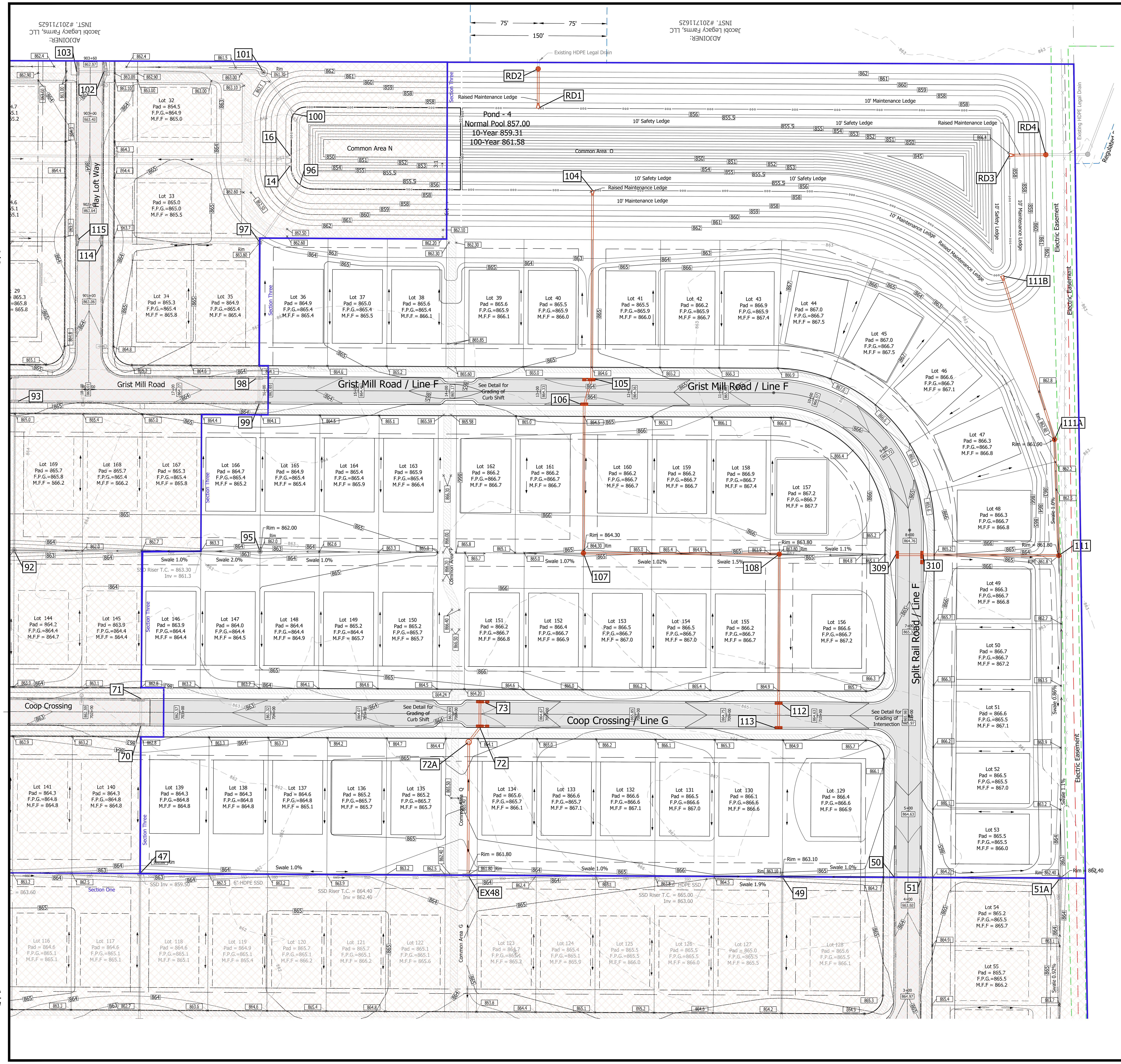
PROJECT NUMBER: 24006

SHEET # C004

Gatherings at Aurora - Section 3 - 10/21/2024

File Path\Name: D:\Benchmark01\Benchmark\24-Jobs\24006-Gatherings at Aurora Section 3\dwgs\Covers3.dwg - Date: Oct 21,2024 - 2:09pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



North

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

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

Grading Plan Legend

- Existing Ground Elevation Contour
- Existing Spot Elevations
- Existing Telephone Lines
- Existing Gas Main
- Existing Water Main
- Existing Electric Lines
- Existing Storm Sewer Main & Structure
- Existing Sanitary Sewer Main & Structure
- Proposed Spot Elevation
- Proposed Pavement Grade
- Match Existing
- Subsurface Drain & Lateral
- Grade Break
- Proposed Storm Sewer Main & Structure
- Proposed Elevation Contour
- Swale Flow Line
- See Sheet C001 for additional symbols and notes

Local Road Pavement Section (d=12" MTSD Pg 2 of 10)

Grading Plan General Notes

1. Topographic information, as provided, shall be utilized to confirm existing topographic conditions prior to the commencement of any construction activities. Any discrepancies encountered between the existing topography shown and actual site conditions, which could affect the design and/or balance of the site, shall be reported to the office of Benchmark Consulting, Inc.
2. All known utility locations shown are approximate. It is the contractors' responsibility to contact all affected utility companies and the local utility protection service prior to any excavation.
3. Where two elevations are shown at the curb line, the top elevation shall represent the top of curb and the bottom elevation the edge of pavement.
4. All proposed spot elevations are the final pavement or final dirt grade elevation.
5. See appropriate details to determine subgrade elevations below finish grade elevations indicated.
6. All fill area shall be compacted to at least 95 percent of the maximum dry density (ASTM D-1557). Fill under the footings shall be compacted to at least 95 percent of the maximum dry density (ASTM D-1557) or as noted in the geotechnical report.
7. All grades shall meet existing grade at the property line.
8. All landscape and yard spaces are to have a minimum of 4" of topsoil after final grading.
9. No basements are to be built in this project.

Elevation Benchmark

H 235-T21
Elevation (recorded) 856.828 (navd 88)
Elevation (observed) 856.306 (navd 88)

A disk set in the northwest wingwall of a 32 foot concrete bridge over the Stansbury and Schultz Regulated Drain. It is located 0.2 miles south of State Road 67, 281 feet east of the physical centerline of County Road 600 W and 12.5 feet north of the physical centerline of County Road 750 North.

CSC TBM #12 Elevation 861.50

A rebar set at the southwestern corner of the stone drive onto the property of 5401 West County Road 700 North in McCordsville, located 17.7 feet south of the centerline of West County Road 700 North and 40.6 feet west of the physical centerline of said stone drive.

CSC TBM #10 Elevation 862.85

A rebar set westerly of the stone drive onto the property of 5401 West County Road 700 North in McCordsville, located 693.7 feet south of the centerline of West County Road 700 North and 8.4 feet westerly of the western edge of the western stone drive, also located 10.3 feet north and 103.1 feet west of the northwest corner of the one-story brick house.

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE — REGISTERED No. PE10606548 — STATE OF INDIANA — PROFESSIONAL ENGINEER
PRELIMINARY PENDING APPROVAL

DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

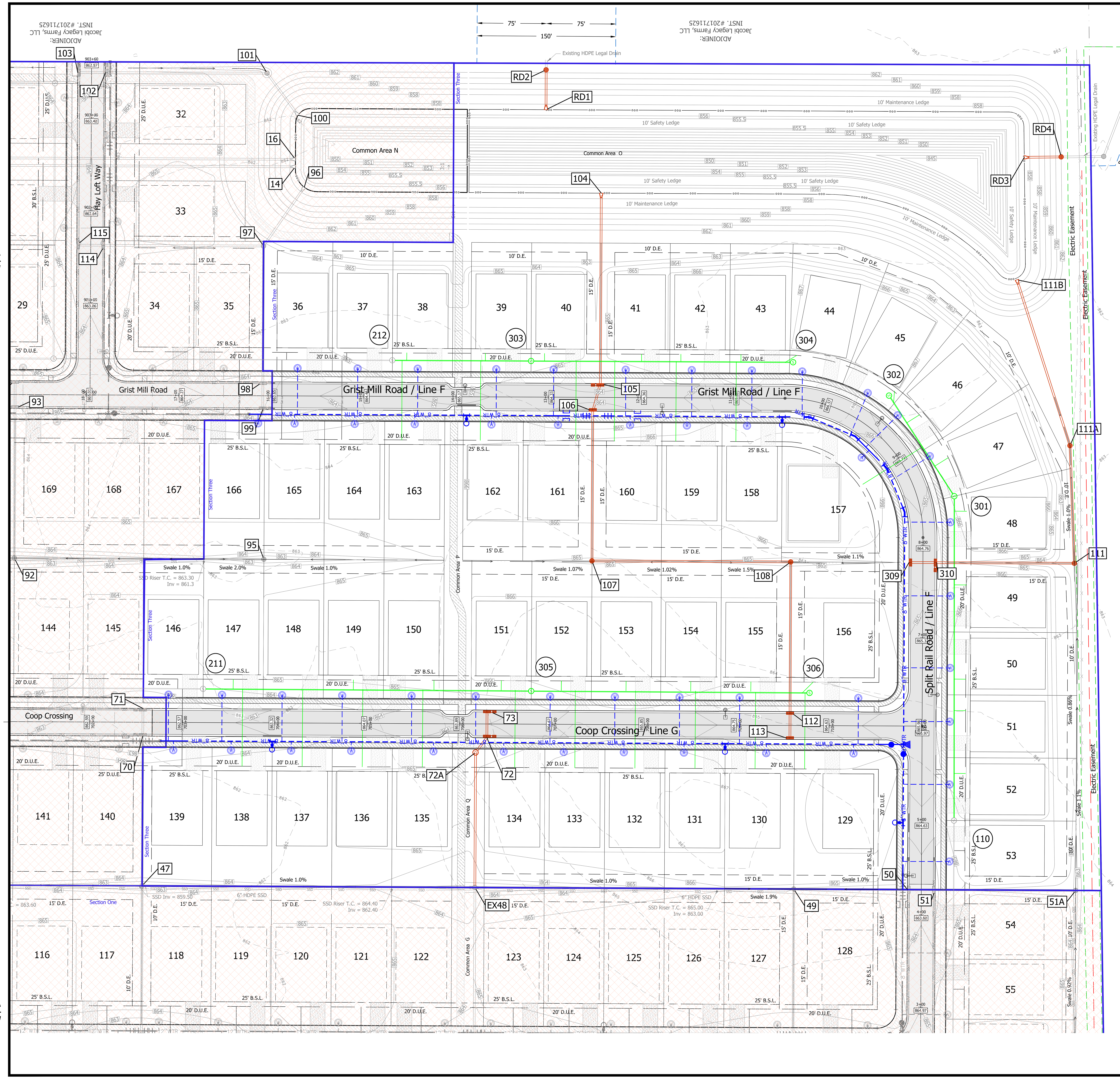
Grading Plan

DATE:	CHECKED BY:
10/21/24	N.A.W.

PROJECT NUMBER: 24006

SHEET # C101

Gatherings at Aurora - Section 3 - 10/21/2024



North

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

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

Development Plan Legend

- 8" WTR — Water Main & Fire Hydrant
- Water Service Line
- Water Valve Water
- Single / Double Water Meter
- Sanitary Sewer Main and Structure
- Sanitary Sewer Lateral & Clean Out
- Sanitary Sewer Structure Number
- Storm Sewer Main & Storm Sewer Endsection
- Storm Sewer Main & Roll Curb Inlet
- Storm Sewer Main & Round yard Inlet
- Storm Sewer Structure Number
- SSD — Sub Surface Drain
- Swale Flow Line

Development Plan General Notes:

1. Review the Town of McCordsville Standard Detail sand Specifications prior to commencement of any utility construction.
2. Sanitary sewer and potable water mains shall have a minimum of ten (10) feet of horizontal separation and a minimum of eighteen (18) inches vertical separation between the outside of the pipe walls.
3. Proposed 6" sanitary sewer service laterals shall be SDR-35, schedule 80 or schedule 40, P.V.C. Pipe conforming to ASTM D2241 and shall meet defection standards as required of ASTM D-3303.
4. Service locations for electric power, telephone, cable television and natural gas service are to be coordinated with final mechanical plans, owner representative and utility providers.
5. Contact the office of Benchmark Consulting, Inc. Prior to re-routing of any field tiles.
6. Where proposed utilities cross existing utilities the existing utility shall be "pot holed" to verify their location and elevation. Contractor shall do this as early in the project as possible. Contact the office of Benchmark Consulting, Inc. of any conflicts are discovered.
7. All fire hydrants to be installed with Storz connections.
8. All water infrastructure to be constructed per Citizens Energy standards and approved plan.

Local Road Pavement Section (d=12" MTSD Pg 2 of 10)

Utility Statement

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although the surveyor does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

BENCHMARK CONSULTING, INC.

NATHAN A. WHITE REGISTERED No. PE10806548 STATE OF INDIANA PROFESSIONAL ENGINEER — PRELIMINARY PENDING APPROVAL

DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

Development Plan

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C102

Gatherings at Aurora - Section 3 - 10/21/2024

File Path\Name: D:\Benchmark01\Benchmark\24 Jobs\24006-Gatherings ar Aurora Section 3\dwgs\101.dwg -- Date: Oct 21,2024 -- 2:05pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

ADJOINER:
Jacobi Legacy Farms, LLC
INST. #201716425

Existing HDPE Legal Drain

Pond - 4
Normal Pool 857.00
10-Year 859.31
100-Year 861.58

Common Area N

Common Area O

Nate Line

Play Loft Way

Grist Mill Road

Grist Mill Road / Line F

Windmill Way

Coop Crossing

Coop Crossing / Line G

Split Rail Road / Line F

Line

Section Three

Section One

See Detail for Grading of Curb Shift

See Detail for Grading of Intersection

Raised Maintenance Ledge

10' Safety Ledge

10' Maintenance Ledge

Electric Easement

Swale 1.0%

Swale 2.0%

Swale 1.07%

Swale 1.02%

Swale 1.5%

Swale 1.1%

Swale 1.9%

Direction of Flow

Flood Protection Grade / Lowest Adjacent Grade (Water Surface + 1 foot)

865.52

864.14

Weir #

Ground Elevation at Weir

Emergency Overflow Weir Location

North

Know what's below. Call before you dig.

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

STATE OF INDIANA
NATHAN A. WHITE
PE 10006548
PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
PROFESSIONAL ENGINEER

DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora - Section 3 - 10/21/2024

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

Emergency Flood Route Plan

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C103

File Path\Name: D:\Benchmark01\Benchmark\24 - Jobs\24006-Gatherings at Aurora Section 3\dwg\101.dwg - Date: Oct. 21,2024 - 2:06pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

ADJOINER:
Jacobi Legacy Farms, LLC
INST. #201711625

75' 75'
150'

Existing HDPE Legal Drain

Pond - 4
Normal Pool 857.00
10-Year 859.31
100-Year 861.58

Common Area N

Common Area O

Ray Loft Way

Windmill Way

Grist Mill Road

Grist Mill Road / Line F

Coop Crossing

Coop Crossing / Line G

Split Rail Road / Line F

Section Three

Section One

Common Area P

Common Area Q

Common Area G

Electric Easement

Extend 6" HDPE SSD

6" HDPE SSD

Extend Existing SSD

SSD Riser T.C. = 863.2
Inv = 861.2

SSD Riser T.C. = 863.30
Inv = 861.3

SSD Inv = 858.5

SSD Riser T.C. = 865.0
Inv = 863.0

SSD Inv = 859.0

SSD Riser T.C. = 865.8
Inv = 863.8

SSD Inv = 860.25

SSD Riser T.C. = 865.4
Inv = 863.3

SSD Riser T.C. = 865.0
Inv = 863.0

SSD Riser T.C. = 863.9
Inv = 861.9

SSD Riser T.C. = 863.60
Inv = 861.6

SSD Inv = 859.50

SSD Riser T.C. = 864.40
Inv = 862.40

SSD Riser T.C. = 865.00
Inv = 863.00

SSD Riser T.C. = 864.00
Inv = 862.00

Swale 1.0%
Swale 2.0%
Swale 1.07%
Swale 1.02%
Swale 1.5%
Swale 1.1%
Swale 1.9%
Swale 0.92%

212 303 304 302 301 211 305 306 110

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

REVISIONS:

PRELIMINARY PLANS NOT FOR CONSTRUCTION
NATHAN A. WHITE
STATE OF INDIANA
PE 10065483
REGISTERED PROFESSIONAL ENGINEER

DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3

West CR 700 North McCordsville, IN

Subsurface Drain Plan

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C104

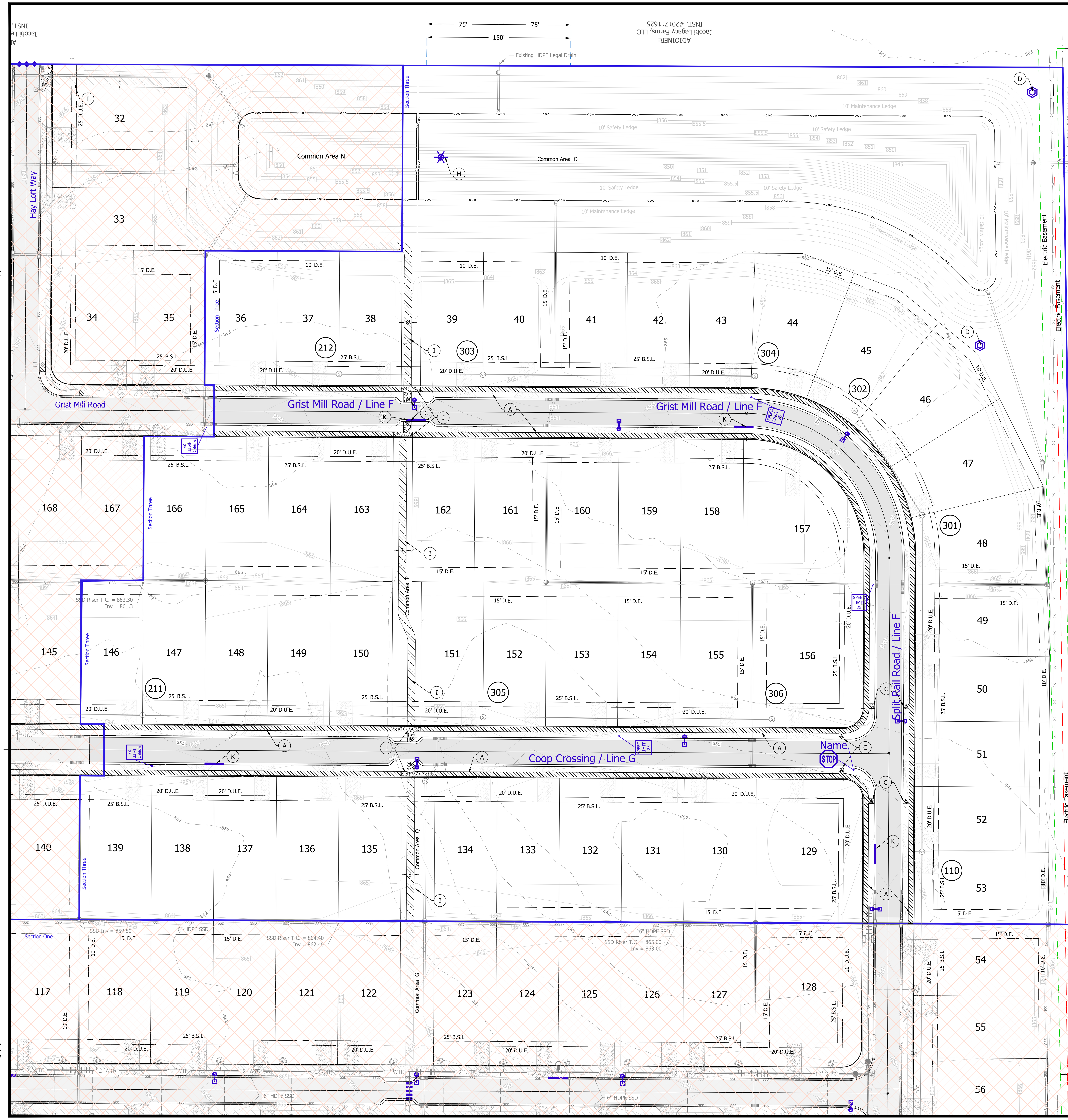
North

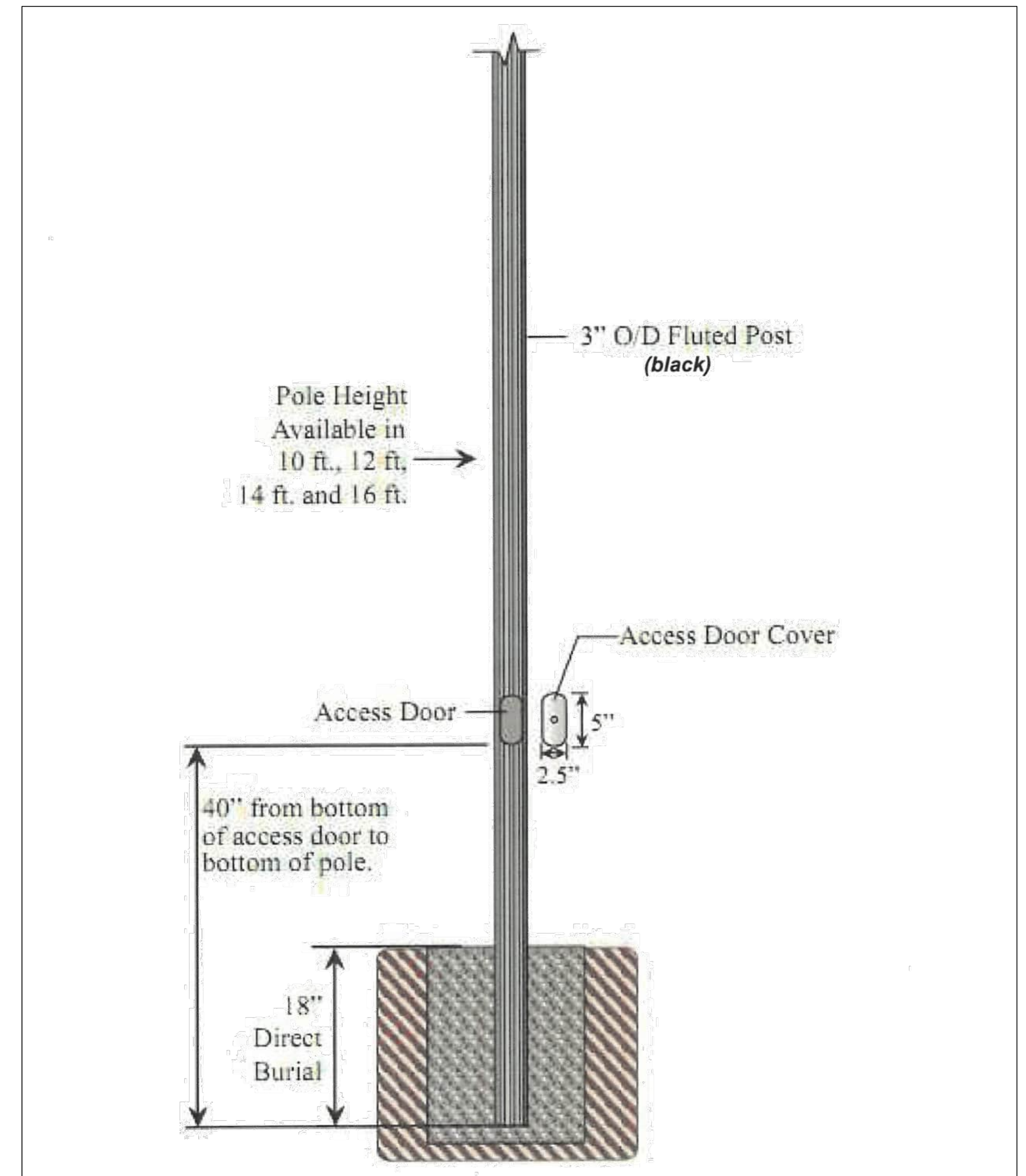
811 Know what's below. Call before you dig.

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

Gatherings at Aurora - Section 3 - 10/21/2024

File Path/Name: D:\Benchmark01\Benchmark\24 Jobs\24006-Gatherings at Aurora Section 3\dwgs\101.dwg - Date: Oct 21, 2024 - 2:39pm





STREET SIGN POLE DETAIL

NOT TO SCALE

Symbol		Description
STOP		Stop Sign Location MUTCD Sign R1-1 (30" x30")
Name		Street Name Sign Location
SPEED LIMIT 25 MPH		Speed Limit Sign MUTCD Sign R2-1 (24"x30")
A		5 Concrete Side Walk - Homeowner Installed
		Street Light Location Global Lighting Perspectives GR1116-NL_G2LED65-T3-40K_BT (See Sheet C802)
C		ADA Sidewalk Ramp (depress Curb as Needed for Ramp)
D		Pond Safety Sign
H		Fountain - Aquamaster, 230V, 5 HP Fountain w/ Sanibel Spray Pattern & 4 Clear LED Light Set
I		Multiuse Path - Developer Installed (10 Ft. & 8 Ft. Widths)
J		5' Concrete Sidewalk - Developer Installed
K		Curb Painting at Fire Hydrant (8" Yellow INDOT Reflective Paint 10' Each Side of Hydrant)

Proposed Street Names

A - Snider Boulevard

B - Meadow Way

C- Silo Crossing

D - Thresher Pass

E - Windmill Way

F - Splitrail Road

1. All construction to be in compliance with the latest edition of the Town of McCordsville Construction Standards Specifications and Details.
2. All signs to meet the current Indiana MUTCD.
3. All sign proofs to be submitted to the Town of McCordsville for approval before ordering.
4. Verify final street names with owner.
5. All street signs to be black fluted post. See detail on sheet C110.
6. All sidewalk/ramp warning pavers to be black in color.

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

Gatherings at Aurora - Section 3 - 10/21/2024

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

PRELIMINARY PENDING APPROVAL

DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

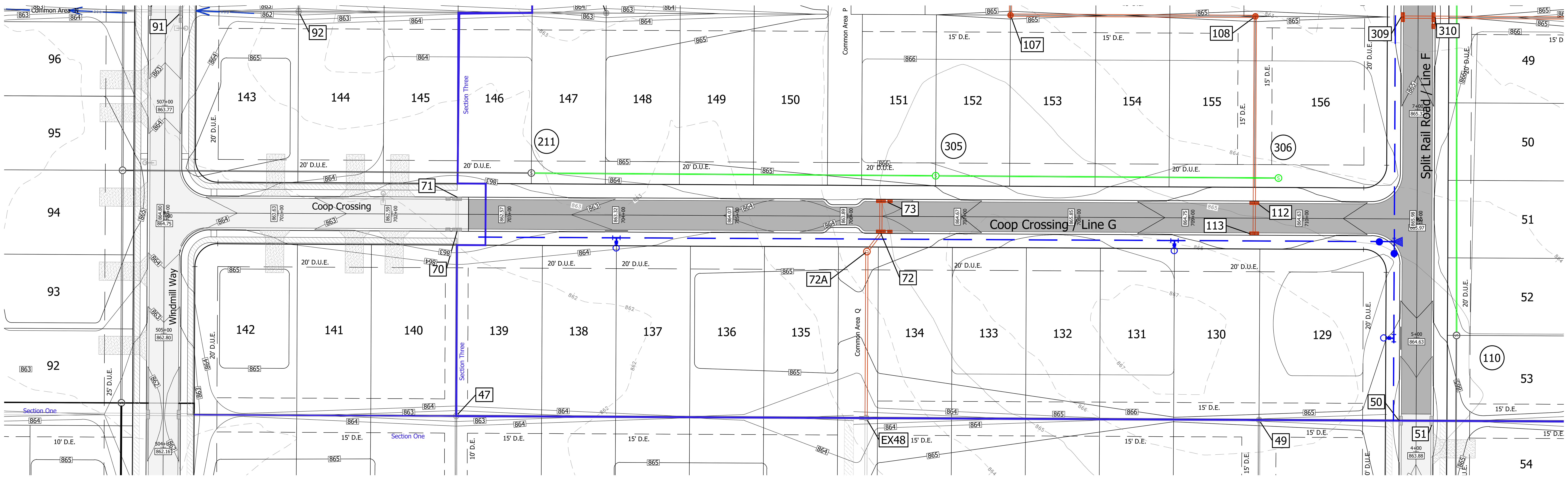
West CR 700 North McCordsville, IN

Sidewalk, Signage & Street Lighting Plan

DATE:	CHECKED BY:
10/21/24	N.A.W.

PROJECT NUMBER: 24006

SHEET # C105

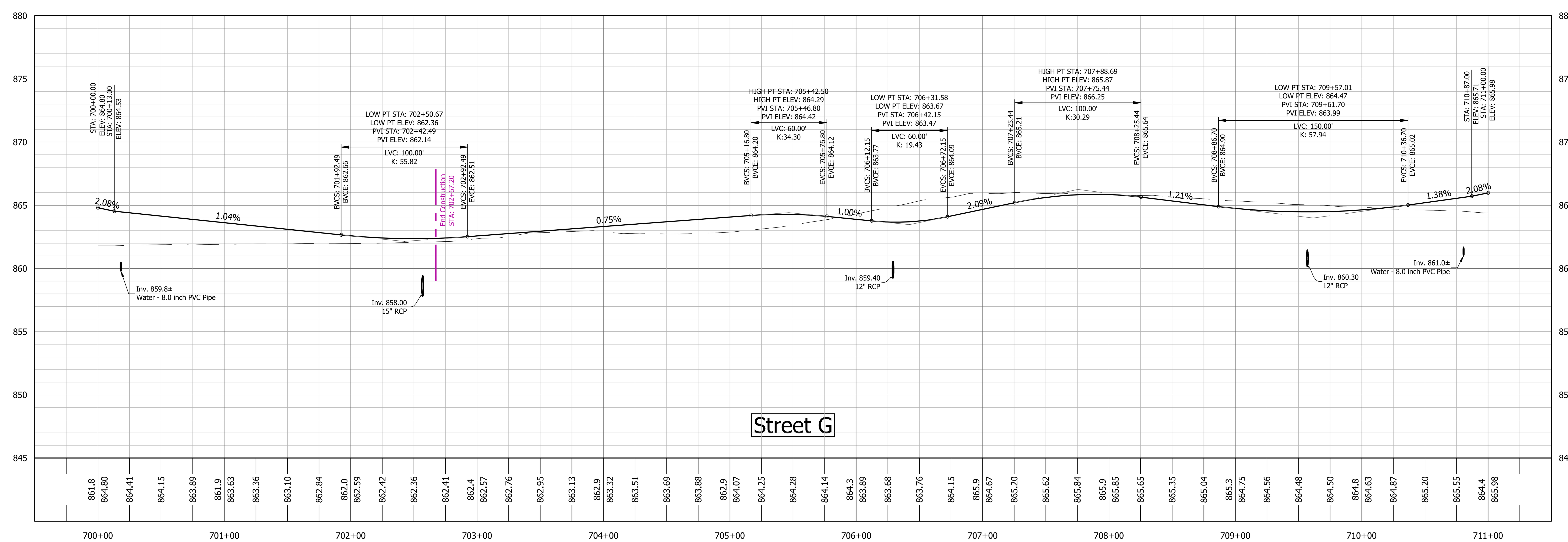


811 Know what's below. Call before you dig.

North

Scale
Horizontal Scale 1" = 50'
Vertical Scale 1" = 5'

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.



BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

PRELIMINARY PENDING APPROVAL

DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Roadway Centerline Plan & Profile

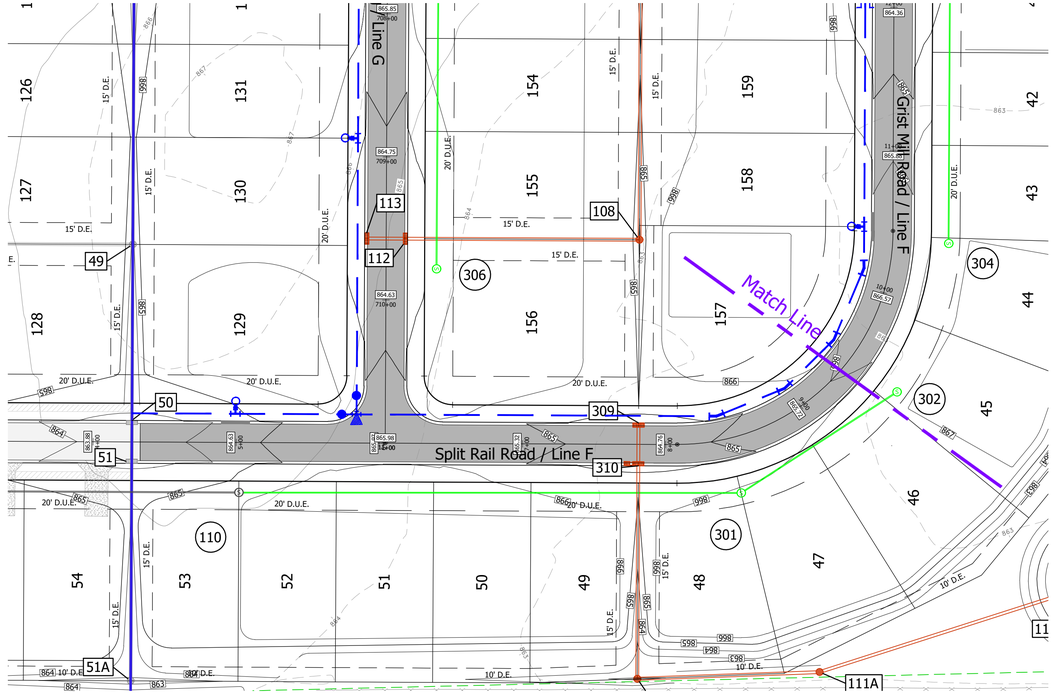
DATE:	CHECKED BY:
10/21/24	N.A.W.

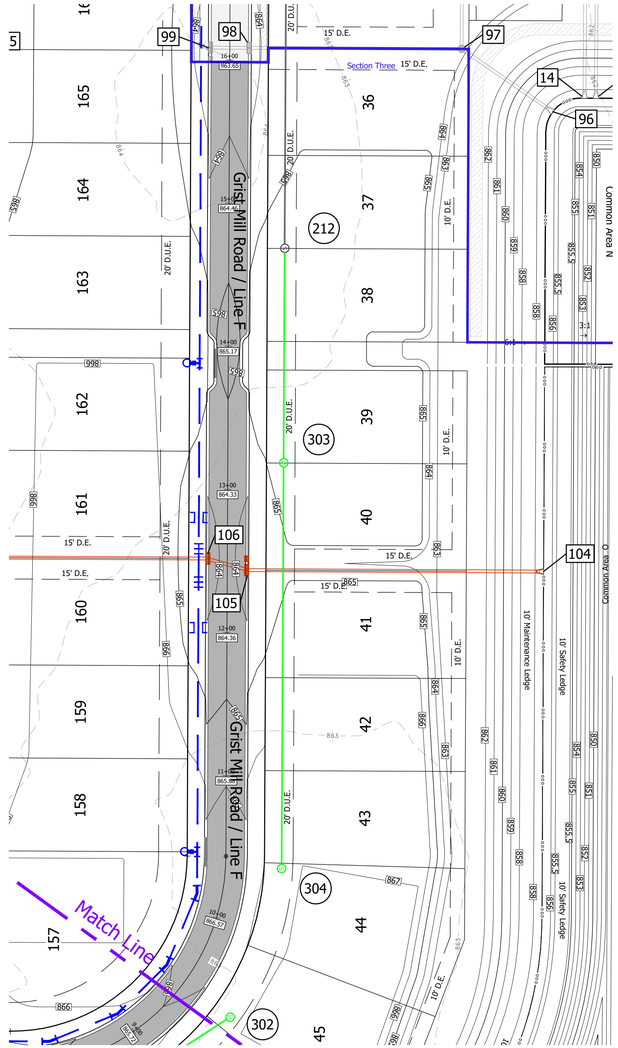
PROJECT NUMBER: 24006

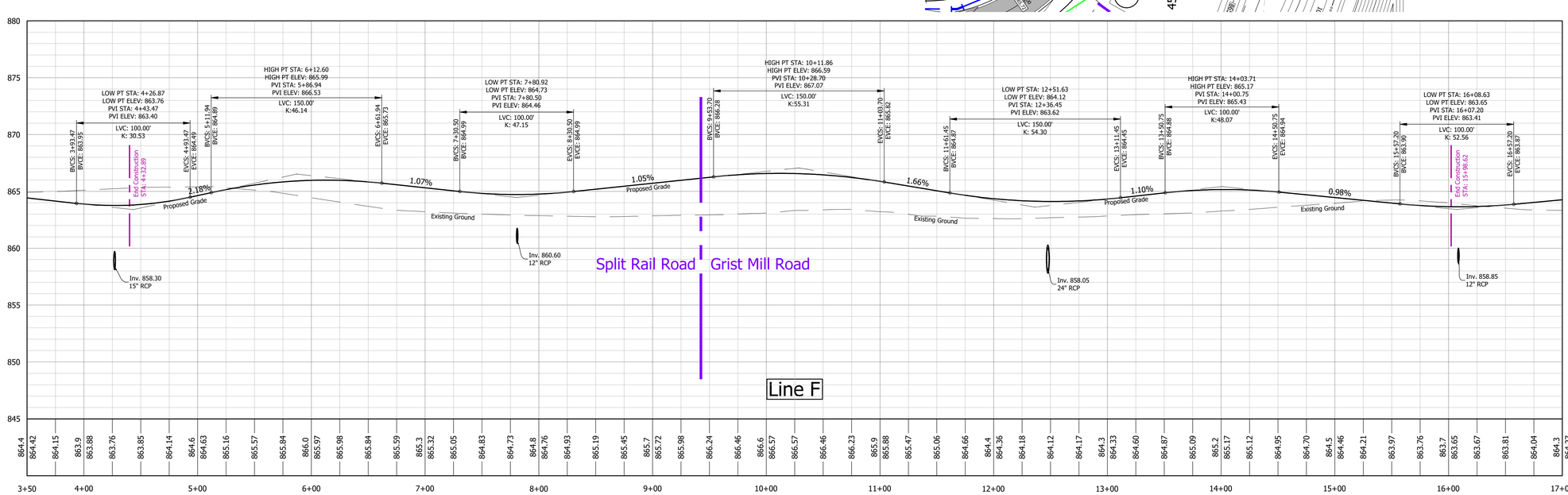
SHEET # C201

Gatherings at Aurora - Section 3 - 10/21/2024

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695







Know what's below. Call before you dig.

North

Scale
Horizontal Scale 1" = 50'
Vertical Scale 1" = 5'

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

BENCHMARK • CONSULTING, INC.

NATHAN A. WHITE
STATE OF INDIANA
PE 10006548
PRELIMINARY NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

Roadway Centerline Plan & Profile

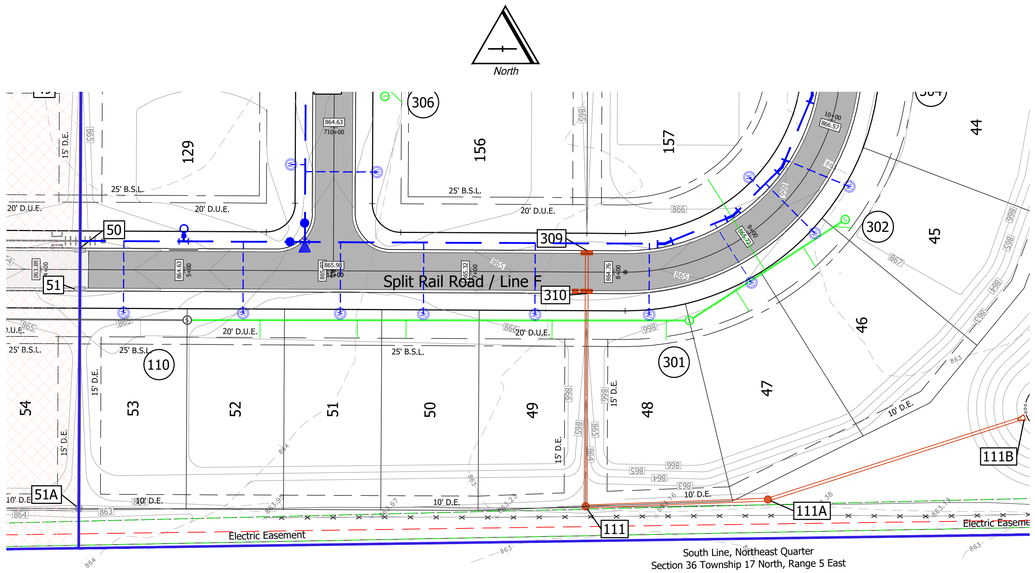
DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C202

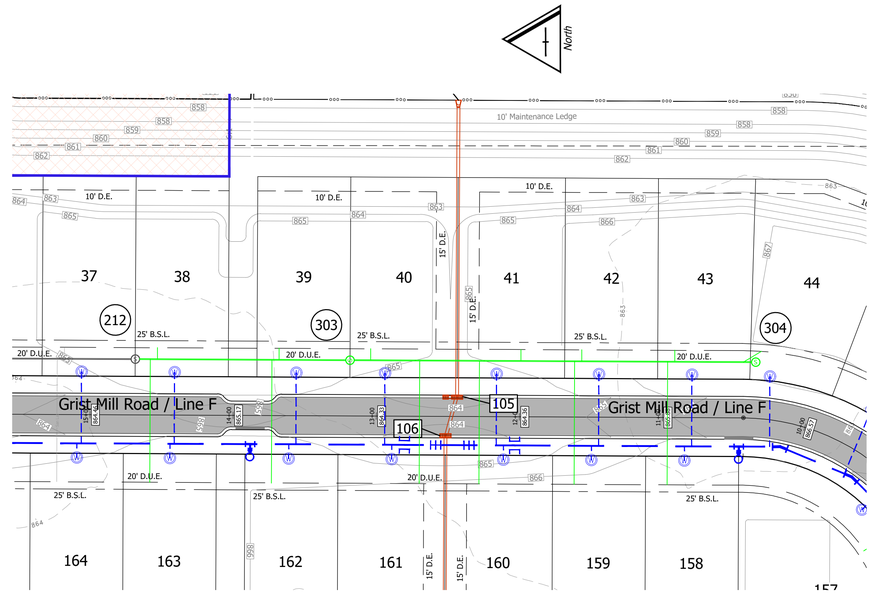
Gatherings at Aurora - Section 3 - 10/21/2024

File Path\Name: D:\Benchmark01\Benchmark 24\Jobs\24006-Gatherings at Aurora Section 3\dwgs\200.dwg Date: Oct 21,2024 - 2:08pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695





GENERAL NOTES

1. All sanitary sewer construction is to be in compliance with the latest Standards and Specifications of the Town of Mc Cordsville.
2. Contractor shall be responsible for contacting all permit issuing agencies within the time frame specified by the governing agency prior to construction.
3. It shall be the site contractor's responsibility to coordinate with the various public utilities to assure that the termini of lateral services do not conflict with the placement of other services (i.e. electric transformers, telephone pedestals, street lights & etc...)
4. Easements as illustrated are subject to change. Please reference the recorded "Final Plat" for final location.
5. Water main must maintain minimum 10' horizontal and/or 24" vertical separation from all storm and sanitary sewer pipes and manholes. If 24" separation is not possible install concrete collar around sanitary sewer.

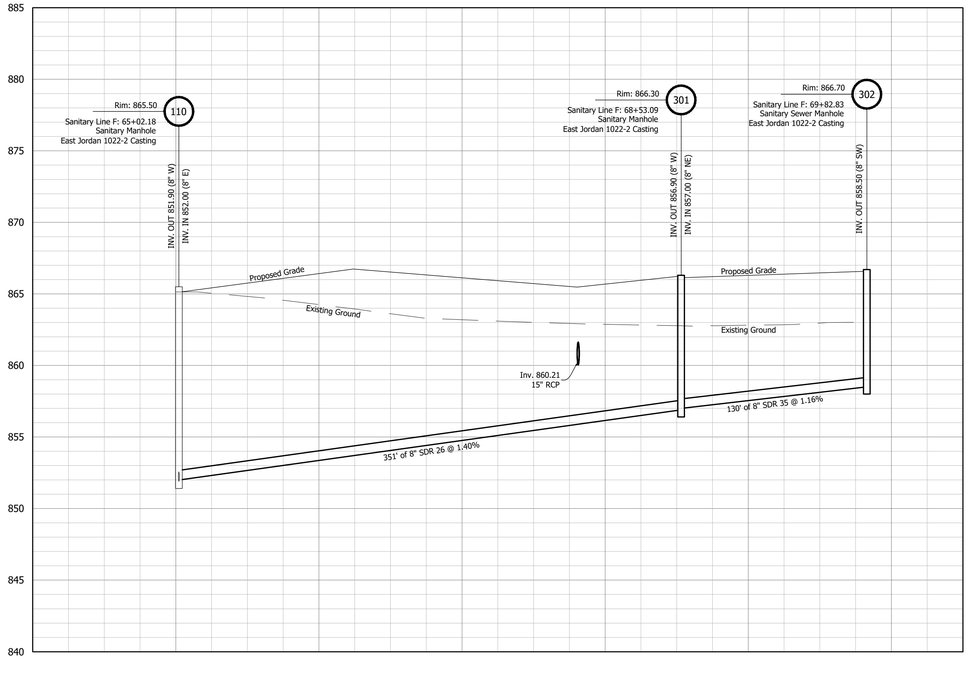
The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although the surveyor does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

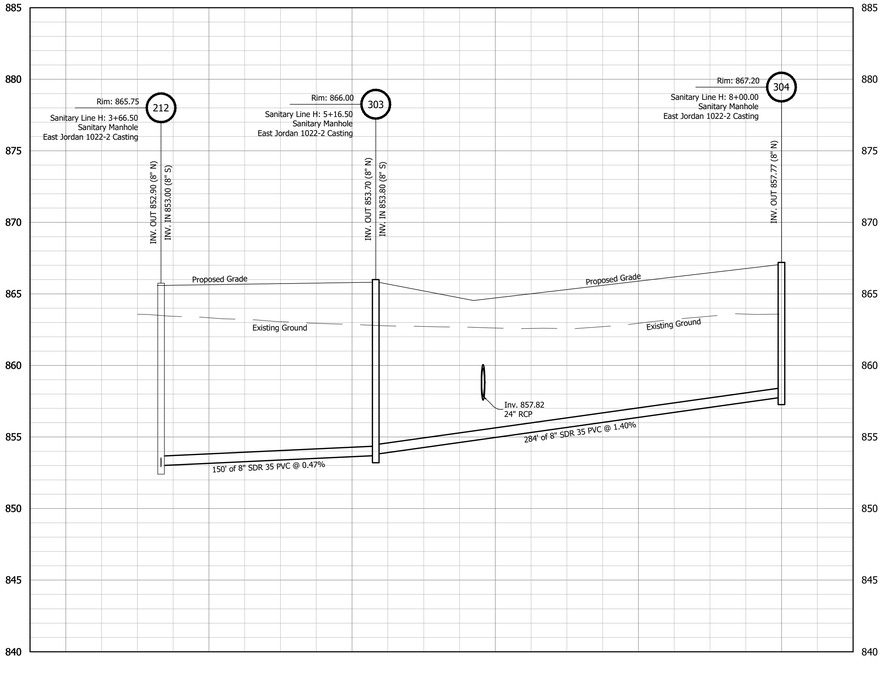
811 Know what's below. Call before you dig.

Scale
Horizontal Scale 1" = 50'
Vertical Scale 1" = 5'

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

Rim
Flat Inlets & Covers





BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Gatherings at Aurora - Section 3 - 10/21/2024

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE
STATE OF INDIANA
PE 10006548
REGISTERED PROFESSIONAL ENGINEER
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

Sanitary Sewer Plan & Profile

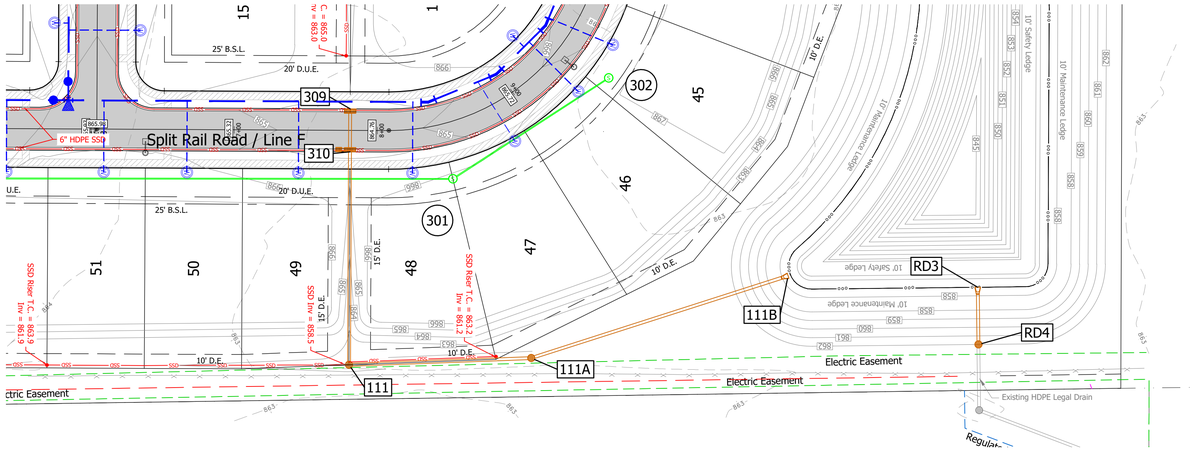
DATE:	CHECKED BY:
10/21/24	N.A.W.

PROJECT NUMBER: 24006

SHEET # C301

File Path\Name: G:\Benchmark\24 Jobs\24006-Gatherings at Aurora Section 3\dwgs\301.dwg - Date: Oct 21,2024 - 2:08pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



All Roadway Sump Inlets are shown to be depressed 0.1'

Road Crossing Backfill

Granular Back Fill

Beehive Inlets

Flat Inlets & Covers

Roll Curb Inlets

Chairback Curb Inlets

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

Pipe End Section

Stool Type Inlets

Scale
Horizontal Scale 1" = 50'
Vertical Scale 1" = 5'

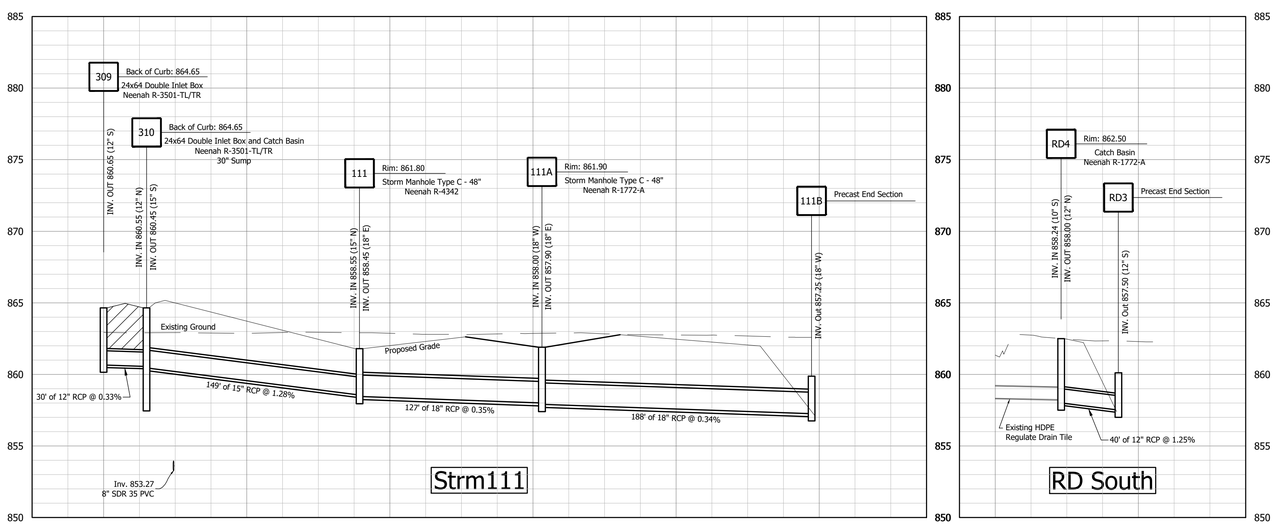
Know what's below. Call before you dig.

North

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

GENERAL NOTES

1. All storm sewer construction is to be in compliance with the latest Standards and Specifications of the Town of McCordsville.
2. Contractor shall be responsible for contacting all permit issuing agencies within the time frame specified by the governing agency prior to construction.
3. Contact the Hancock County Surveyor's Office before any work in the Regulated Drain Easement. A permit will be required.
4. It shall be the site contractor's responsibility to coordinate with the various public utilities to assure that the termini of lateral services do not conflict with the placement of other services (i.e. electric transformers, telephone pedestals, street lights & etc...)
5. Easements as illustrated are subject to change. Please reference the recorded "Final Plat" for final location.
6. All storm sewer castings are to have clean water messages "Dump No Waste Drains to Waterway" with fish icon.
7. Water main must maintain minimum 10' horizontal and/or 24" vertical separation from all storm and sanitary sewer pipes and manholes. If 24" separation is not possible install concrete collar around sanitary sewer.



BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Gatherings at Aurora - Section 3 - 10/21/2024

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE
STATE OF INDIANA
PE 10006548
REGISTERED PROFESSIONAL ENGINEER
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

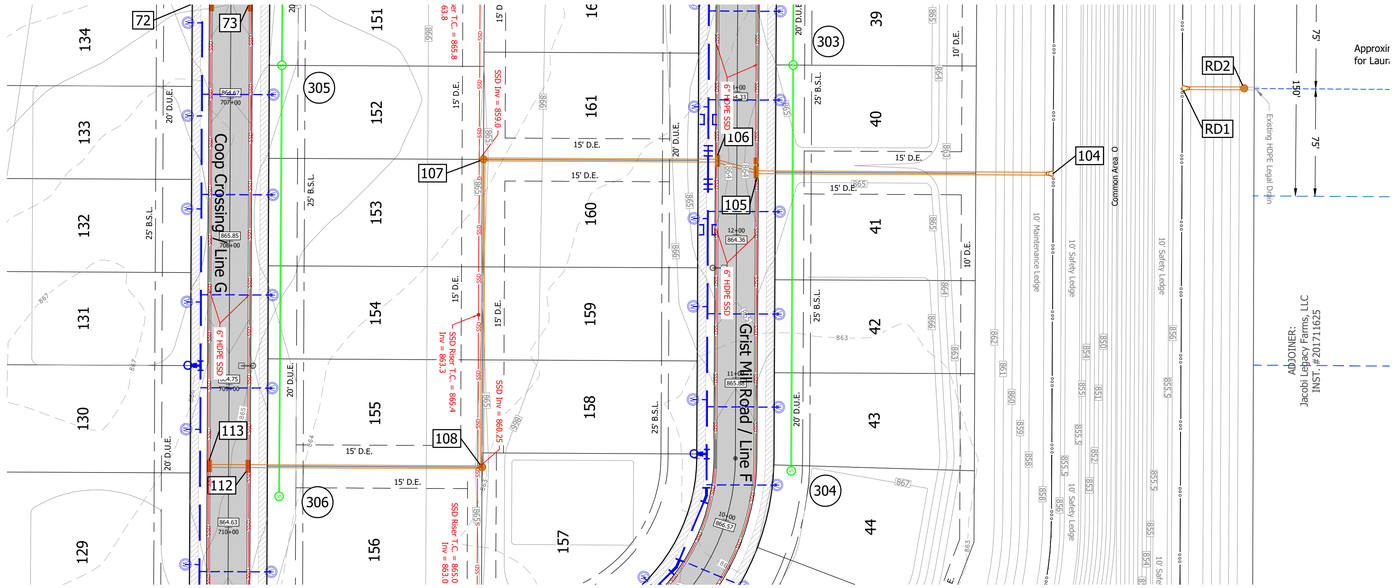
Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Storm Sewer Plan & Profile

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C401

File Path\Name: D:\Benchmark\01\Benchmark\24 Jobs\24006-Gatherings or Aurora- Section 3\dwgs\401.dwg - Date: Oct 21,2024 - 2:10pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



GENERAL NOTES

1. All storm sewer construction is to be in compliance with the latest Standards and Specifications of the Town of McCordsville.
2. Contractor shall be responsible for contacting all permit issuing agencies within the time frame specified by the governing agency prior to construction.
3. Contact the Hancock County Surveyor's Office before any work in the Regulated Drain Easement. A permit will be required.
4. It shall be the site contractor's responsibility to coordinate with the various public utilities to assure that the termini of lateral services do not conflict with the placement of other services (i.e. electric transformers, telephone pedestals, street lights & etc...)
5. Easements as illustrated are subject to change. Please reference the recorded "Final Plat" for final location.
6. All storm sewer castings are to have clean water messages "Dump No Waste Drains to Waterway" with fish icon.
7. Water main must maintain minimum 10' horizontal and/or 24" vertical separation from all storm and sanitary sewer pipes and manholes. If 24" separation is not possible install concrete collar around sanitary sewer.

All Roadway Sump Inlets are shown to be depressed 0.1'

Road Crossing Backfill

Granular Back Fill

Beehive Inlets

Flat Inlets & Covers

Roll Curb Inlets

Chairback Curb Inlets

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

Pipe End Section

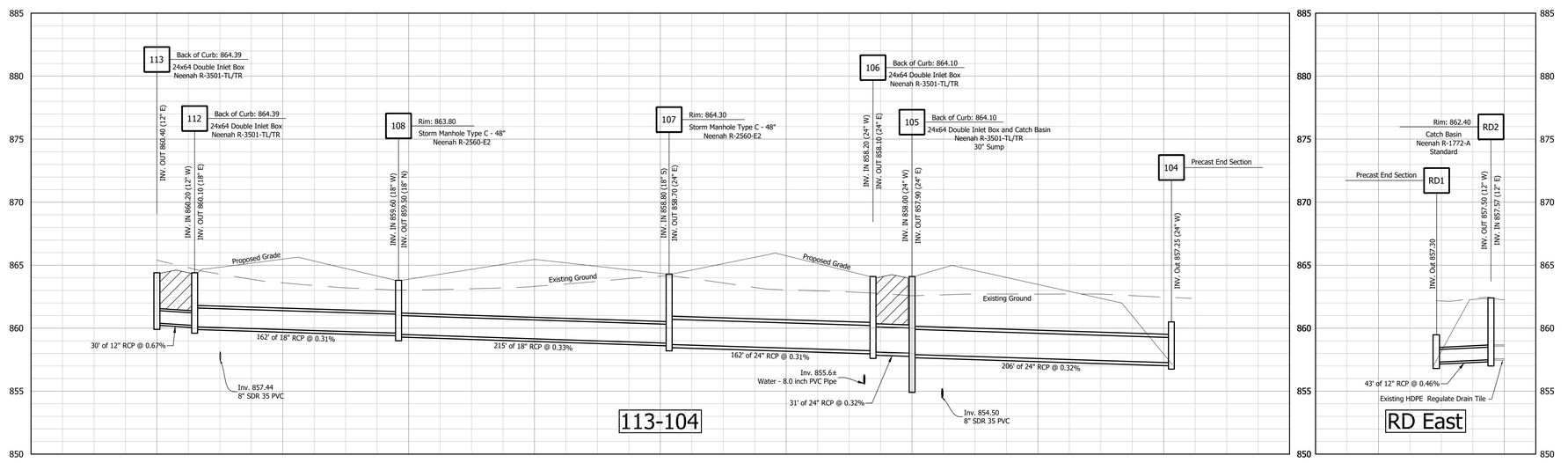
Stool Type Inlets

Scale
Horizontal Scale 1" = 50'
Vertical Scale 1" = 5'

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

North

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.



BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

STATE OF INDIANA
NATHAN A. WHITE
PE 10006548
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY NOT FOR CONSTRUCTION PENDING FINAL APPROVAL
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

Storm Sewer Plan & Profile

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C402

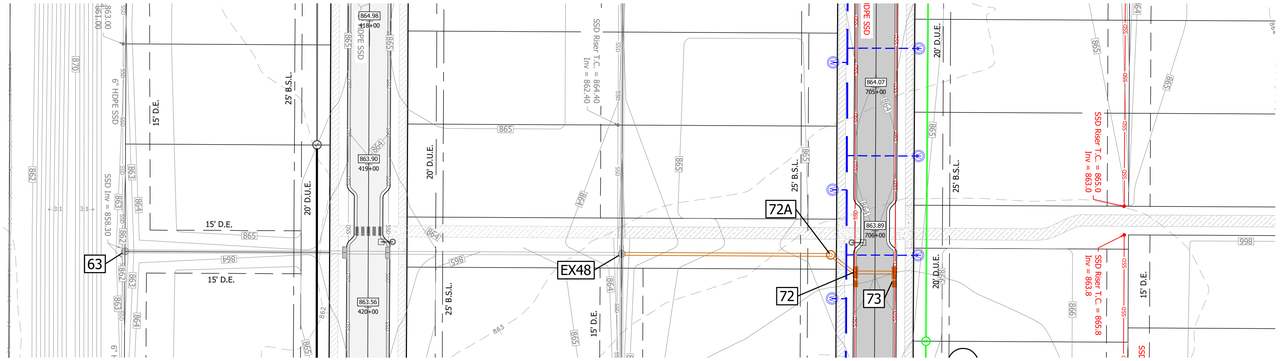
Gatherings at Aurora - Section 3 - 10/21/2024

File Path Name: D:\Benchmark\01\Benchmark\24 Jobs\24006- Gatherings at Aurora- Section 3\dwgs\400.dwg Date: Oct 21,2024 - 2:11pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

GENERAL NOTES

1. All storm sewer construction is to be in compliance with the latest Standards and Specifications of the Town of McCordsville.
2. Contractor shall be responsible for contacting all permit issuing agencies within the time frame specified by the governing agency prior to construction.
3. Contact the Hancock County Surveyor's Office before any work in the Regulated Drain Easement. A permit will be required.
4. It shall be the site contractor's responsibility to coordinate with the various public utilities to assure that the termini of lateral services do not conflict with the placement of other services (i.e. electric transformers, telephone pedestals, street lights & etc...)
5. Easements as illustrated are subject to change. Please reference the recorded "Final Plat" for final location.
6. All storm sewer castings are to have clean water messages "Dump No Waste Drains to Waterway" with fish icon.
7. Water main must maintain minimum 10' horizontal and/or 24" vertical separation from all storm and sanitary sewer pipes and manholes. If 24" separation is not possible install concrete collar around sanitary sewer.



All Roadway Sump Inlets are shown to be depressed 0.1'

Road Crossing Backfill

Granular Back Fill

Beehive Inlets

Flat Inlets & Covers

Roll Curb Inlets

Chairback Curb Inlets

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

Pipe End Section

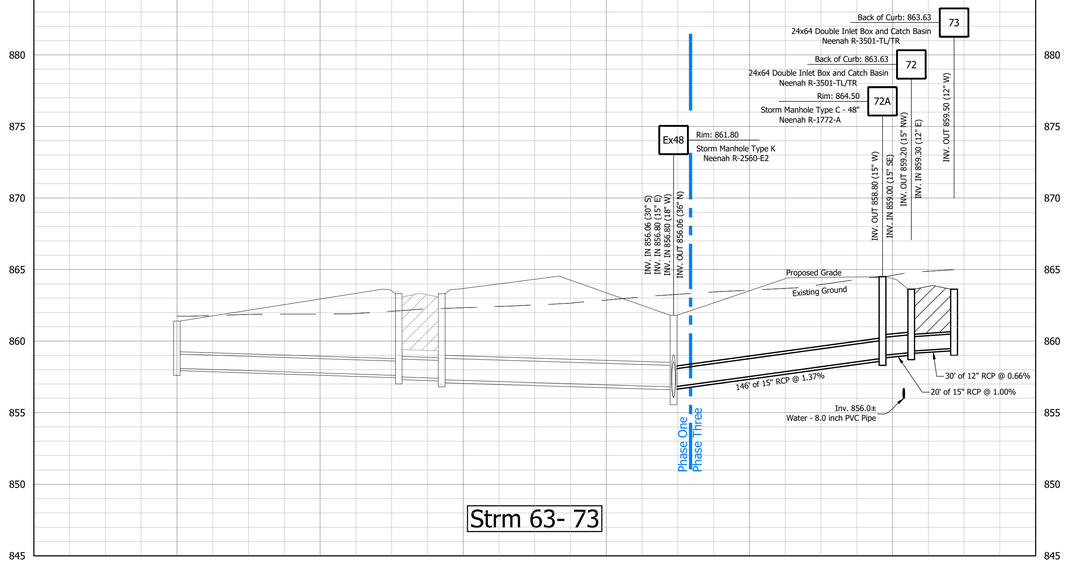
Stool Type Inlets

Scale
Horizontal Scale 1" = 50'
Vertical Scale 1" = 5'

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

North

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.



Strm 63- 73

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE
STATE OF INDIANA
PE 10806548
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
PROFESSIONAL ENGINEER
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

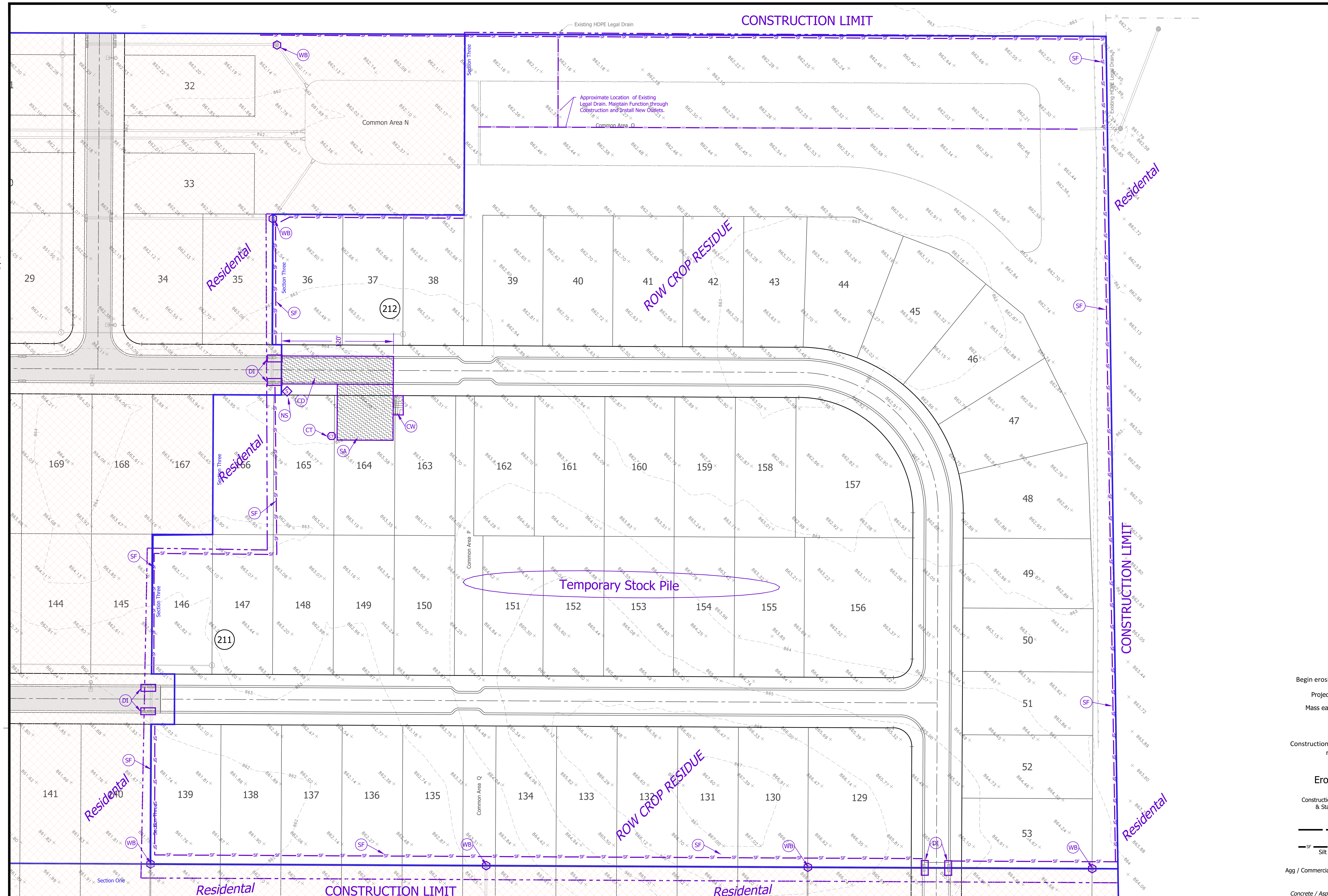
Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Storm Sewer Plan & Profile

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C403

Gatherings at Aurora - Section 3 - 10/21/2024

File Path Name: D:\Benchmark\24 Jobs\24006-Gatherings or Aurora- Section 3\dwgs\430.dwg - Date: Oct 21,2024 - 2:11pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

Construction Timetable

Begin erosion control practice installation: March 1, 2025

Project construction start date: March 15, 2025

Mass earthwork completion date: October 31, 2025

Project Narrative

Construction of 60 single family home sites with associated roadway and utility improvements.

Erosion Control Plan Legend

Construction Access Drive & Staging Area	CD SA	
Construction Limits		
Silt Fence	SF	
Agg / Commercial / Residential	Surrounding Land use	
Concrete / Asphalt / Lawn	Existing Surface	
Construction Toilet	CT	
Concrete Washout	CW	
Notification Sign	NS	
Wire Basket Inlet Protection	WB	
Drop Inlet Protection	DI	

Erosion Control Sequence

The provided construction sequence is intended as a general guideline only; the actual construction sequence may be varied by the contractor as required by field conditions, provided full conformance with the intent of 327 IAC 15-5 (Rule 5), General Permit for construction activity storm water runoff control, is achieved. Contractor shall notify Benchmark Consulting, Inc, local County Soil and Water Conservation District and the local jurisdiction planning staff prior to any changes in the general construction sequence.

1. Before any earth disturbing activities including installation of sediment and erosion control measures a preconstruction meeting with the local jurisdiction, Developer, Contractor, Sediment and Erosion control installer, and the qualified individual for the sediment and erosion control will need to be held. The preconstruction meeting will need to be setup 72 hours before commencement activities.
2. Post contractor and owner information at site entrance.
3. Contact IDEM at (317) 233-1864 & Local County Soil and Water Conservation Service & the local jurisdiction forty-eight hours prior to the beginning of construction.
4. Call the Indiana Underground Plant Protection Systems, Inc. At 811 or 1-800-382-5544 to check the location of existing utilities. They are to be notified a minimum of two working days before construction takes place.
5. Stake construction limits to ensure all work stays on site.
6. Install construction drive and perimeter silt fence protection.
7. Begin mass earthwork with the stripping of topsoil and stockpile as needed.
8. Install any required temporary seeding per this plan and seasonal soil protection chart on sheet C504.
9. General contractor shall temporary seed and mulch any disturbed area that is planned to remain unchanged for a period of more than 15 days.

Erosion Control Plan General Notes

1. The contractor, owner and/or their designated agents shall assume full responsibility for ensuring site construction on this project is completed in full conformance with the requirements of 327 IAC 15-5 (Rule 5).
2. Site is required to be inspected weekly and after any rain event greater than $\frac{1}{2}$" within a 24 hour period. A written report is to be prepared by qualified person after each inspection. Report shall note any areas of concern or failing erosion and sediment control measures. Report is to be provided to the engineer and owner each week. Copies of reports are to be provided to any local jurisdictional representative with 24 hours of request.
3. If any additions or subtractions are made to the approved plan due to field conditions they are to be recorded on a copy of the approved construction plans and kept on site. A description of the change and an explanation of why the change is being made is to be provided to the engineer.
4. Tracking of sediment onto abutting road system shall be prevented to the greatest extent possible. Vehicles shall be cleaned of mud and debris as required to prevent tracking. Mud and debris which is tracked onto the road system shall be removed by scraping and/or sweeping and placed in a protected area.
5. Any disturbed area that is planned to be left unchanged for more than 15 days is to be temporary seeded and mulched.
6. No sediment barriers are to be removed until all upstream areas have been stabilized.
7. Additional erosion control measures may be required by State, County or Town officials if field conditions warrant.
8. All erosion control practices shall be in accordance with the latest edition of the IDEM Indiana Storm Water Quality Manual and the Natural Resources Conservation Service Field Office Technical Guide and INDOT Stomemwater Management Field uide.
9. Any soil removed from the site is to be taken to a permitted site with adequate erosion control measures in place.
10. Contractor is responsible to maintain all erosion control measures until site is stabilized. Once site is stabilized contractor to remove sediment trapping devices (i.e. Drop inlet protection, rock check dams, concrete washout basin).

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

Gatherings at Aurora - Section 3 - 10/21/2024

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

PRELIMINARY PENDING APPROVAL
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

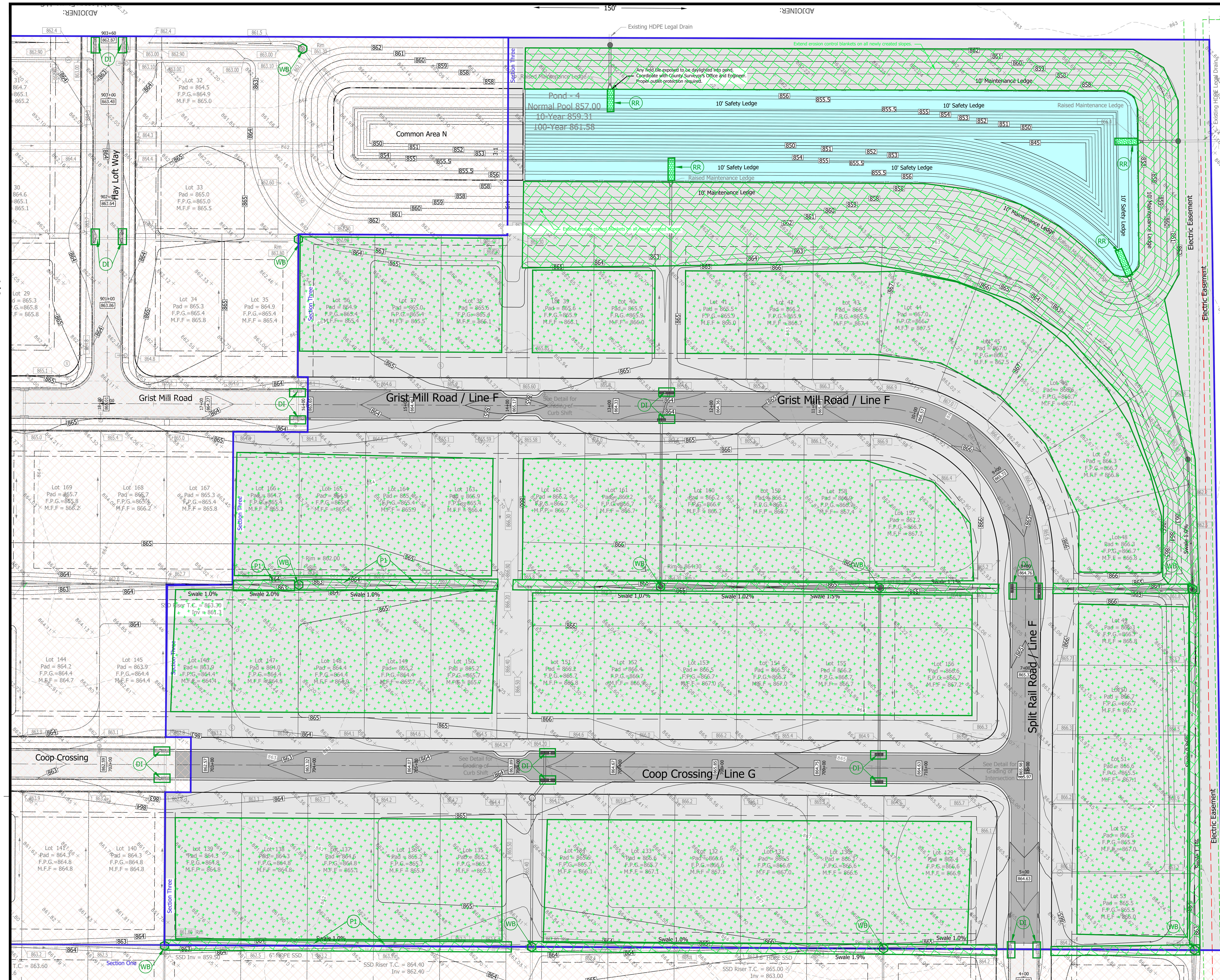
Erosion Control Plan Phase I

DATE:	CHECKED BY:
10/21/24	N.A.W.

PROJECT NUMBER: 24006

SHEET # C501

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

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

Erosion Control Sequence

The provided construction sequence is intended as a general guideline only; the actual construction sequence may be varied by the contractor as required by field conditions, provided full conformance with the intent of 327 IAC15-5 (Rule 5), General Permit for construction activity storm water runoff control, is achieved. Contractor shall notify Benchmark Consulting, Inc, Hancock County Soil and Water Conservation District and the Town of McCordsville planning staff prior to any changes in the general construction sequence.

1. Complete underground utilities.
2. Install storm sewer inlet protection as soon as inlet has been installed.
3. Complete roadway construction.
4. Finish grade site.
5. Install surface stabilization measures as illustrated within these approved erosion control plans.
6. Do not remove any sediment trapping device until all upstream areas have been stabilized. The vegetated areas shall be considered "stabilized" when vegetation has been established with a density of seventy percent (70%). Unvegetated areas that are scheduled or likely to be left inactive for 15 days must be temporarily or permanently stabilized with measures appropriate for the season to minimize erosion potential.
7. All disturbed areas not complete to final grade are to be temporary and permanently seeded with mulch no later than October 31st.
8. Extended soil stockpiles are not anticipated to be required as a result of the proposed earth moving construction. Any excess dirt which may result upon completion of the earthwork shall be hauled off to an offsite location. The contractor or developer shall notify the Town of McCordsville of any offsite stockpiling, filling or borrow areas. Documentation of proper permits will need to be on file with the Town prior to any earthwork or excavation regarding offsite construction.
9. After site work has been completed and site cover reestablished request Notice of Termination (N.O.T.) inspection from the Town of McCordsville. McCordsville must approve N.O.T. before submitting to IDEM. Once site has been stabilized and the N.O.T. approved by McCordsville all temporary erosion control measures are to be removed by the general contractor.

Erosion Control Plan Legend

Symbol	Description
SF	Silt Fence Sediment Barrier (Nutec 3 NWS-6 or Equal)
P3	Temporary Seeding with Straw Mulch ad 2 tons per acre
P2	Permanent Seeding with Straw Mulch at 2 tons per acre
P1	Seeding with Erosion Control Blanket (North American Green S75 or equal)
DI	Drop Inlet Protection (Dandy Sack or Equal)
WB	Wire Basket Inlet Protection
RR	Rip Rap Endsection Treatment (TMSD Pg 7 of 10)

REVISIONS:
1. 07/24/24 Revised ec blankets on mounding at new overflow

Gatherings at Aurora - Section 3 - 10/21/2024

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

PRELIMINARY PENDING APPROVAL
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3
West CR 700 North McCordsville, IN
Erosion Control Plan Phase II

DATE:	CHECKED BY:
10/21/24	N.A.W.

PROJECT NUMBER: 24006
SHEET # C502

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

Assessment of Construction Plan Elements (Section A)

A1 Index showing locations of required plan elements
See erosion control plan sheet C501- C502

A2 Vicinity Map Depicting the Project Site Location
See Sheet C100

A3 Narrative of Nature and purpose of project
Construction of 60 single family residential homes sites with a community building and sports court. Associated utility infrastructure, roadways, and retention ponds will also be included in construction.

A4 Latitude and Longitude of Project Site
Project latitude: North 39°52'46" Project longitude: West 85°54'21"

A5 Legal Description of Project Site
Legal - sheet C100

A6 11" x 17" Plat Showing Building Lot Number and Boundaries
Included in submission

A7 Boundaries of 100-Year Flood Plain, Fringe and Floodway
The site is located in zone "X" per community panel 18059C0019E; effective March 17, 2014
See sheet C100 for floodway mapping.

A8 Adjacent Land Use
NORTH - Residenital SOUTH - Residential EAST - Agricultural WEST - Residential

A9 Identification of a U.S. EPA Approved or Established TMDL Waterway
None

A10 Receiving Waters
Stanzbury Ditch - Thorpe Creek - Geist Reservoir

A11 Identification of Discharges to EPA 303(d) Impaired Water Ways
Not Listed

A12 Soils Mapping
See sheet C505 for soils mapping.

A13 Identifications and Location of all Known Wetlands, Lakes and Water Courses
No wetlands are know to exist in the area of residential development. The Stanzbury Ditch runs through the site and jurisdictional areas are located in the are of the ditch. No disturbance in the likely area of wetlands is anticipated with this phase of development.

A14 Identification of State of Federal Water Quality Permits
None

A15 Existing Vegetative Cover
Agricultural Row Crops

A16 Existing Topography
See sheet C501

A17 Location Where Storm Water Enters Site
Stormwater generally flow via sheet and shallow concentrated flow in north westerly direction and enters the project area from the eastern boundary. Minimal flow enters form the south as a result of previous residential development. Two know field tiles transmit storm water through the project site. The Laura T Gale Regulate Drain and travel in a northwesterly direction to the Stanzbury Ditch.

A18 Locations Where Stormwater Runoff Discharges Site Before Construction
Stormwater runoff generally flows northwesterly via sheet and shallow concentrated flow to the Stanzbury Ditch.

A19 Location of Existing Structures on Site
None.

A20 Existing Permanent Retention / Retention Facility
Four retention ponds were constructed with phase 1 & 2 of development. The fourth pond started with phase 2 will be completed.

A21 Locations Where Stormwater May Directly Discharge into Ground Water
None

A22 Size of Project Area (Ac)
18.763 ac

A23 Total Area of Disturbance (Ac)
20.0 Ac

A24 Final Site Topography
See Grading Plan Sheet C101 - C102

A25 Location of Boundary of Disturbed Area
See Sheet C501 for Construction Limits

A26 Location Size & Dimensions of Stormwater Drainage System
See Utility Plan & Storm Sewer Plan and Profile Sheets

A27 Location Where Stormwater Runoff Leaves Site
The majority of storm water runoff will be collected in the storm sewer system and exist Pond 1 to the Stanzbury Ditch.

A28 Location of all Proposed Site Improvements
See Development Plan sheet C103-C104

A29 Location of all Proposed Onsite and Off-site Stock Piles and Borrow Area
No long term soil stock piles are planned on site. Short term stockpiles as needed will be limited to the east side of the project site and will be incorporated into future phases of development. No fill material is anticipated to be brought onsite or taken offsite.

A30 Construction Support Activities
The construction staging area and all support areas are contained in the defined construction limits on site.

A31 Location of In-Stream Construction Activities
None

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

Assessment of Storm Water Pollution Prevention Plan Construction Component (Section B)

B1 Potential Pollutant Sources Associated with Construction Activities
The materials and substances listed below are expected on-site.

Biological Solid Waste
Trap in containers, cleaned regularly, and disposed of according to local, county, state and federal regulations or other public agency. Schedule waste collection more frequently to prevent containers from overfilling. Untreated, raw sewage or septage should never be discharged or buried onsite.

Adhesives - Store in approved containers, and dispose of according to local, county, state and federal regulations or other public agency.

Aerosol spray products - Store in approved containers, and dispose of according to local, county, state and federal regulations or other public agency.

Paints, thinners and solvents - Ensure that containers have lids so that they can be covered before periods of rain, and keep containers in dry, covered area whenever possible.

Batteries - Store onsite in dry covered area and dispose of per manufacturer's recommendations in conjunction with state, local and federal regulations.

Regulated PCB Material - Store in approved containers, and dispose of according to local, county, state and federal regulations or other public agency.

Motor Oil - Store petroleum products for vehicles in covered areas with leak-proof heavy duty plastic liner on the ground with dikes in place to contain and spills. Immediately contain and clean up any spills with absorbent materials. Motor oil should be changed in a designated area with a metal catch pan of 4'x4'x8" minimum and properly disposed of.

Antifreeze - Store in approved containers, and dispose of according to local, county, state and federal regulations or other public agency.

Fuel - Store fuel for vehicles in covered areas with leak-proof heavy duty plastic on the ground with dikes in place to contain and spills. Immediately contain and clean up any spills with absorbent materials.

Brake fluids - Store in approved containers, and dispose of according to local, county, state and federal regulations or other public agency.

Hydraulic - Fluids store in approved containers, and dispose of according to local, county, state and federal regulations or other public agency.

Rubble-Asphalt/Concrete - Dispose of in proper containers and recycle per local, county, state and federal regulations.

Land Clearing Debris - Recycle appropriately in appropriately marked containers and schedule regular pickup before overfilling occurs.

Soil amendments - All soil amendments including lime used as structural soil modification are to be applied in a manner and amount as directed by geotechnical engineer. All amendments are to be stored in their original manufacture container prior to use. No amendments are to be stored on site if not in their original container. Amendment's transported in bulk are to be used the same day they are delivered to the site. No amendments are to be exposed to rain or excessive wind prior to placement.

Waste - All waste materials will be collected and stored in a securely lidded approved container. All trash and non-recyclable materials shall be deposited in the dumpster daily. The dumpster should be emptied periodically and not allowed to overfill. Do not throw trash on ground or bury materials on site.

Unused Building Materials - All waste materials will be collected and stored in a securely lidded approved container. All recyclable materials shall be deposited in the dumpster daily. The dumpster should emptied periodically and not allowed to overfill. Do not bury materials on site.

Concrete (Masonry) Washout - Washout water and wet concrete material are polluted waste and must be treated as such. Concrete washout areas should bermed, self contained area approximately 10'x10'x3' in a place to contain the concrete, but allow the water to evaporate. Dried material shall be removed and disposed of properly. The concrete washout area shall be placed away from storm water structures and water bodies. See detail.

Fertilizers/Pesticides/Detergents - Fertilizers and pesticides will be applied only in the minimum amounts recommended by the manufacturer. once applied, fertilizer will be worked into the soil to limit the exposure time to storm water. Storage will be in a covered shed. the contents of any partially used bag of fertilizer will be transferred to a sealable plastic bin to avoid spills. The original label and safety information will be retained. Storage areas shall be bermed to contain spill from running into groundwater or storm system.

B2 Stable Construction Entrance Location and Specification
See erosion control plan sheets for location and construction details

B3 Temporary & Permanent Surface Stabilization Methods

Temporary Stabilization

- Unvegitated areas that are left idle or scheduled to be left inactive must be temporarily or permanently stabilized with measures appropriate for the season to minimize erosion potential. To meet this requirement, the following apply:
- Stabilization must be initiated by the end of the seventh (7th) day the area is left idle. The stabilization activity must be completed within fourteen (14) days after initiation. Initiation of stabilization includes, but is not limited to, the seeding and/or planting of the exposed area and applying mulch or other temporary surface stabilization methods where appropriate. Areas that are not accessible due to an unexpected and disruptive event that prevents construction activities are not considered idle.
- Areas that have been compacted may be excluded from the stabilization requirement when the areas are intended to be impervious surfaces associated with the final land use, provided run-off from the area is directed to appropriate sediment control measure.
- Topsoil replacement shall take place from March 1 to October 31. Stockpile topsoil at all other time of the year. Permanent and final vegetation and structural erosion control devices shall be installed within seven (7) days after final grading or as soon as possible.
- Temporary seeding shall utilize seed species, application rates, and dates set forth in figure 5-2 through figure 5-4 on sheet C504.

Permanent Stabilization

- Any bare disturbed areas will be graded, seeded and mulched or otherwise revegitated or stabilized, as per the erosion control plan. Before permanent seeding all surfaces are to be graded to final grade with a layer of topsoil a minimum four inches thick. Permanent seeding will be according to the seed species, rates and dates figure 5-2 through figure 5-4 on sheet C504.
- At the proper time, with approval from the owner, and only after notifying the proper SWCD or Stormwater agent, the contractor shall dismantle the remaining erosion control elements only as required to finish all grading. Contractor shall notify the proper SWCD or Stormwater agent in advance and arrange for the landscaping contractor to follow up immediately with revegetation of the remaining areas.
- Contractor shall remove any unsuitable material from the site left from the erosion control measures.
- Final stabilization of a project site is achieved when: All land disturbing activates have been completed and a uniform (for example, evenly distributed, without large bare areas) perennial vegetative cover with a density of seventy percent (70%) has been stabilized on all unpaved areas and areas not to be covered by permanent structures, or equivalent permanent stabilization measures have been employed. Implementation and maintenance will be according to sections C2 and C5 below.

B4 Sediment Control Measures for Concentrated Flow Areas
None

B5 Control Measures for Sheet Flow Areas
Silt Fence; See Erosion Control Plan sheets for locations; See Erosion Control Detail sheets C504 for installation details

B6 Runoff Control Measures
A system of retention ponds will be constructed to control the rate of stormwater runoff.

Inlet Protection Measure Locations and Specifications
Dandy Sack sediment barriers & silt fence sediment barriers. Any inlet with the potential to receive storm water runoff from this site should be protected with the appropriate measure.

B7 Storm Water Outlet Protection Specifications
Rip rap and/or gabion baskets are to be installed at storm water outlets. See sheet C505 for locations and details.

B8 Grade Stabilization Structures
N/A

B9 Dewatering Structures
Dewatering as necessary to be conducted with a properly size manufactured dewatering bag. See sheet C505 for a typical dewatering bag setup.

B10 Construction Within Water Bodies
None

B11 Maintenance Guidelines for Stormwater Measurers
See maintenance specifications on this sheet and on C504-C504

B12 Construction Sequence
The provided construction sequence is intended as a general guideline only; the actual construction sequence may be varied by the contractor as required by field conditions, provided full conformance with the intent of Indiana Construction General Stormwater Permit for construction activity storm water runoff control, is achieved. Contractor shall notify Benchmark Consulting, Inc, Town of McCordsville planning staff prior to any changes in the general construction sequence.

Erosion Control Sequence - Phase 1

1. Before any earth disturbing activities including installation of sediment and erosion control measures a preconstruction meeting with the local jurisdiction, developer, contractor, sediment and erosion control installer, and the qualified individual for the sediment and erosion control will need to be held. The preconstruction meeting will need to be setup 72 hours before commencement activities.
2. The project site owner shall post a notice near the main entrance of the project site. The notice must be maintained in a legible condition and contain the following information: (A) Copy of the completed NOI letter and the NPDES permit number where applicable. (B) Name, company name, telephone number, e-mail address (if available), and address of the project site owner or a local contact person. (C) Location of the construction plan if the project does not have an on-site location to store the plan. (D) Stormwater Permit Card.
3. All erosion control practices will be installed under the guidance of a professional experienced in erosion control. All other non-engineered erosion control measures involving vegetation will be installed according to the specifications and criteria as set forth in this erosion control plan.
4. Implement self-monitoring program.
5. Erosion control practices will be implemented on all disturbed areas within the project site and maintained in working order by the contractor.
6. Flag or denote all construction limits.
7. Call for an underground locate to verify location of existing utilities.
8. Retain existing vegetation wherever possible.
9. Identify and protect all existing vegetation designated to remain.
10. Install construction drive, erosion control measures and silt fence.
11. Begin rough grading of site.
12. Begin utility ifrustructure construction.
13. Inform all general contractors, construction management firms, grading or excavating contractors, and all other contractors with primary oversight on individual building lots of the terms and conditions of the Construction Stormwater General Permit, and the conditions and standards of this Erosion Control Plan, schedule for implementation, and the construction site Erosion Control Plan report.

Erosion Control Sequence - Phase 2

1. Continue self-monitoring program.
2. Any stockpiled topsoil to be salvaged shall be perimeter protected. Runoff from stockpiles will be filtered through silt fences and/or straw bales. Stockpiles shall not interfere with natural drainage. The stockpiles shall be redistributed over the site and final graded immediately prior to seeding.
3. Begin seeding and mulching program, temporary seed disturbed needed.
4. Install storm and sanitary facilities.
5. Install inlet protection as storm inlets are completed.
6. Complete building, parking areas and curbs. No lime used as soil treatment is to be stored on site.
7. Final grade and landscape.
8. All areas which can be regraded to a final state shall be revegetated with an approved seed mixture and fertilized at the rates indicated per Figure 5-2 through Figure 5-4 on sheet C504.
9. After construction and final grading, landscape and permanently stabilize all disturbed sites, including borrow and disposal areas.
10. Once site has been stabilized contact Benchmark Consulting, Inc to arrange final inspections and N.O.T. inspection. Once N.O.T. inspection has been passed remove temporary runoff control structures and any unstable sediment around them, and vegetate those areas. SMP must remain active until N.O.T. inspection and acceptance by the Town of McCordsville.

B13 Erosion & Sediment Control on Individual Lots
See detail on sheet C505.

B14 MATERIAL HANDLING AND SPILL PREVENTION PLAN

- The proper management and disposal of wastes should be practiced on site at all times to reduce pollution storm water runoff. hazardous waste should always be disposed of through a designated hazardous waste management or recycling facility. hazardous waste should not be disposed of with ordinary garbage, or poured into the sanitary sewer system or onto the ground.
- Designate a waste collection area on-site that does not receive a substantial amount of runoff from upland areas and does not drain directly into a water body.
- Keep products in original containers unless they are not re-sealable, then original label and material safety data will be retained. if a product does not have its original label, label it yourself if you are sure of contents. make sure products are properly sealed to prevent leaks and spills and stored in a weather proof self contained area away from heat, sparks and flames.
- A program for recycling or disposal of materials associated with or from the project site shall be established. all recycling containers will be clearly labeled.
- All construction activities to be monitored and maintained by the contractor. as each new subcontractor comes on-site, the contractor will conduct and document a meeting to ensure awareness of the pollutant prevention program. guidelines for proper handling, storage and disposal of construction site wastes should be posted in storage and use areas and workers should be trained in these practices to ensure everyone is knowledgeable enough to participate.
- In an emergency, the contractor will call 911 and then the National Spill Response Center at 1-800-424-8802.
- In the event of a spill that poses no immediate threat, the contractor will contact the local fire department, the National Spill Response Center at 1-800-424-8802 and IDEM emergency response at (888) 233-7745 and Town of McCordsville at (317) 335-3151 within 24 hours of the spill. Emergency phone numbers and procedures shall be prominently displayed at the work site where spills may occur, such as staging/refueling areas.

Clean up spills immediately! For hazardous materials follow cleanup instructions on the package. Use absorbent material such as sawdust or kitty litter to contain the spill. Proper safety materials should be stored on site in case of accident or spill which should include but not limited to brooms, dust pans, mops, rags, gloves, goggles, and plastic and metal trash containers specifically for that purpose. Spill areas should be well ventilated. During the demolition phase of construction, provide extra containers and schedule more frequent pickups for recyclables and garbage. Collect, remove, and dispose or all construction site wastes at authorized disposal areas. contact local environmental agency to identify disposal sites or authorized contractors. Construction vehicles should be inspected for leaks daily and repaired immediately in a self-contained area designated for vehicle maintenance and repair. The vehicle maintenance area should be conducted on an area that is to become future pavement. This area will be designed to minimize contact between equipment activities and rainfall or runoff. Spills must be cleaned up and materials disposed of immediately. Containers or equipment that may malfunction and cause leaks or spills should be identified through regular inspection and storage of use areas. Equipment and containers should be inspected regularly for leaks, corrosion, support or foundation failure, or any other signs of deterioration and should be tested for soundness. Any found to be defective should be repaired or replaced immediately.

Local Fire Department :	Vernon Township Fire Department
Emergency:	911
Non Emergency:	(317) 485-7327

B 15 Material Handling and Storage Procedures for Construction Activates
Appropriate measures must be implemented to manage wastes or unused building materials including, but not limited to garbage, debris, cleaning wastes, wastewater, concrete or cementitious washout water, mortar/masonry products, and other substances. Wastes and unused building materials must be managed and disposed of in accordance with all applicable statutes and regulations.

A concrete washout basin similar to that shown on C503 or other manufactured concrete washout basin is to be onsite until all construction activities with cementation materials is complete. When those activities are complete the associated waste water is to be disposed of in accordance to all regulations. Water can be allowed to evaporate, solidified or taken to the appropriate waste facility for disposal.

An appropriate sized trash receptacle shall be on site until all construction activities are complete. Receptacle shall be emptied regularly to make room for additional debris. If wind blow debris becomes and issue the receptacle shall have a cover installed.

No soil stabilizers or lime stabilization materials are to be stored on site.

Storm Water Pollution Prevention Post Construction Component (Section C)

C1 Description of Pollutants and Their Sources Associated with the Proposed Land Use
Pollutants that will be expected to make their way into the storm water collection system in a significant amount include grit from the road surface wearing, yard waste, pavement treatments during cold weather. The wearing of roadway surfaces will result in small particles of portland cement concrete and bituminous cement concrete. Roadway treatments will include the use of salt compounds and sand as a means of limiting ice buildup on public roads, as well as parking areas and walks. Each will not only cause pollution in the form of small particulate matter but each will also release some chemical compounds into the storm water system. Granular sediments will also be released from areas that are intended to be turf, but due to wearing the vegetative cover has been damaged or destroyed.

C2 Description of Proposed Post Construction Storm Water Quality Measure
The existing system of retention ponds will work as the water quality treatment. The ponds will collect sediment, oils and other pollutants and hold them for removal or degradation. Collected pollutants will be acted upon by the natural environmental forces or removed y mechanical means.

C3 Construction Details and Specifications
See grading plans and details for pond construction.

C4 Sequence Describing Stormwater Quality Measure Implementation
Ponds will be constructed early in site development.

C5 Maintenance Guidelines for Post-Construction Stromwater Measures
Inspect monthly and clean as needed during construction. After construction is completed follow guidelines in the provided O&M Manual.

C6 Entity Responsible for Operation & Maintenance Post-Construction
Tommy Bunton
Land Development Manager
Beazer Homes - Indianapolis Division
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
Cell: 317-316-2009

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

BENCHMARK CONSULTING, INC.

NATHAN A. WHITE — STATE OF INDIANA — PE 10006548 — REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY PLANS NOT FOR CONSTRUCTION
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Stormwater Pollution Prevention Plan

DATE:	CHECKED BY:
10/21/24	N.A.W.

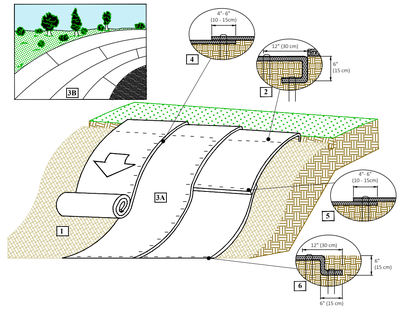
PROJECT NUMBER: 24006

SHEET # C503

Gatherings at Aurora - Section 3 - 10/21/2024

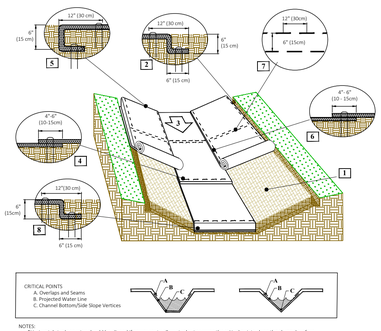
File Path \Name: D:\Benchmark01\Benchmark\24 Jobs\24006 -Gatherings at Aurora Section 3\dwgs\500.dwg - Date: Oct 21,2024 - 2:12pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

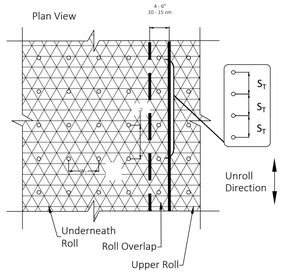


Instructions

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
2. Begin at the top of the slope by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench. Anchor the RECPs with a row of staples/stakes/pins spaced at S_T apart in the bottom of the trench. Backfill and compact the trench after stapling and fold the roll over downslope. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced at S_T apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide. RollMax RECPs and ECBs should utilize Staple Pattern C, TRMs and VMax materials should utilize Staple Pattern D.
4. The edges of parallel RECPs must be stapled with approximately 4" - 6" (10 - 15 cm) overlap.
5. Consecutive RECPs spliced down the slope must overlapped with the upstream mat atop the downstream mat (shingle style). The overlap should be 4" - 6" (10 - 15 cm).
6. At the terminal end, secure each mat across the width with a row of staples/stakes/pins spaced at S_T. If exposed to flow, foot traffic, wind uplift or other disruption, trench the terminal end in as shown in detail.
7. Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may by used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMax (TRM) or TMax (HPTRM) materials.



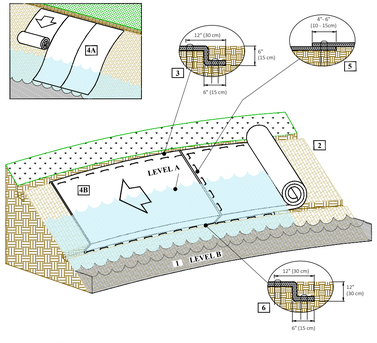
Staple Pattern Guide



- Pin / Staple / Twist Pin, as appropriate for field conditions

	Staple Pattern	
Dimension	C	D
W_T	30" (75 cm)	24" (60 cm)
L_T	30" (75 cm)	20" (50 cm)
S_T	18" (45 cm)	18" (45 cm)
Nominal Frequency	1.7 / SY	3.0 / SY
Application	ECB (Degradable)	TRM (Permanent)

*Note: Staple Pattern A and B used prior to 8/2019 have been discontinued.



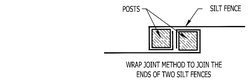
Erosion Control Blanket (surface applied) Maintenance & Inspection Requirements

Installation
- Select the appropriate type of blanket needed specifically for the designated area and anticipated water velocity.
- The area shall be relatively free of all rocks or clods over 1½" in diameter
- Lay erosion control blankets on the seeded area so that they are parallel to the primary direction of water flow, in continuous contact with the soil, and with each upstream blanket overlapping the downstream blanket.
- Tuck the uppermost edge of the upper blankets into a check slot, backfill with soil and tamp down.
- Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil.

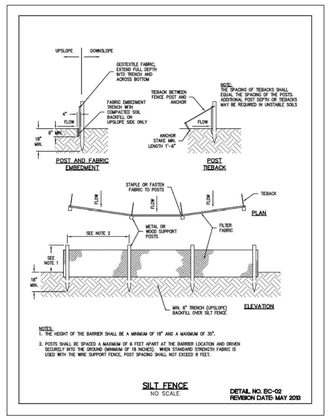
Inspection
- Check for erosion or displacement of the blanket weekly and within 24 hours of a ½" or more rain.
- Blanket needs to be anchored and overlapped properly according to specification to ensure proper function.

Maintenance
- If any area shows erosion, pull back that portion of the blanket covering mthe eroded area, add soil and tamp, reseed the area, replace and staple the blanket.

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



WRAP JOINT METHOD TO JOIN THE ENDS OF TWO SILT FENCES

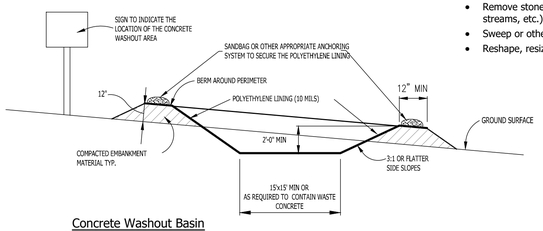


SILT FENCE
NO SCALE

DETAIL NO. EC-02
REVISION DATES: MAY 2018

Silt Fence Maintenance & Inspection Requirements

1. Inspect within 24 hours of each rain event in excess of ½ inch and at least once every seven calendar days.
2. If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately.
3. Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
4. Take care to avoid undermining the fence during clean out.
5. After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade, and stabilize.



Concrete Washout Basin

Notes:

1. Concrete washout area shall be installed prior to any concrete placement on site and lined with polyethylene liner.

2. Signs shall be placed at the construction entrance, at the washout area, and elsewhere as necessary to clearly indicate the location of the concrete washout area to operators of concrete trucks and pump rigs.

3. The concrete washout area shall be repaired and enlarged or cleaned out as necessary to maintain capacity for wasted concrete.

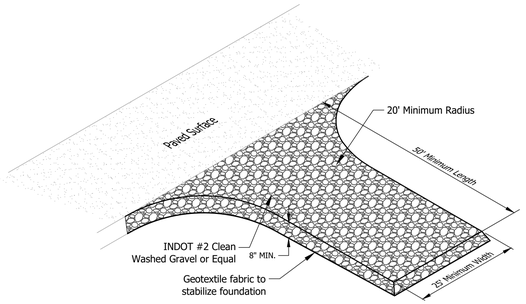
4. At the end of construction, all concrete shall be removed from the site and disposed of at an approved waste site.

5. When the concrete washout are is removed, the disturbed area shall be seeded and mulched or otherwise stabilized in a manner approved by the inspector.

Installation
- Follow the approved concrete waste water plan as part of the SWQCP.
- Choose washout location near a road for easy truck access.
- Size the washout to ensure adequate capacity for the day's operations.
- Create a structure or excavate a hole in the ground large enough to completely contain concrete slurry. Straw bale containment is not allowed.
- Use one continuous sheet of plastic to line the washout. Do not overlap two or more sheets. Any overlap or tear in the plastic will allow the chemicals to be released.
- Secure plastic with stakes, stone or other acceptable methods.
- Place sign next to washout and ensure all drivers are aware of its location.
- Never washout into storm drains, bodies of water, wetlands, adjacent properties, vegetation, or soil.
- Contractor shall provide secondary emergency waste water containment on site.

Inspection
- Make sure all concrete slurry can be contained within the washout provided. Construct additional washouts as needed.
- Inspect daily during concrete pour operations.
- Ensure washout is completely contained with one sheet of plastic free of tears.
- Dispose of cured concrete per specifications.
- Any spillage of concrete slurry water on the ground must be fully
- excavated and disposed of in accordance with 203.

Maintenance
- Repair or replace if leaks, spills or tears are found.
- Provide additional concrete washouts as needed to ensure adequate capacity.
- Maintain a minimum of 12 inches of free board. Dispose of washout waste water if it exceeds the free board.



Gravel Construction Drive / Gravel Staging Area

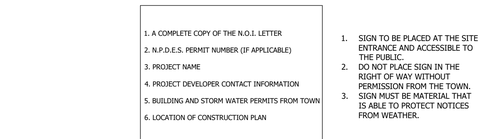
N.T.S.

1. Place at least 8" of clean INDOT #2 clean washed gravel or equal on a stable base.
2. Geotextile is required between stone and base.
3. Acceptable alternative are rumble grid mats or rumble grids bar systems

Installation
- Place geotextile fabric under #2 stone
- Construction entrances should be a minimum of 12' wide by 50' long.
- Ideally, if space allows, the entrance should be 150' long.
- Avoid placing on steep slopes or curves onto public roads.
- Do not block ditches. Install an appropriately sized culvert if traversing a ditch.
- Verify that the entrances are where they are most effective. Is the location safe? Are the trucks entering and exiting in that location?
- Ensure the entrance will not interfere with existing drainage patterns.

Inspection
- Inspect the entrance each day it is being used.
- Monitor tracking onto public roads and observe the sediment being collected in the stone. Redress or remove stone and sediment and replace with clean stone as necessary.

Maintenance
- Redress the #2 stone as necessary to provide clean stone with voids capable of trapping additional sediment.
- Remove stone and sediment and replace with clean #2 stone on construction entrances near sensitive areas (wetlands, streams, etc.) or where redressing could cause a safety (example: sight lines) or drainage problems.
- Sweep or otherwise remove sediment from public roads as necessary.
- Reshape, resize or relocate ineffective construction entrances.

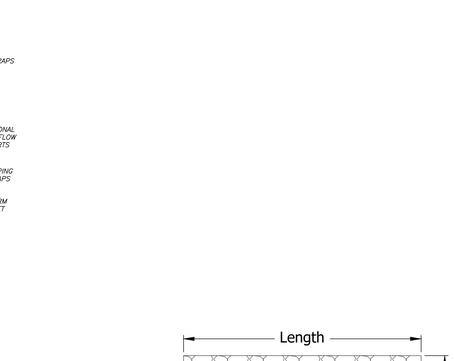


N.O.I & CONTACT INFORMATION SIGN REQUIREMENTS

N.O.I. INFORMATION AND CONTACT SHEET MUST PROVIDE THE FOLLOWING INFORMATION.
1. A COMPLETE COPY OF THE N.O.I. LETTER
2. N.P.D.E.S. PERMIT NUMBER (IF APPLICABLE)
3. PROJECT NAME
4. PROJECT DEVELOPER CONTACT INFORMATION
   a. ADDRESS
   b. PHONE NUMBER
   c. EMAIL ADDRESS (IF AVAILABLE)
   (THIS INFORMATION MAY BE SUBSTITUTED WITH THE CONTACT INFORMATION OF A LOCAL CONTACT PERSON)
5. ALL BUILDING AND STORM WATER PERMITS FROM TOWN MUST ALSO BE DISPLAYED.
6. LOCATION OF CONSTRUCTION PLAN IF NOT ON SITE.

ALL OF THIS INFORMATION MUST BE LEGIBLY POSTED IN A LOCATION THAT IS ACCESSIBLE TO THE PUBLIC.

Notice Sign



REGULAR FLOW DANDY SACK (BLACK)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2206 (320)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.67 (150) x 0.73 (165)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/M (gpt/min/ft²)	3852 (70)
Permittivity	ASTM D 4491	Sec⁻¹	0.90

HI-FLOW DANDY SACK™ (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.82 (360) x 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 x 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	1987 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) x 0.53 (75)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/M (gpt/min/ft²)	5807 (140)
Permittivity	ASTM D 4491	Sec⁻¹	1.1

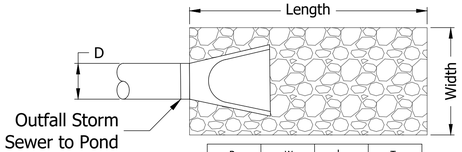
*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows

Drop Inlet Protection

Installation
- Install per manufactures recommendations
- Install as soon as inlet becomes functional

Inspection
- Inspect weekly and within 24 hours after a ½" or more rain event.
-

Maintenance
- Remove accumulated sediment and debris after each storm event. Deposit sediment in an area where it will not re-enter the paved area or storm drains.
- Remove sediment when it has reached 1/2 the storage volume of the insert.
- Replace or clean geotextile fabric as needed.
- When the contributing drainage area has been stabilized, remove inlet protection.



D	W	L	T
12"	42"	10'	12"
15"	42"	10'	12"
18"	48"	10'	12"
24"	60"	10'	18"
30"	72"	10'	18"
36"	84"	10'	18"
42"	90"	10'	24"
48"	96"	10'	24"
54"	108"	10'	24"

Rip Rap Pond Outlet Detail

N.T.S.

1. Aggregated to be INDOT Uniform A Class Rip Rap.
2. Minimum depth to be 12"
3. Geotextile to be GEOTEC ® 315ST or equal.
4. Extend rip rap to downstream edge of safety ledge.

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

STATE OF INDIANA
NATHAN A. WHITE
PE 10006548
PRELIMINARY PENDING FINAL
REGISTERED PROFESSIONAL ENGINEER
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

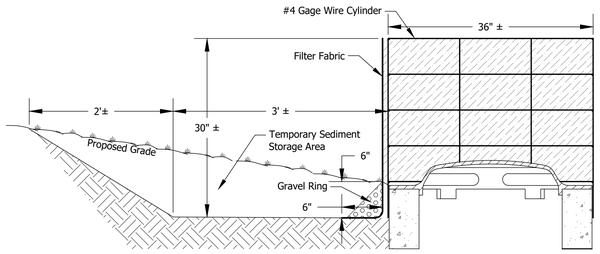
Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Erosion Control Details

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C504

Gatherings at Aurora - Section 3 - 10/21/2024

File Path Name: D:\Benchmark\24 Jobs\24005-Gatherings or Aurora Section 3\dwgs\500.dwg Date: Oct 21,2024 - 2:12pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



Wire Basket Yard Inlet Sediment Barrier

N.T.S.

1. Gravel ring to be INDOT #8 stone
2. Extend filter fabric under gravel ring at least 6"
3. Permanently attached fabric to wire with cable tie or similar method

Installation

- Install the specified inlet protection so that storm water does not bypass the inlet.
- Use #8 filter stone and #2 coarse aggregate for gravel ring.
- Follow the standard drawing and/or manufacturers installation information (when using a commercially available product) when installing inlet bag type protection for inlets.
- Do not place this type of protection within any jurisdictional waterways.

Inspection

- Inspect weekly and after every rain event.
- Look for inlet protection materials that are damaged, clogged or have become ineffective.
- Make sure storm water is not bypassing or undercutting any type of inlet protection that has been installed.

Maintenance

- Remove sediment after each storm event.
- If measure is repeatedly damaged or clogged, consider additional erosion and sediment control measures upstream in a series.
- Cleaning by flushing with water will not be allowed
- Remember, only rain goes down the drain.

Seed Species and Mixtures

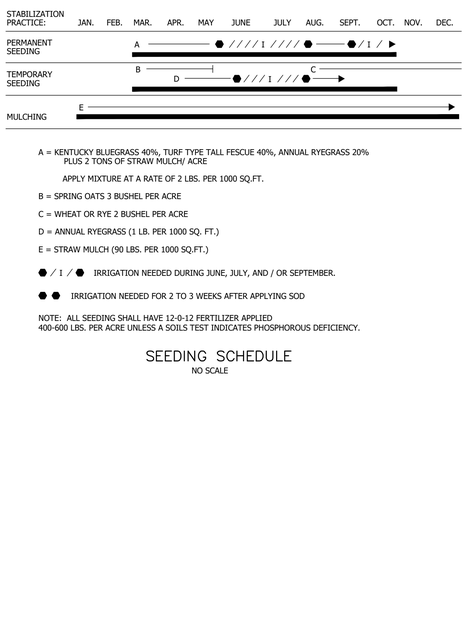
Open And Disturbed Areas (remaining Idle More 1 Yr.)	Rate Per Acre	Optimum Soil pH
1. Perennial Ryegrass	35 to 50 lbs.	5.6 to 7.0
+ white or ladino clover*	1 to 2 lbs.	
2. Kentucky Bluegrass	20 lbs.	5.5 to 7.5
+ smooth or bromegrass	10 lbs.	
+ switch grass	3 lbs.	
+ timothy	4 lbs.	
+ perennial ryegrass	10 lbs.	
+ white or ladino clover*	1 to 2 lbs.	
3. Perennial Ryegrass	15 to 30 lbs.	5.6 to 7.0
+ tall fescue**	15 to 30 lbs.	
4. Tall Fescue	35 to 50 lbs.	5.5 to 7.5
+ladino or white clover*	1 to 2 lbs.	
Steep Banks And Cuts, Low Maintenance Areas (not Mowed)		
1. Smooth Bromegrass	25 to 35 lbs.	5.6 to 7.0
+ red clover*	10 to 20 lbs.	
2. Tall Fescue**	35 to 50 lbs.	5.6 to 7.0
+ white or ladino clover*	1 to 2 lbs.	
3. Tall Fescue**	35 to 50 lbs.	5.6 to 7.0
+ red clover*	10 to 20 lbs.	
(Recommended north of US 40)		
4. Orchardgrass	20 to 30 lbs.	5.6 to 7.0
+ red clover*	10 to 20 lbs.	
+ladino clover*	1 to 2 lbs.	
5. Perennial Ryegrass	10 to 12 lbs.	5.6 to 7.5
+ tall fescue** (	20 to 30 lbs.	
Recommended south of US 40)		
Lawns And High Maintenance Areas		
1. Bluegrass	105 to 140 lbs.	5.5 to 7.0
2. Perennial Ryegrass	45 to 60 lbs.	5.6 to 7.0
+ bluegrass	70 to 90 lbs.	
3. Tall Fescue (turf-type)**	130 to 170 lbs.	5.6 to 7.5
+ bluegrass	20 to 30 lbs.	
Channels And Areas Of Concentrated Flow		
1. Perennial Rye Grass	100 to 150 lbs.	5.6 to 7.0
+ white or ladino clover*	1 to 2 lbs.	
2. Kentucky Bluegrass	20 lbs.	5.5 to 7.5
+ smooth or bromegrass	10 lbs.	
+ switch grass	3 lbs.	
+ timothy	4 lbs.	
+ perennial ryegrass	10 lbs.	
+ white or ladino clover*	1 to 2 lbs.	
3. Tall Fescue **	100 to 150 lbs.	5.5 to 7.5
+ ladino or white clover*	1 to 2 lbs.	
4. Tall Fescue **	100 to 150 lbs.	5.5 to 7.5
+ Perennial Ryegrass	15 to 20 lbs.	
+ Kentucky bluegrass	15 to 20 lbs.	

This table provides several seeding options. Additional seed species and mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties (e.g., soil pH and drain age), slope aspect and the tolerance of each species to shade and doughtiness

* For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring-seeded, although the grass may be fall-seeded and the legume frost-seeded (Practice 3.13); and (c) if legumes are fall-seeded, do so in early fall.

** Tall fescue provides little cover for, and may be toxic to, some species of wildlife. The IDNR recognizes the need for additional research on alternatives to tall fescue, such as buffalograss, orchard-grass, smooth bromegrass, and switch-grass. This research, in conjunction with demonstration areas, should focus on erosion control characteristics, wildlife toxicity, turf durability, and drought resistance.

NOTE: An oat or wheat companion or nurse crop may be used with any of the above permanent seeding mixtures. If so, it is best to seed during the fall seeding period, especially after Sept.15, and at the following rates: spring oats - ¼ to ¾ bu./acre; wheat-no more than ½ bu./acre.



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Br	Brookston silty clay loam, 0 to 2 percent slopes	17.5	41.3%
CrA	Crosby silt loam, New Castle Till Plain, 0 to 2 percent slopes	21.5	50.7%
Ko	Kokomo silty clay loam, 0 to 2 percent slopes	3.4	7.9%

A = KENTUCKY BLUEGRASS 40%, TURF TYPE TALL FESCUE 40%, ANNUAL RYEGRASS 20% PLUS 2 TONS OF STRAW MULCH/ ACRE

APPLY MIXTURE AT A RATE OF 2 LBS. PER 1000 SQ.FT.

B = SPRING OATS 3 BUSHEL PER ACRE

C = WHEAT OR RYE 2 BUSHEL PER ACRE

D = ANNUAL RYEGRASS (1 LB. PER 1000 SQ. FT.)

E = STRAW MULCH (90 LBS. PER 1000 SQ.FT.)

● / I / ● IRRIGATION NEEDED DURING JUNE, JULY, AND / OR SEPTEMBER.

● ● IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

NOTE: ALL SEEDING SHALL HAVE 12-0-12 FERTILIZER APPLIED
400-600 LBS. PER ACRE UNLESS A SOILS TEST INDICATES PHOSPHOROUS DEFICIENCY.

SEEDING SCHEDULE
NO SCALE

Permanent Seeding

Installation

- Topsoil should be capable of supporting normal vegetation, free of noxiousweeds and shall be in accordance with the final cross section and grade.
- Topsoil shall be free of rocks over 1 inch in diameter.
- Topsoil shall have a pH value within acceptable range. A soil test isrecommended to determine if amendments are needed.
- Loosen topsoil to a minimum of 3 inches.
- Fertilizer shall be uniformly applied at the appropriate rate.
- Seed may be drilled or mixed with water and sprayed over area. Seedshall not be covered more than one-half inch.
- Permanent mulch shall be applied uniformly at 2 tons per acre within 24hours after seeding.
- Alternatively, erosion control blanket can be used to protect seed and Erosion Control Blankets are required on slopes 2:1 or steeper. They are strongly recommended on slopes 3:1 or greater for higher vegetation establishment success.
- Punch mulch into soil with a mulch tiller.
- Unless seed was applied by a hydroseeder, water thoroughly.

Inspection

- Inspect weekly and within 24 hours after a ½" or more rain event.
- Areas should be monitored to ensure that mulch cover stays in place. y With appropriate temperature and moisture, seed should germinate in approximately 2-3 weeks.
- Any areas void of seed germination shall be subject to soil test for proper correction measures before reseeding. Change order for soil test might be warranted.

Maintenance

- Promptly repair any small rills that form and reapply seed and mulch as needed.
- If consistent rills or gullies are forming, consider installing slope drains or fiber rolls at the top of the slope until vegetation is established.
- If vegetation appears yellow or wilted, fertilizer and/or watering may be needed.

Temporary Seeding

Installation

- Temporary seed and mulch shall be placed on disturbed areas that are expected to be inactive for more than seven days.
- Prepare slopes by roughening the soil surface prior to temporary seeding. If soil is compacted, loosen soil to a depth of 2-3" prior to temporary seeding.
- Apply temporary seed mix uniformly over the disturbed, bare soil areas expected to be inactive for more than seven days, or as directed.
- Install the seed by drilling, hydroseeding, hand broadcasting, or other approved method that provides a uniform distribution.
- Do not cover the seed with more than one-half inch of soil.
- Mulching should take place within 24 hours after the seeding operation.
- When directed, fertilizer may be applied at the temporary application rate, in accordance with 205.04, during the active growing season from March through November.

Temporary seed application rates:

- Spring Mix: January 1 to June 15 (oats at 150 lbs/acre)
- Fall Mix: September 1 to December 31 (winter wheat at 150 lbs/acre)

Inspection

- Inspect weekly and within 24 hours after a ½" or more rain event.
- Look for eroded areas, rills and gullies
- Adequate temporary stabilization is approximately 80 percent vegetation density

Maintenance

- Repair eroded areas by reworking the area and reseeding promptly.
- Apply Mulch to reseeded areas within 24 hours.
- Fertilize if needed during the active growing season (March through November).

Temporary Mulch

Installation

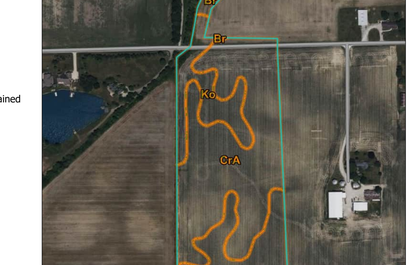
- Mulch can be straw, wood chips or other products in accordance with INDOT Specification 914.05.
- Install temporary straw mulch uniformly and at a rate of 2.5 tons per acre.
- Install within 24 hours of seeding.
- Mulch shall be secured with acceptable netting, punching in with notched disks, cleating with dozer tracks, commercially produced water borne mulch binder, or other approved method to hold it in place.
- Punching or cleating of mulch should be performed in the same slope direction as roughening (page 54).
- Mulch is not effective in ditch bottoms or other concentrated flow areas
- Avoid mulching across waterways or wetlands.

Inspection

- Inspect the day of application to ensure uniform coverage.
- Inspect weekly and within 24 hours after a ½" or more rain event.
- Check for mulch movement and eroded areas.
- Continue to inspect mulch coverage until vegetation is established.

Maintenance

- Correct eroded areas, reseed and reapply mulch as needed.
- If erosion is severe, reoccurring or in channelized flow, consider using erosion control blanket and slope drains.



Individual Building Lots

Notes:
NOTE:

1. Finished grades to be in conformance with subdivision grading plan; excess soil to be disposed of in approved fill area.
2. Side yard swales to be constructed per subdivision grading plan.
3. All sediment tracked onto public roadway to be removed by scraping or broom at the end of each work day.
4. All disturbed areas to be stabilized as denoted in approved erosion control plan once finish grading has been completed.
5. All sediment control practices to be maintained to ensure proper functioning.
6. Silt fence or approved alternative measure shall be placed around the permit of lot.
7. Install appropriate sediment protection for any storm sewer inlet adjacent to lot.

Inspection

- Inspect daily

Maintenance

- Repair or replace silt fence if damaged or tears are found.
- Remove any sediment collected at storm sewer inlets when sediment protection reaches 50% of anticipated protective level.

Stormwater Pollution Prevention Plan (SWPPP or SWP)
Preparer's Certification

The SWPPP for the Site listed below was prepared for Beazer Homes by:
Benchmark Consulting, Inc (Insert SWPPP Preparer's Company Name)
Site: Gatherings at Aurora - Section 3
This SWPPP is:

a. Site specific;
b. incorporates the inspection frequency and routine maintenance deadlines under the applicable permit; and
c. includes a clear, concise descriptions of Site-specific BMPs to be used for each anticipated major phase of construction and to implement the requirements of the applicable permit.

I certify that the development of this SWPPP was guided by the requirements listed above and the EPA guidance document "Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites."
SWPPP Preparer's Signature: Nathan A. White
Printed Name: Nathan A. White
Date: September 30, 2024

A copy of this signed Certification must be inserted into the SWPPP

November 2010 Page 4

References:
INDOT Storm Water Management Field Guide. All installation and maintenance shall be in accordance to the latetes edition.

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

PRELIMINARY NOT FOR CONSTRUCTION
NATHAN A. WHITE
STATE OF INDIANA
PE 10006548
REGISTERED PROFESSIONAL ENGINEER
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Erosion Control Details

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C505

Gatherings at Aurora - Section 3 - 10/21/2024

File Path\Name: D:\Benchmark20\1Benchmark\24 Jobs\24006-Gatherings on Aurora-Section 3\dwgs\300.dwg - Date: Oct 21,2024 - 2:13pm

Gatherings at Aurora - Section 3

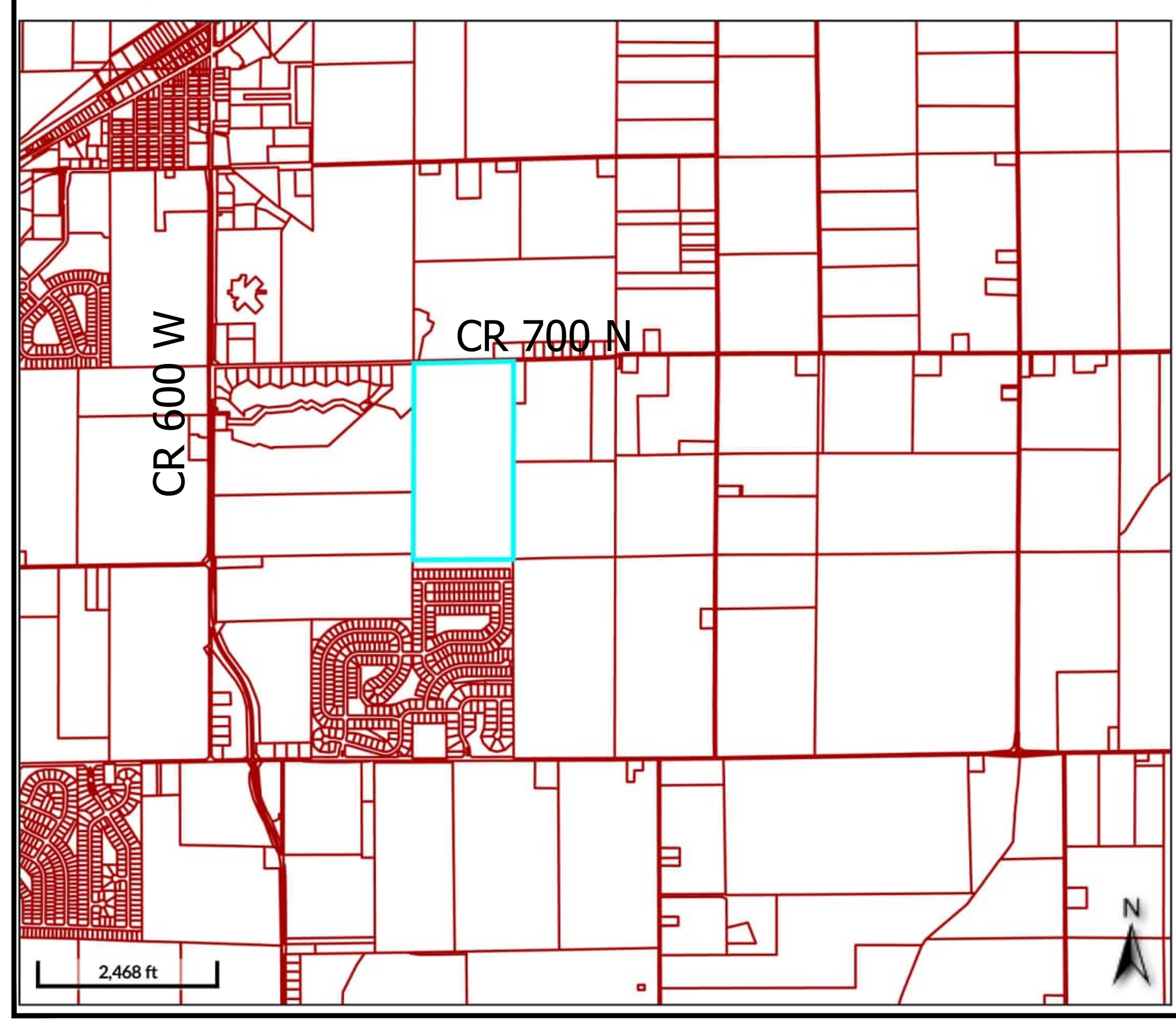
Water Distribution Plan

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

Section 36 - Township 17 North - Range 5 West
Vernon Township, Hancock County

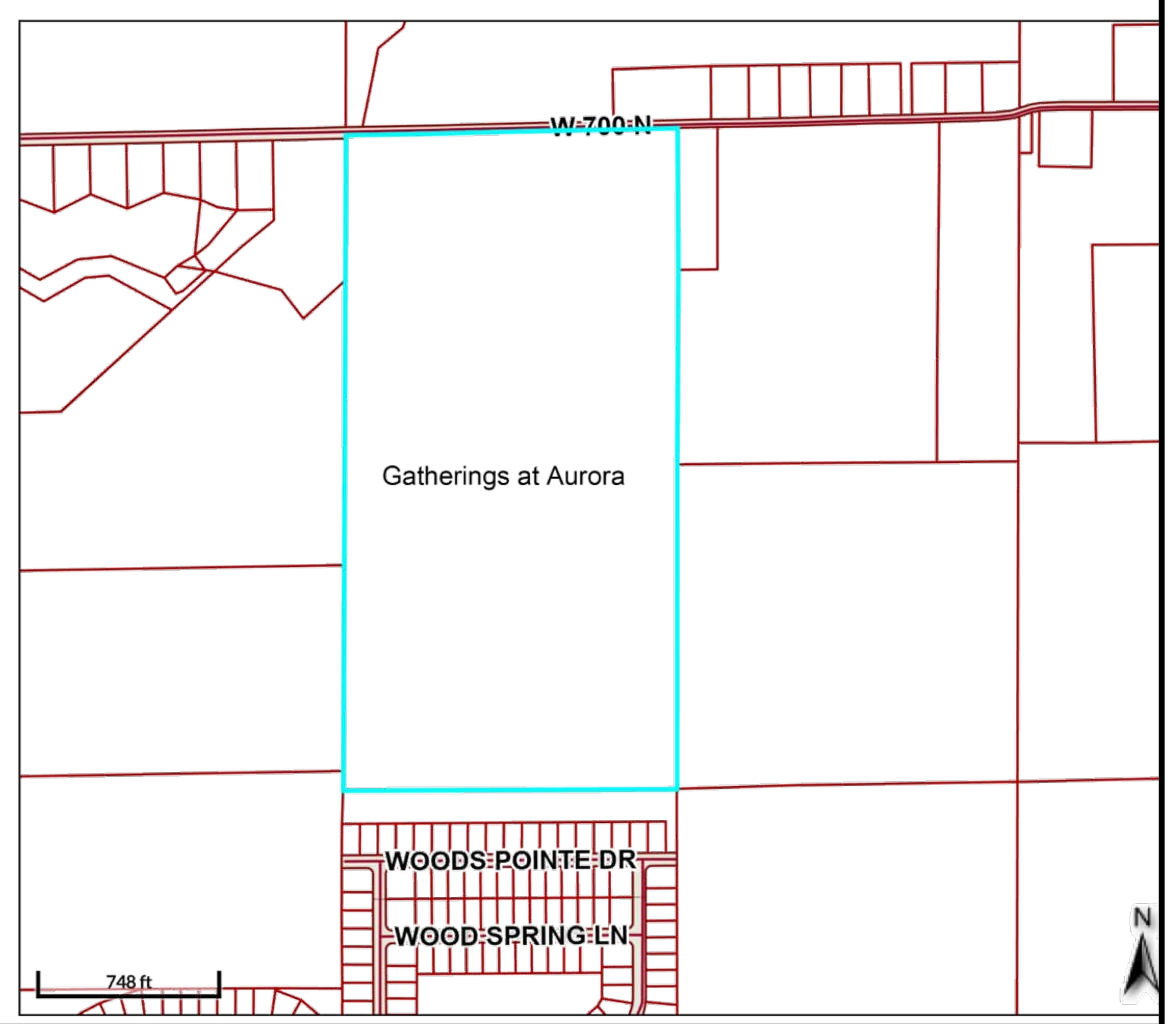
Area Map

1" = 2000'



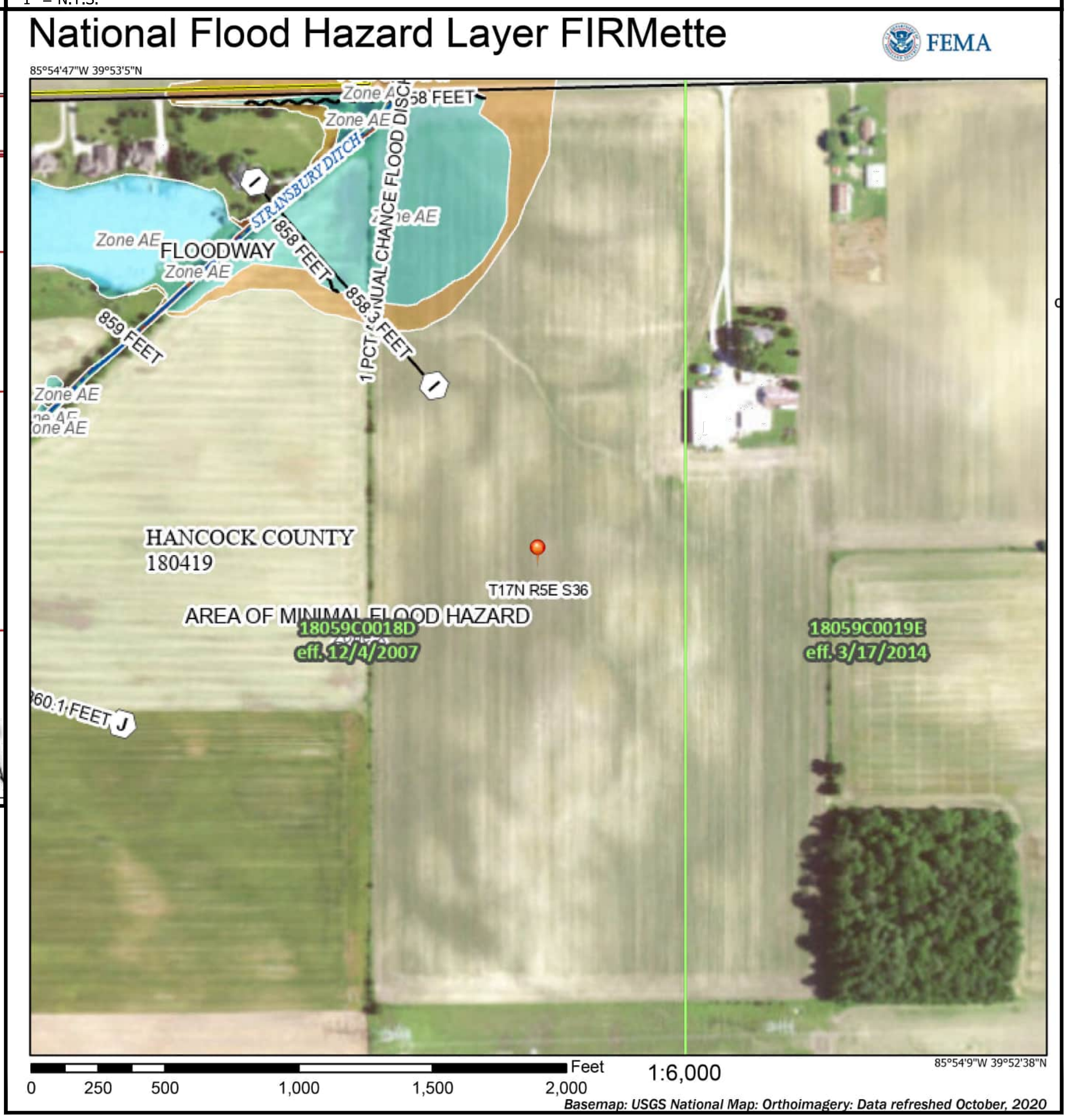
Vicinity Map

1" = N.T.S.



Flood Map

1" = N.T.S.



Utility Provider Contacts

Regulated Drainage System
Hancock County Surveyor's Office
111 South American Legion Place Suite 171
Greenfield, IN 46140
(317) 477-1150
Contact: Chad Coughenour

Storm Sewer
Town of McCordsville
Department of Public Works
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3493
Contact: Ron Crider

Streets
Town of McCordsville
Department of Public Works
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3493
Contact: Ron Crider

Electrical Service
Nine Star Connect
2243 East Main Street
Greenfield, IN 46140
(317) 323-2074
Contact: Eric Meyer
emeyer@ninestarconnect.com

Potable Water Service
Citizens Energy Group - Water CW Authority, Inc
2150 Dr. Martin Luther King, Jr. Street
Indianapolis,, IN 46202
(317) 927-4351
Contact: Brad Hostetler

Sanitary Sewer Service
McCordsville Public Works
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3493
Contact: Ron Crider

School System
Mount Vernon Community School Corporation
1806 West State Road 234
Fortville, IN 46040
Contact: Dr. Jack Parker
(317) 485-3100

Post Office
U.S. Postal Service
7397 North County Road 600 West Suite 1000
McCordsville, IN 46055
(317) 336-6446

Natural Gas
Centerpoint Energy
16000 Allisonville Road
Noblesville, Indiana 46061
Contact: Sandra Casey

Internet Service
Nine Star Connect
2243 East Main Street
Greenfield, IN 46140
(317) 323-2074
Contact: Eric Meyer
emeyer@ninestarconnect.com

Cable Services
Bright House Networks
3030 Roosevelt Avenue
Indianapolis, IN 46218
Contact: Joe Burton
joe.burton@charter.com

Electric Transmission Lines
AES Asset Protection
2727 Central Avenue
Columbus, IN 47201
(812) 375 - 2021
Contact: Ryan Daugherty
ryan.daugherty@duke-energy.com

General Notes:

1. Where any specifications included in these plans conflict with the Town of McCordsville Indiana Construction Standards Specifications and Details, latest edition, the standards of the Town of McCordsville shall prevail.
2. The contractor shall accept the site in its current state and shall remove all trash, rubbish, and debris from the site prior to starting excavation.
3. The contractor shall notify engineer in writing of any changes, errors, or omissions found on the plans or in the field, before work is started or resumed.
4. Do not scale from these plans for survey field locations.
5. All construction activity on this site to performed in compliance with all applicable O.S.H.A. standards for worker safety.
6. The existing site outside the designate demolition area is to be protected and undamaged.
7. The contractor shall be responsible for ensuring the construction site and surrounding areas are free of accumulated debris.
8. The contractor shall notify all utility companies 72 hours prior to construction to verify if any utilities are present. All verifications (location, size & depth) shall be determined by the appropriate utility companies. When excavating in areas near or over existing utilities, the contractor must notify such utility company so a representative of the appropriate utility company can be present to observe activities.
9. The contractor shall obtain a Regulated Drain Encroachment permit from the Hancock County Drainage Board before any work is to take place in the Regulated Drain.
10. Do not close or obstruct streets, walks, drives, facilities, etc. without written permission of the land owner or authority having jurisdiction.
11. When connections are to be made to existing piping and structures or where construction is in the vicinity of existing piping, the location and elevation of the existing piping shall be field verified and notification to the office of Benchmark Consulting, Inc., if the existing piping is found to be different than that illustrated on these drawings.
12. All points of connection of proposed sanitary and storm sewers to existing systems shall be verified vertically from a known benchmark prior to the start of construction. Any discrepancies with information included within these construction plans shall be reported to the office of Benchmark Consulting, Inc.
13. All on-site sanitary, drainage, stormwater and water system improvements, including but not limited to meters, pipes, valves, pits, conduits, and the like shall be privately owned and maintained by the owner of the lot, unless otherwise described on the final plat.

Land Owner:
Beazer Homes
9465 Counselors Row
Indianapolis, IN 46240

Parcel ID Number:
30-01-36-100-003.000-016 & 30-01-36-100-003.110-018

Current Zoning:
PUD - Ordinance No. 101122D - Snider Planned Unit Development

Legal Description

Part of the West Half of the Northeast Quarter of Section 36, Township 17 North, Range 5 East of the Second Principal Meridian, Vernon Township, Hancock County, Indiana, being a portion of the property granted to Beazer Homes Indiana, LLP ("Takedown One") recorded as Instrument Number 202307763 and a portion of the property granted tot Beazer Homes Indiana, LLP ("Takedown Two") recorded as Instrument Number 202410525, both in the Office of the Recorder of Hancock County, Indiana, more particularly described as follows:

Commencing at the Northwest Corner of the Northeast Quarter of said Section 36, Township 17 North, Range 5 East and the northwestern corner of said Takedown One (the following two (2) courses are along the boundary of said Takedown One); (one) thence South 00 degrees 12 minutes 24 seconds West (Basis of Bearings: Indiana State Plane, East Zone, NAD 83) 2641.39 feet along the West Line of the West Half of said Northeast Quarter to the Southwest Coner thereof; (two) thence North 89 degrees 10 minutes 57 seconds East 427.03 feet along the South Line of said Northeast Quarter to the POINT OF BEGINNING of this description; thence North 00 degrees 16 minutes 58 seconds East 1037.75 feet; thence South 89 degrees 43 minutes 02 seconds East 150.00 feet passing from Takedown One into Takedown Two; thence South 00 degrees 16 minutes 58 seconds West 10.00 feet; thence South 89 degrees 43 minutes 02 seconds East 54.00 feet; thence North 00 degrees 16 minutes 58 seconds East 10.00 feet; thence South 89 degrees 43 minutes 02 seconds East 150.00 feet; thence South 00 degrees 16 minutes 58 seconds West 65.00 feet; thence South 89 degrees 43 minutes 02 seconds East 150.00 feet; thence South 00 degrees 16 minutes 58 seconds West 73.00 feet; thence South 89 degrees 43 minutes 02 seconds East 54.00 feet; thence North 00 degrees 16 minutes 58 seconds East 10.00 feet; thence South 89 degrees 43 minutes 02 seconds East 140.00 feet; thence South 00 degrees 16 minutes 58 seconds West 200.00 feet; thence South 89 degrees 43 minutes 02 seconds East 194.09 feet to the East Line of the West Half of said Northeast Quarter coincident with the eastern line of said Takedown Two; thence South 00 degrees 10 minutes 59 seconds West 692.59 feet along said coincident line to the southeastern corner of said Takedown Two and the Southeast Corner of said West Half; thence South 89 degrees 10 minutes 57 seconds West 893.46 feet along the South Line of said West Half and the southern line of said Takedown Two passing through the southern common corner of said Takedown Two and Takedown One and along the southern line of said Takedown One to the POINT OF BEGINNING, containing 18.807 acres, more or less.

Local Jurisdictional Contacts

Planning and Zoning Authority
Town of McCordsville
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3604
Contact: Ryan Crum - Director

Building & Inspection Authority
Town of McCordsville
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-3604
Contact: Ryan Crum - Director

Local Law Enforcement
Town of McCordsville
6280 West County Road 800 North
McCordsville, IN 46055
(317) 335-2812

Fire & Rescue
Vernon Township Fire Department
600 Vitality Drive
Fortville, IN 46040
(317) 485-7327
Contact: Tara Conely

Sheet Index

Project Name	Gatherings at Aurora – Section 3
Project Number	J–25–001
Dist. Map No.	??
Meter Map No.	IN30_0503
Lots	60
Tax Code	30016
Pressure Dist	Hancock
Drafter	BENCHMARK CONSULTING, INC., NAW
Date	10/01/24

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

REVISIONS:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

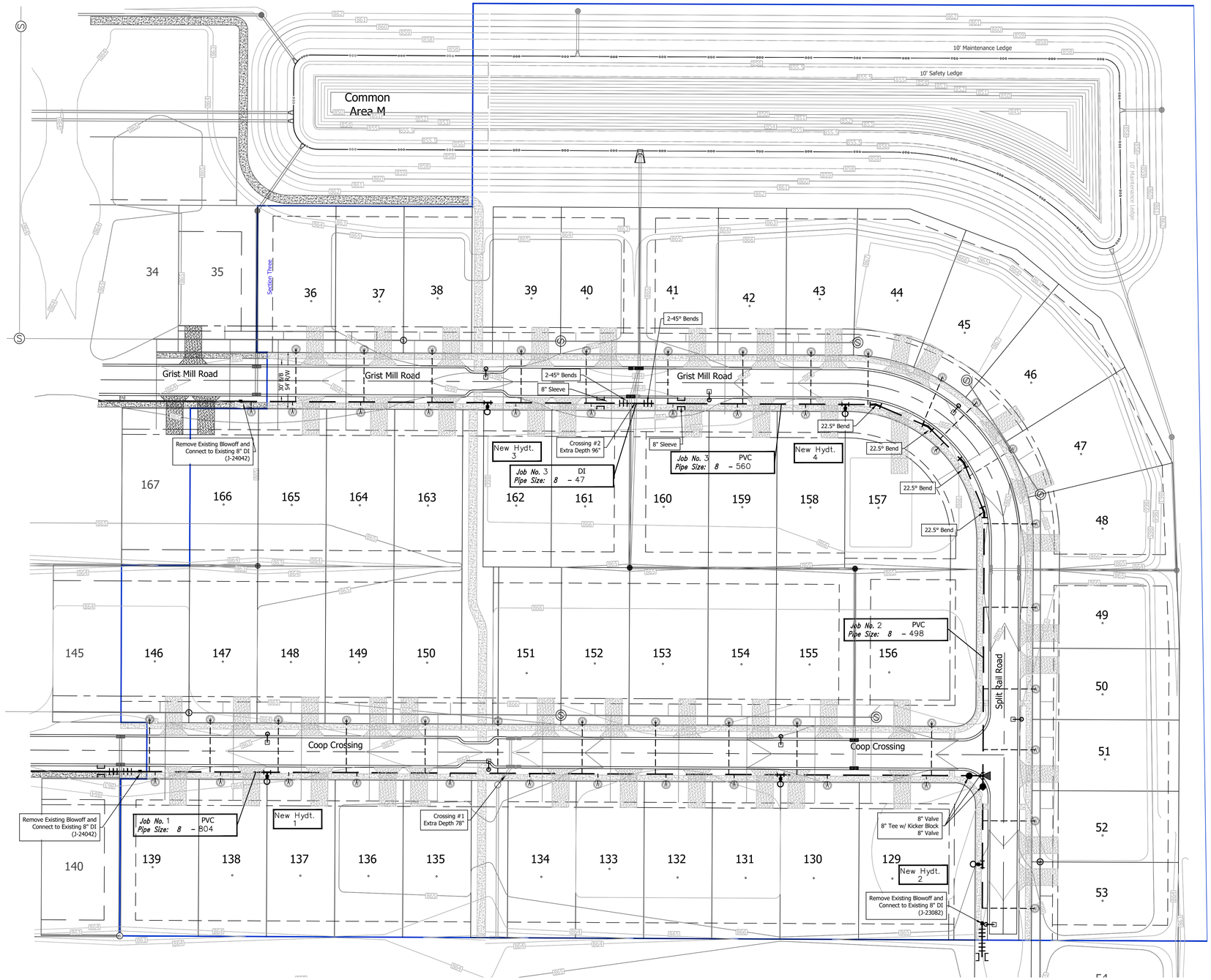
Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Water Distribution Plan Title Sheet

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C700

Gatherings at Aurora - Section 3 - 10/21/2024

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

ADJOINER:
Jacobi Legacy Farms, LLC
INST. #201716625



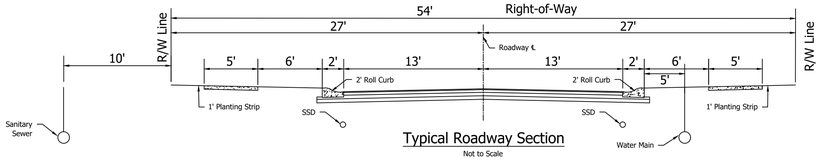
LEGEND

- Existing Water Main
- Proposed Water Main
- Telephone Pole
- Gas Pole
- Inlet
- Tree
- GAS VALVE
- Parcel Id
- Adapter
- Bend
- Kicker Block
- Vertical Bend
- Hydrant
- Hydrant with Hydrant Valve
- Butterfly Valve
- Valve
- Blowoff Assembly
- Air Relief Valve
- Plug
- Reducer
- T.J. Tee
- M.J. Sleeve
- Cross
- Casing Pipe
- Gas Lines
- Telephone Lines
- Electric Lines
- Single Water Meter Pit & Service Line
- Driveway Location
- Proposed Sanitary Sewer Main & Manhole
- Proposed Sanitary Sewer Lateral
- Proposed Test Station

Crossing Detail Table

Crossing Number	A	B	C	D	E	F	G	H	Cover
	Proposed Grade (Feet)	Crossing Pipe Size	Crossing Pipe Material	Crossing Pipe Bottom	Top Water Main	Water Main Size	Crossing Depth (Feet)	Crossing Half Length (Feet)	(Inches)
2	864.4	18"	RCP	854.8	856.45	8"	3.45	8.5	95"

Citzens Water				
Project Legend				
Project Name:	Gatherings at Aurora - Section 3			
Project Number:	J-25-001			
Job No.	Street Name	Pipe Size	Pipe Type	Pipe Total
1	Coop Crossing	8	PVC	804
2	Split Rail Road	8	PVC	498
3	Grist Mill Road	8	PVC	670
			Total	1,972
Service Lines				
60	1" Single Service Line		HDPE	1,657



Typical Roadway Section
Not to Scale

Water Distribution Plan General Notes

1. See Citizens Energy Group Water Standards Manual, latest edition.
2. Standard Practice O Installation of restraints must be followed during construction of water main, Any question ask CEG inspector.
3. All Fire Hydrants are to have 5" Storz connections installed.
4. Full depth granular backfill is required in all road crossings and within five feet of the edge of pavements.
5. Water main to have a minimum depth of 54-inches.
6. All valves to be placed in grassy area.
7. Sanitary or storm sewer and potable water mains shall have a minimum of ten (10) feet of horizontal separation and a minimum of eighteen (18) inches vertical separation between the outside of the pipe walls.
8. Tracing wire required in accordance to Section 79.17 of the Citizens Energy Group Water Standards Manual.

North

GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50 ft.

Project Name Gatherings at Aurora - Section 2
Project Number J-25-001
Dist. Map No. 856/857
Meter Map No. IN30_0503
Lots 60
Tax Code 30016
Pressure Dist Hancock
Drafter BENCHMARK CONSULTING, INC., NAW
Date 10/01/24

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE
STATE OF INDIANA
PE 10806548
PROFESSIONAL ENGINEER
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora Section 3

West CR 700 North McCordsville, IN

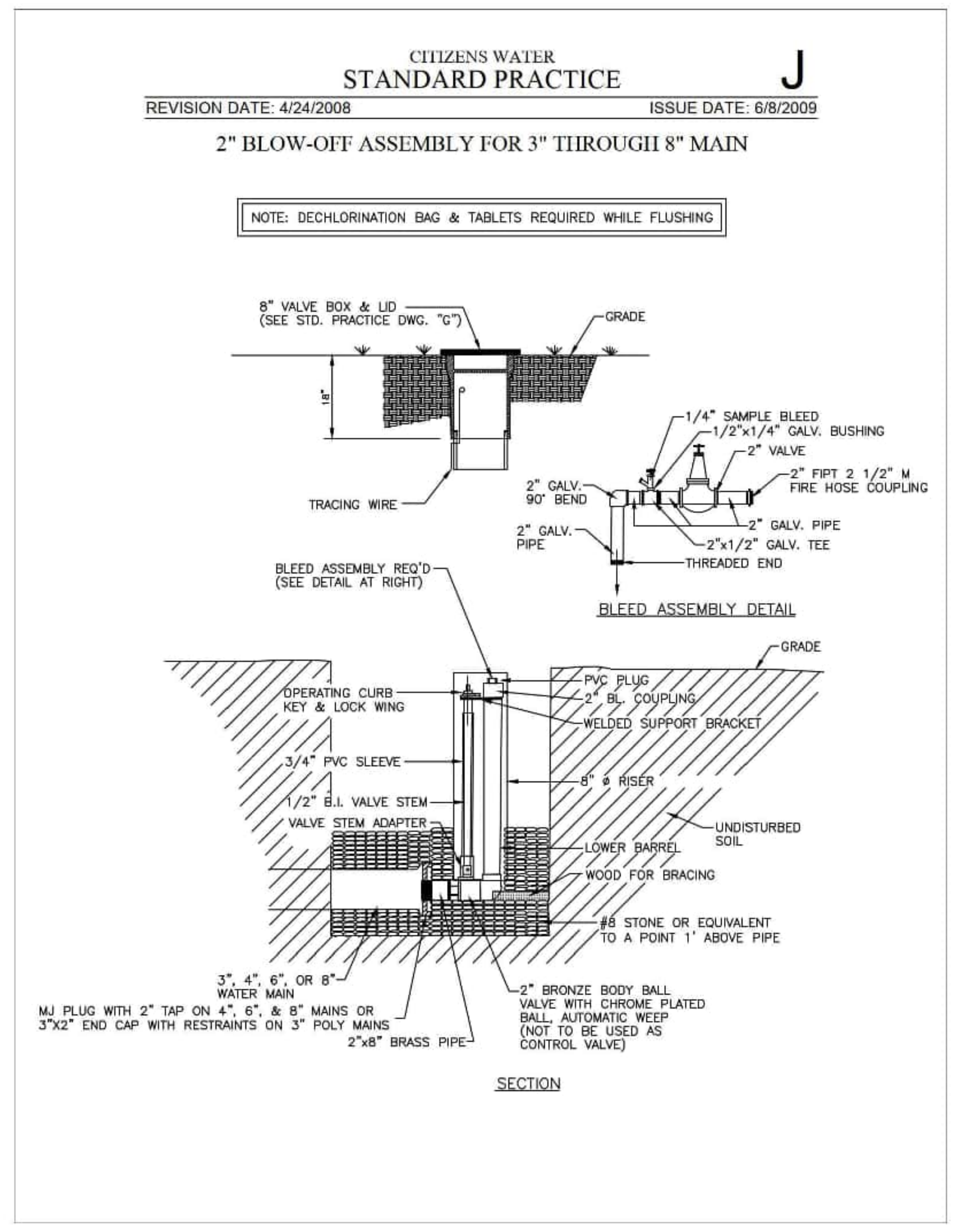
Water Distribution Plan

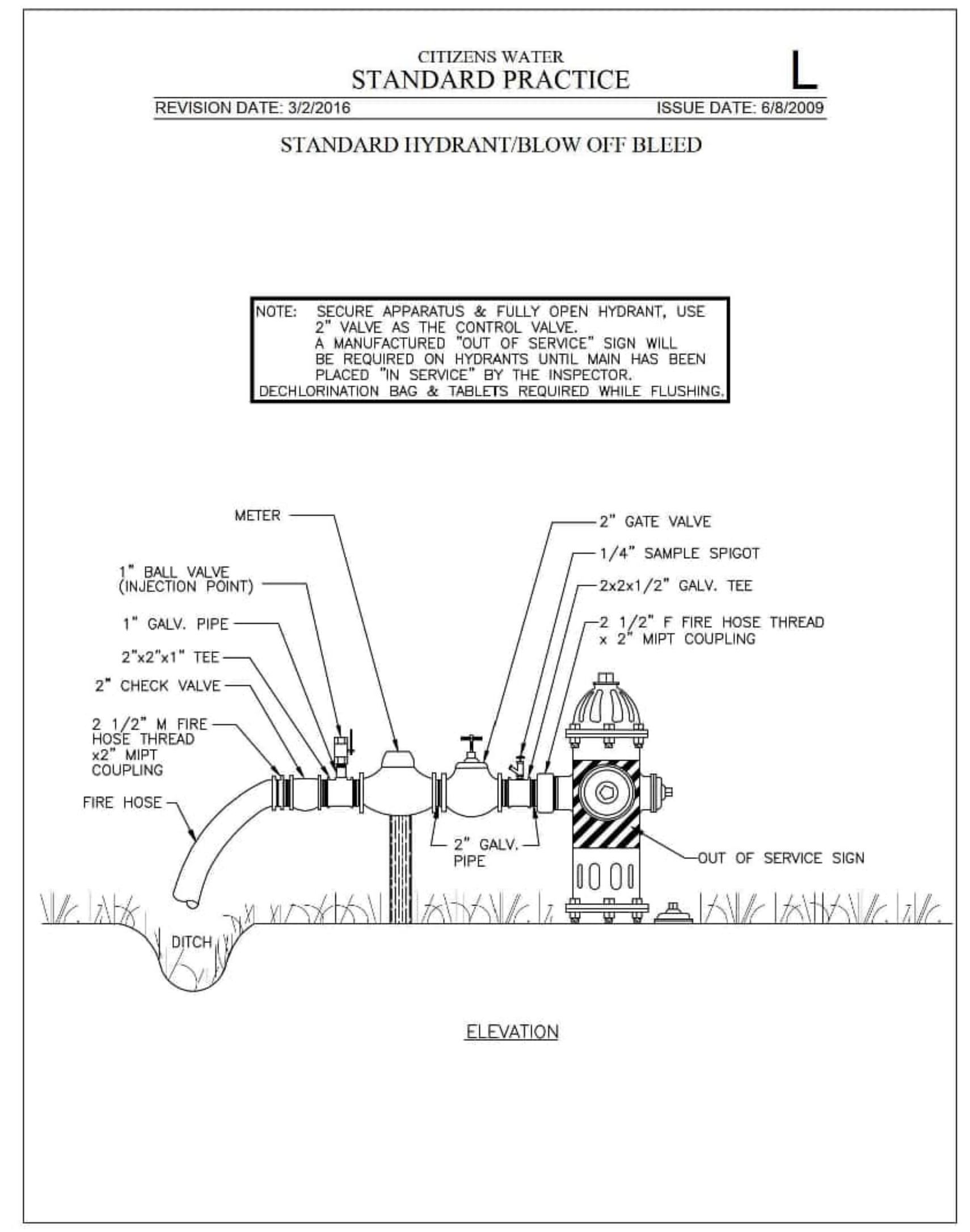
DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C701

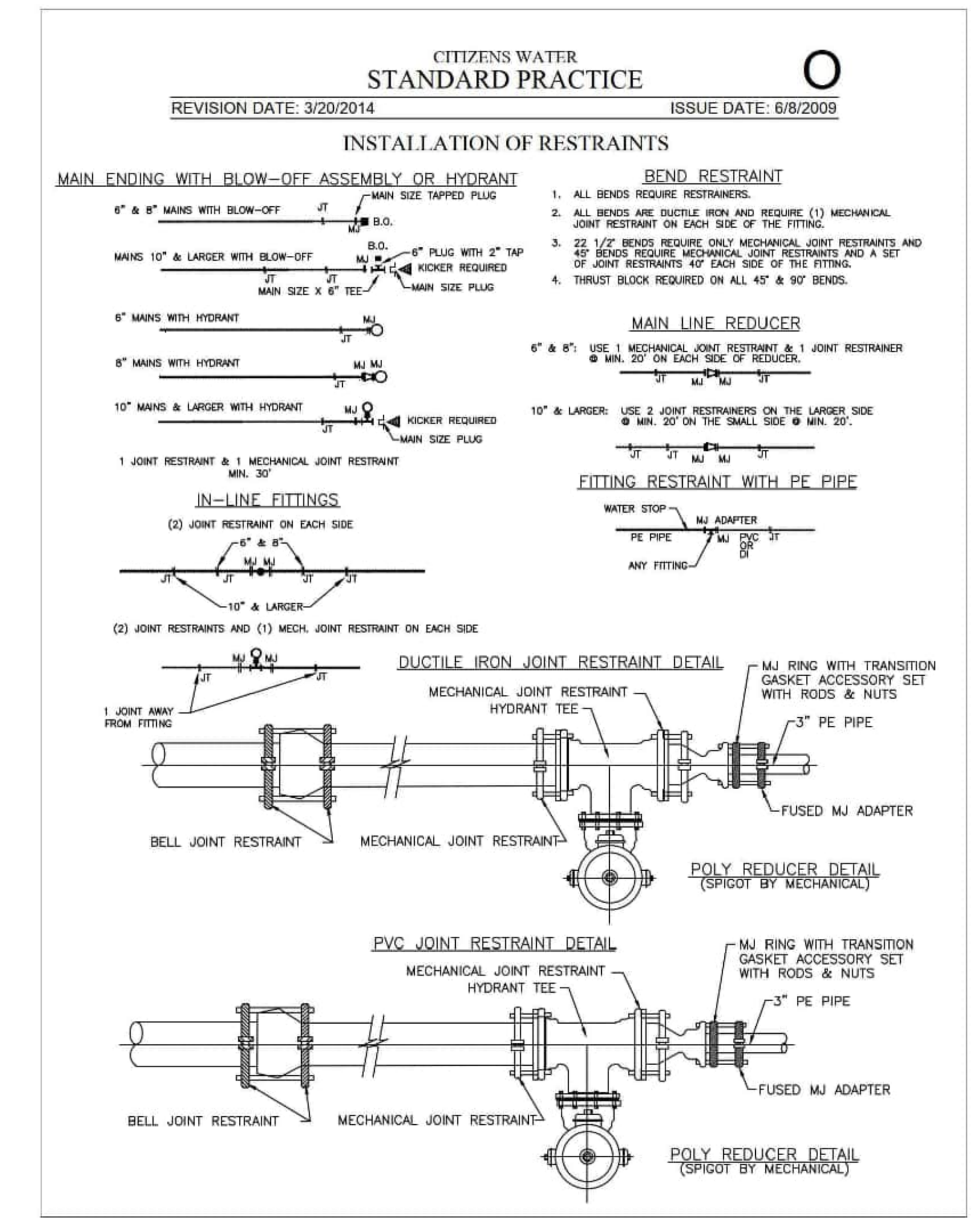
Gatherings at Aurora - Section 3 - 10/21/2024

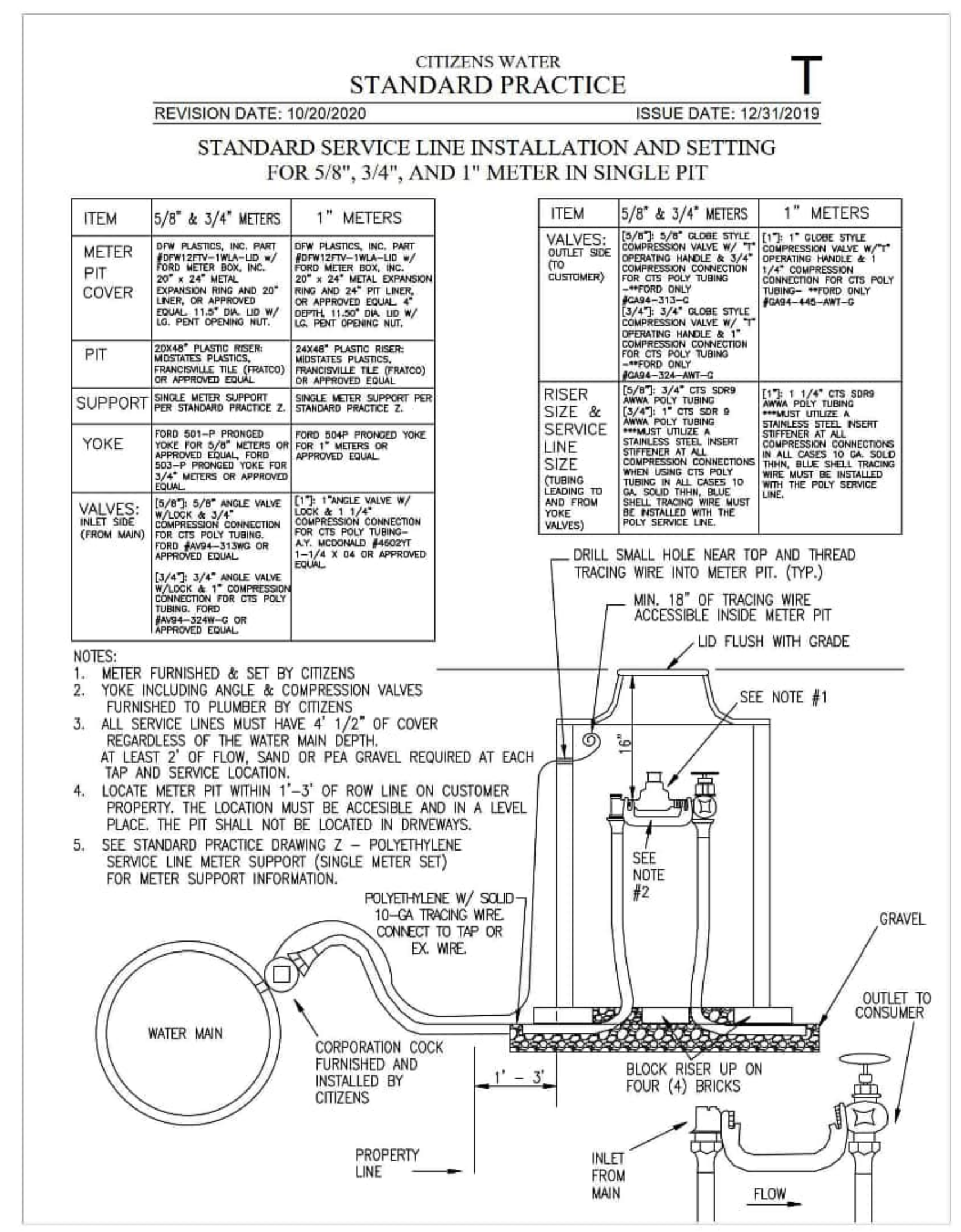
File Path\Name: D:\Benchmark01\Benchmark\24 Jobs\24006-Gatherings at Aurora Section 3\dwgs\CEG\Gatherings 3 -WC.dwg - Date: Oct 21,2024 - 2:13pm

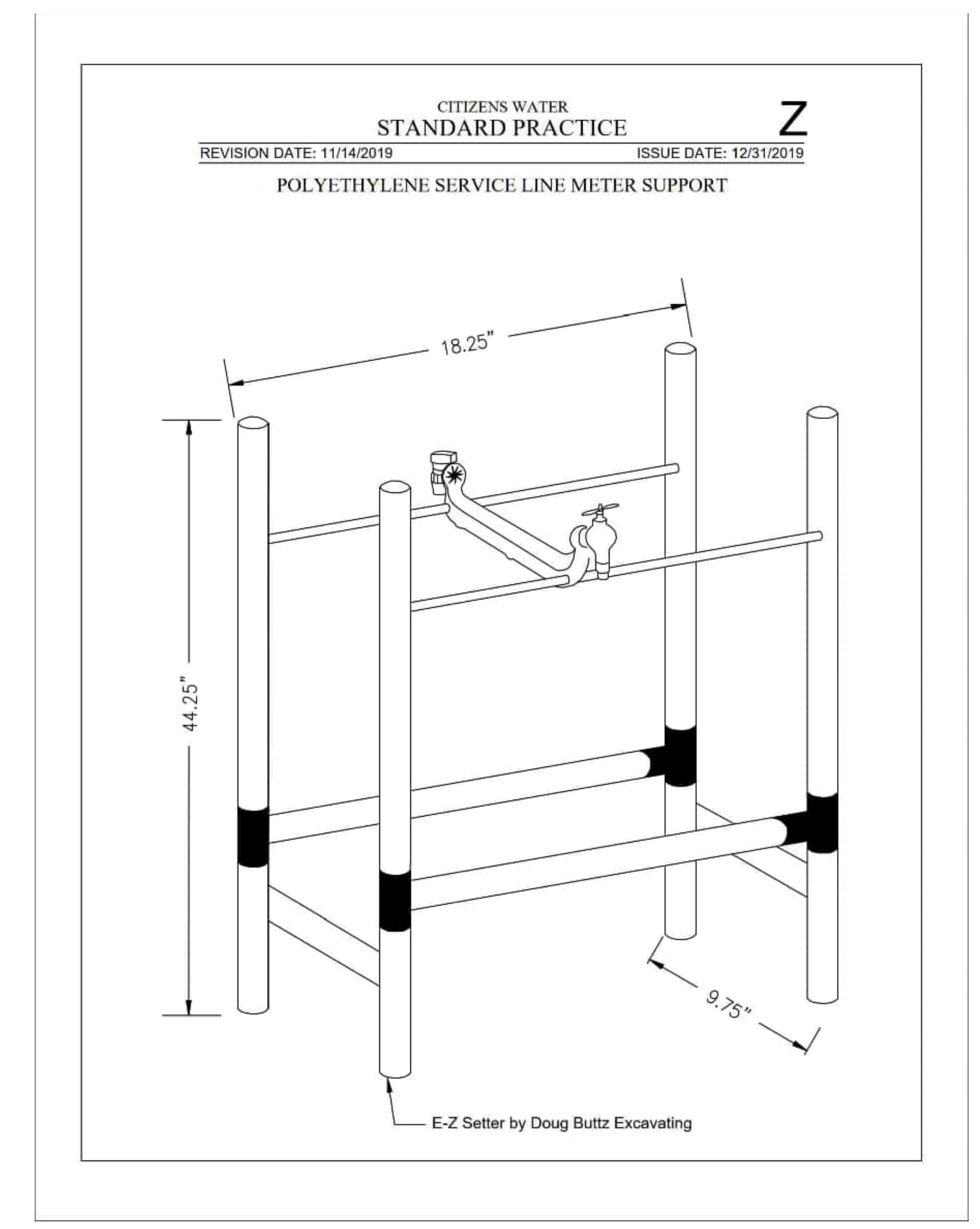
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695











BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

PRELIMINARY PENDING APPROVAL
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Water Distribution Details

DATE:	CHECKED BY:
10/21/24	N.A.W.

PROJECT NUMBER: 24006

SHEET #: C702

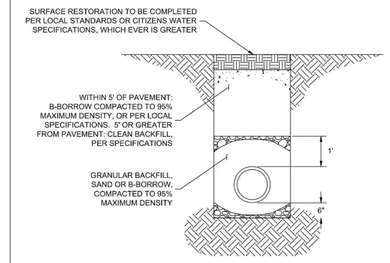
Gatherings at Aurora - Section 3 - 10/21/2024

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

CITIZENS WATER
STANDARD PRACTICE **A.1**

REVISION DATE: 9/20/2018 ISSUE DATE: 7/17/2013

WATER MAIN AND SERVICE BACKFILL REQUIREMENTS



SCALE: NTS

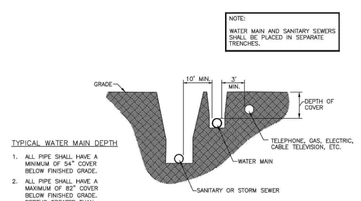
NOTE:
COMPACTED BACKFILL IN LIFTS OF 12" MAXIMUM. TRENCH EXCAVATION SHALL CONFORM TO LOCAL STANDARDS.

CITIZENS WATER
STANDARD PRACTICE **A**

REVISION DATE: 6/8/2009 ISSUE DATE: 6/8/2009

WATER AND SEWER MAIN SEPARATION DETAIL

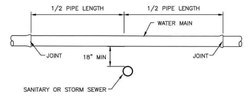
NOTE:
WATER MAIN AND SANITARY SEWERS SHALL BE PLACED IN SEPARATE TRENCHES.



TYPICAL WATER MAIN DEPTH

1. ALL PIPE SHALL HAVE A MINIMUM OF 54" COVER BELOW FINISHED GRADE.
2. ALL PIPE SHALL HAVE A MAXIMUM OF 82" COVER BELOW FINISHED GRADE. DEPTHS GREATER THAN 82" COVER WILL REQUIRE A LOWERING

WATER MAIN LAYING PARALLEL TO SEWER
SECTION VIEW

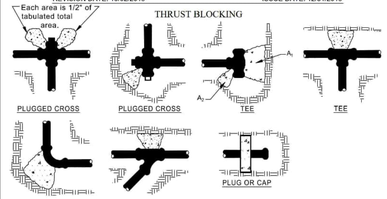


WATER MAIN CROSSING SEWER
SECTION VIEW

CITIZENS WATER
STANDARD PRACTICE **A.2**

REVISION DATE: 10/02/2019 ISSUE DATE: 12/31/2019

THRUST BLOCKING



Notes:
1) CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2) KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3) POLYETHYLENE ENCASEMENT SHALL BE PLACED BETWEEN CONCRETE AND FITTINGS.
4) ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3,000 P.S.I., 2" TO 4" SLUMP AND INCLUDE WIRE MESH FOR REINFORCEMENT.
5) MINIMUM SOIL BEARING SURFACE AREA REQUIREMENTS ARE PROVIDED BELOW BASED ON 150 P.S.I. WATER PRESSURE PLUS 100 P.S.I. WATER HAMMER AND SOIL BEARING CAPACITY OF 3,000 POUNDS PER SQUARE FOOT.

Minimum Soil Bearing Surface Area (ft2)
(Assuming 3,000 psf Soil Bearing Capacity)

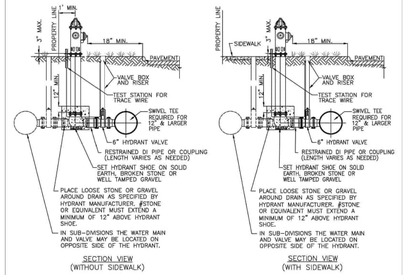
Pipe Size	Horizontal Bends			Tee or Dead End (Plug/Cap)
	22-1/2°	45°	90°	
6"		6	8	6
8"		6	8	6
12"	4	6	11	8
16"	6	11	22	15
20"	9	18	36	24
24"	13	27	50	36
30"	20	45	76	57
36"	31	59	115	80

CITIZENS WATER
STANDARD PRACTICE **B**

REVISION DATE: 10/02/2019 ISSUE DATE: 12/31/2019

STANDARD HYDRANT SETTING

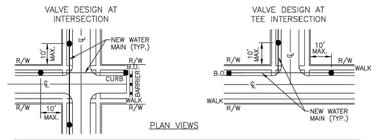
NOTES:
1. ALL HYDRANTS SHALL BE RESTRAINED TO THE HYDRANT TEE WITH DUCTILE IRON BRANCH PIPING ENCASED IN POLYETHYLENE WRAP.
2. SWIVEL 90° BEND MAY BE USED TO INSTALL HYDRANT AND VALVE IN GRASS STRIP BETWEEN CURB & SIDEWALK.
3. A MANUFACTURED "OUT OF SERVICE" SIGN WILL BE REQUIRED ON HYDRANTS UNTIL MAIN HAS BEEN PLACED "IN SERVICE" BY THE INSPECTOR.
4. FOR BRANCH PIPE LONGER THAN 10', INSTALL TRACING WIRE ALONG HYDRANT VALVE RISER.



CITIZENS WATER
STANDARD PRACTICE **F**

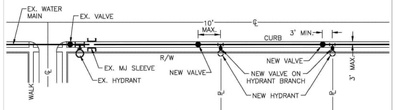
REVISION DATE: 10/20/2020 ISSUE DATE: 6/8/2009

TYPICAL VALVE PLACEMENT



PLAN VIEWS

CONTINUOUS RUNS
VALVE SEPARATION: 6" THROUGH 12" VALVES, INSTALLATION EVERY 1000' TO 1200'
16" THROUGH 24" VALVES, INSTALLATION EVERY 1200' TO 1800'
30" OR LARGER VALVES, MAXIMUM 1800'
FOR LARGER MAINS THE VALVE SEPARATION MAY BE REDUCED WITHIN A DEVELOPMENT, AS APPROVED BY THE UTILITY.



PLAN VIEW

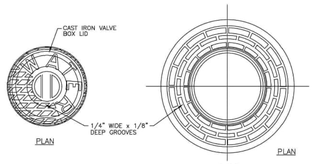
NOTE:
ALL VALVES ARE TO BE INSTALLED WITHIN 10' OF AN INTERSECTION OR NEAR A FIRE HYDRANT.

NOTES:
SEE SEC. 2.03-C FOR VALVE INSTALLATION INFORMATION
SEE SEC. 7.05 FOR VALVE OPENING INFORMATION

CITIZENS WATER
STANDARD PRACTICE **G**

REVISION DATE: 1/1/2015 ISSUE DATE: 6/8/2009

STANDARD 8" VALVE BOX AND COVER

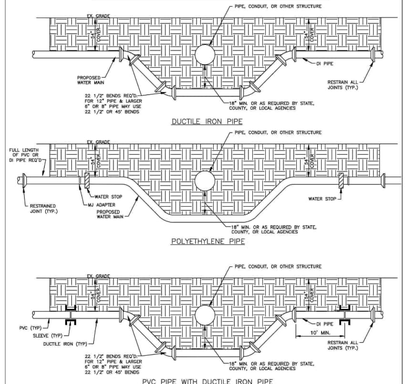


CITIZENS WATER
STANDARD PRACTICE **H.2**

REVISION DATE: 10/02/2019 ISSUE DATE: 12/31/2019

WATER MAIN LOWERING

NOTES:
1. ALL PIPE USED IN WATER MAIN LOWERING SHALL BE POLYETHYLENE PIPE OR DUCTILE IRON WITH RESTRAINED BENDS. (SEE STANDARD PRACTICE DRAWING "G" FOR RESTRAINED JOINT)



BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE — STATE OF INDIANA — PE 10006548 — REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY NOT FOR CONSTRUCTION PENDING FINAL PLAT APPROVAL
DATE:

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Water Distribution Details

DATE: 10/21/24 | CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C703

Gatherings at Aurora - Section 3 - 10/21/2024

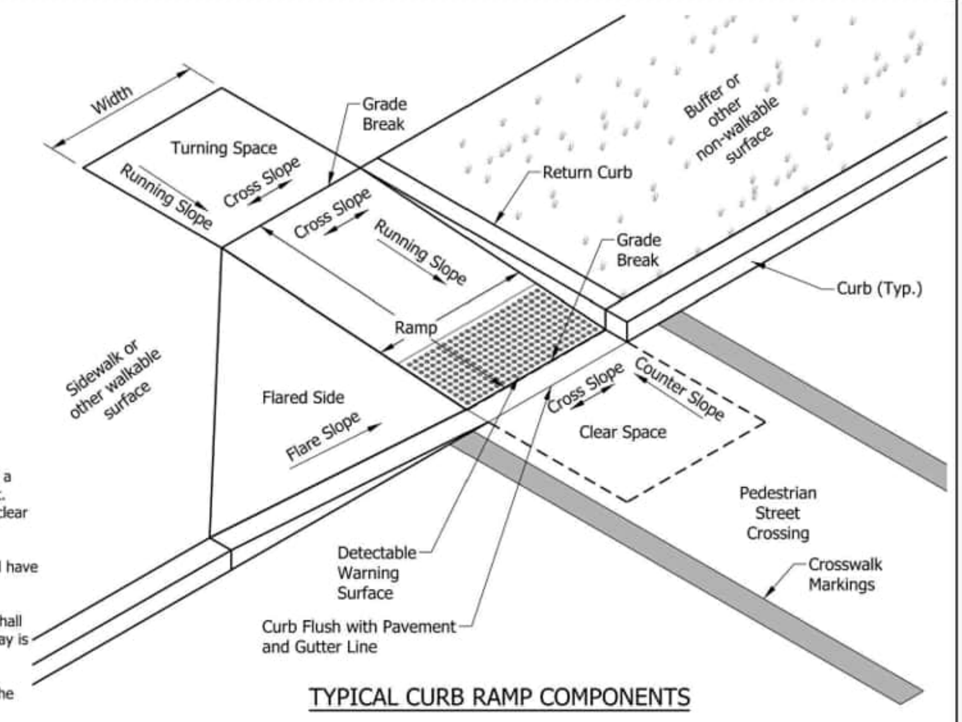
File Path\Name: D:\Benchmark\24 Jobs\24006-Gatherings or Aurora Section 3\dwgs\CIC\702-Detail.dwg - Date: Oct 21,2024 - 2:13pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

INDEX	
SHEET NO.	SUBJECT
1	Curb Ramp Drawing Index and General Notes
2-3	Perpendicular Curb Ramp Typical Placement
4	Perpendicular Curb Ramp Component Details
5	One-Way-Directional Perpendicular Curb Ramp Typical Placement
6	One-Way-Directional Perpendicular Curb Ramp Component Details
7	Parallel Curb Ramps Typical Placement
8	Parallel Curb Ramp Component Details
9	Blended Transition Curb Ramp, Depressed Curb Ramp and Diagonal Curb Ramp Typical Placement
10	Blended Transition Curb Ramp Component Details
11	Median Cut-Through and Median Perpendicular Curb Ramp Typical Placement
12-13	Detectable Warning Surface Placement and Configuration
14	Detectable Warning Surface Details

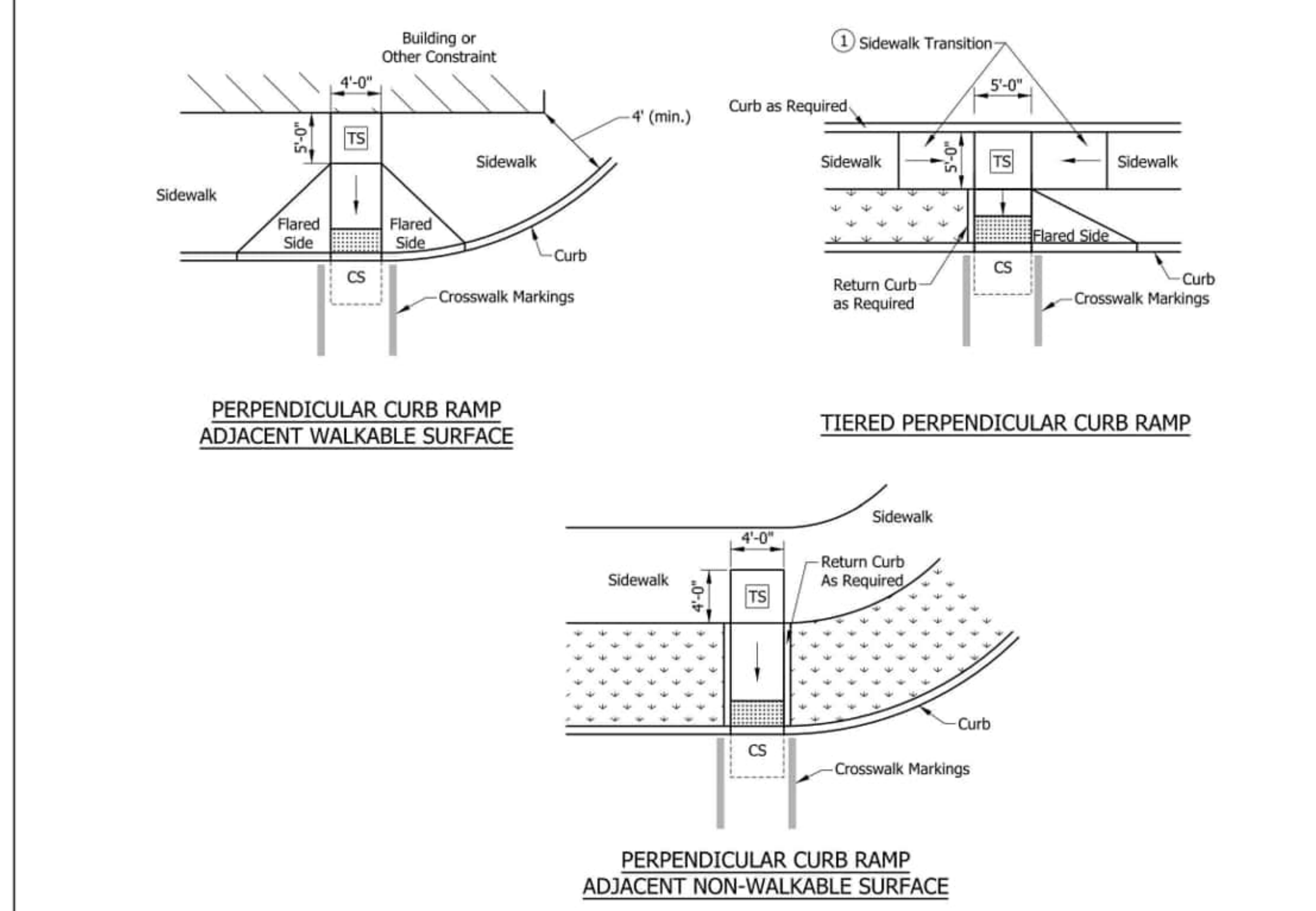
GENERAL NOTES:

1. All slopes are absolute rather than relative to the sidewalk or roadway grade. Slopes at least 0.50% less than the maximum are preferred.
2. Ramp or Blended Transition. A ramp or blended transition shall be used to lower or raise the sidewalk to connect with the street or highway.
3. Turning Space. A turning space shall be provided at the top of a perpendicular ramp, bottom of a parallel ramp, or where the pedestrian travel requires a change in direction. A common turning space may be shared by adjacent ramps. The turning space shall have a minimum clear dimension of 4 ft x 4 ft. Where the turning space is constrained at the back of the sidewalk by a curb, retaining wall, building, or feature over 2 inches in height, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope.
4. Flared Side. A flared side shall be used adjacent to a walkable surface. A flared side may be used adjacent to a non-walkable surface. A flared side shall have a maximum slope of 10.00% measured parallel to the back of the curb.
5. Return Curb. A return curb is placed perpendicular to the roadway curb. A return curb may be used adjacent to a non-walkable surface. A return curb shall not be used adjacent to a walkable surface. The return curb may be omitted where the non-walkable surface is flared and the curb adjacent the roadway is tapered to meet the flush curb at the bottom of the ramp.
6. Clear Space. A clear space shall be provided beyond the bottom grade break of a curb ramp wholly contained within the crosswalk and wholly outside the parallel vehicular travel path. The clear space shall have a minimum clear dimension of 4 ft x 4 ft.
7. Detectable Warning Surface. A detectable warning surface shall consist of truncated domes and be placed at each street, highway, or railroad crossing. The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and be placed the entire width of a ramp, blended transition, or turning space.
8. Running Slope. The running slope of a ramp, blended transition, or turning space shall be measured parallel to the direction of pedestrian travel.
   a. A running slope of 2.00% or less is considered level.
   b. A ramp shall have a maximum running slope of 8.33% but shall not require a ramp length to exceed 15 ft.
   c. A blended transition shall have a maximum running slope of 5.00%.
   d. A turning space shall have a maximum running slope of 2.00%.
9. Width. Unless otherwise noted, minimum width of a ramp, blended transition, or turning space, excluding flared sides or return curb, shall be 4 ft.
10. Grade Break. A grade break at the top and bottom of a ramp, blended transition, or turning space shall be perpendicular to the running slope. Grade breaks shall not be within the ramp, blended transition, turning space, or detectable warning surface. Grade breaks shall be flush. Vertical discontinuities shall not be greater than 1/2 in. Where a discontinuity is greater than 1/4 in. the surface shall be beveled with a slope not steeper than 1V:2H.
11. Cross Slope Exceptions. The cross slope of a ramp, blended transition, or turning space shall be measured perpendicular to the direction of pedestrian travel.
   a. The maximum cross slope at a pedestrian street crossing without yield or stop control shall be 5.00%.
   b. The maximum cross slope at a pedestrian street crossing with yield or stop control shall be 2.00%.
   c. The maximum cross slope at a midblock crossing shall be the established grade of the adjacent roadway.
12. Counter Slope. A counter slope is the cross slope of the gutter or street adjacent the running slope of the ramp, blended transition, or turning space. See Standard Drawing E 604-SWCR-14 for counter slope details.
13. Objects such as a utility cover, vault frame, and grating shall be placed outside the curb ramp.
14. Curb ramps shall be placed within the marked crosswalk area.
15. Drainage inlets should be located uphill from a curb ramp to prevent ponding in the path of pedestrian travel.



TYPICAL CURB RAMP COMPONENTS

INDIANA DEPARTMENT OF TRANSPORTATION
CURB RAMP DRAWING INDEX AND GENERAL NOTES
SEPTEMBER 2018
STANDARD DRAWING NO. E 604-SWCR-01
/s/ Elizabeth W. Phillips 03/29/18 DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18 CHIEF ENGINEER DATE



PERPENDICULAR CURB RAMP ADJACENT WALKABLE SURFACE

TIERED PERPENDICULAR CURB RAMP

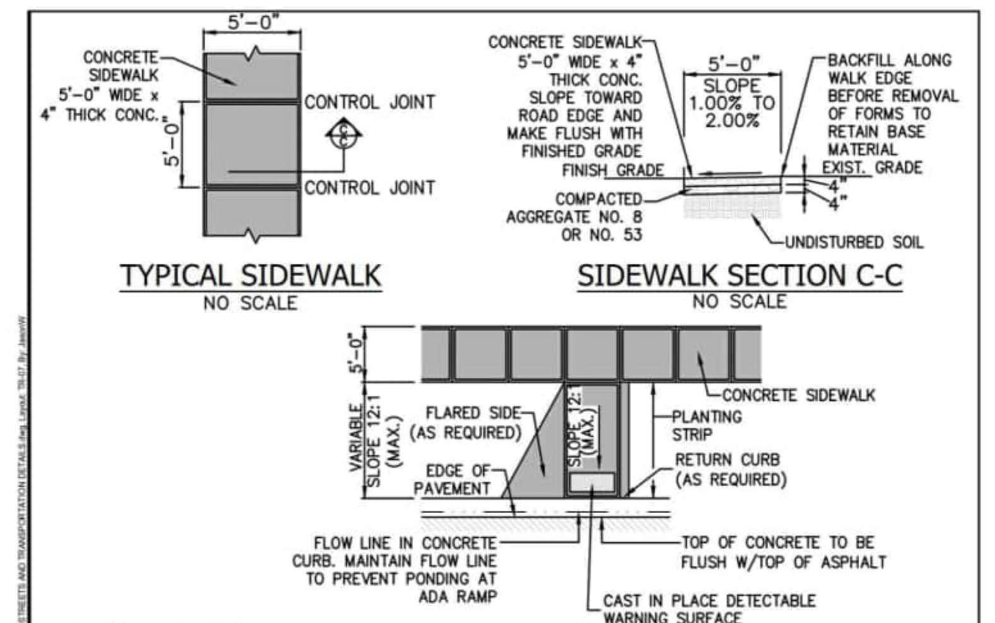
PERPENDICULAR CURB RAMP ADJACENT NON-WALKABLE SURFACE

NOTES:

1. Where insufficient width between the curb and back of sidewalk prevent a standard perpendicular curb ramp running slope, a sidewalk transition may be used to lower the sidewalk grade. The sidewalk transition running slope shall not exceed 8.33%. See Standard Drawing Series E 604-SDWK for sidewalk details.
2. The turning space shall have a minimum clear dimension of 4 ft x 4 ft and a running slope of 2.00% maximum. Where the turning space is constrained at the back of the sidewalk, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope.

LEGEND:
- Buffer or Other Non-Walkable Surface
- Ramp
- Detectable Warning Surface
- TS Turning Space
- CS Clear Space

INDIANA DEPARTMENT OF TRANSPORTATION
PERPENDICULAR CURB RAMP TYPICAL PLACEMENT
SEPTEMBER 2018
STANDARD DRAWING NO. E 604-SWCR-02
/s/ Elizabeth W. Phillips 03/29/18 DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18 CHIEF ENGINEER DATE



TYPICAL SIDEWALK
NO SCALE

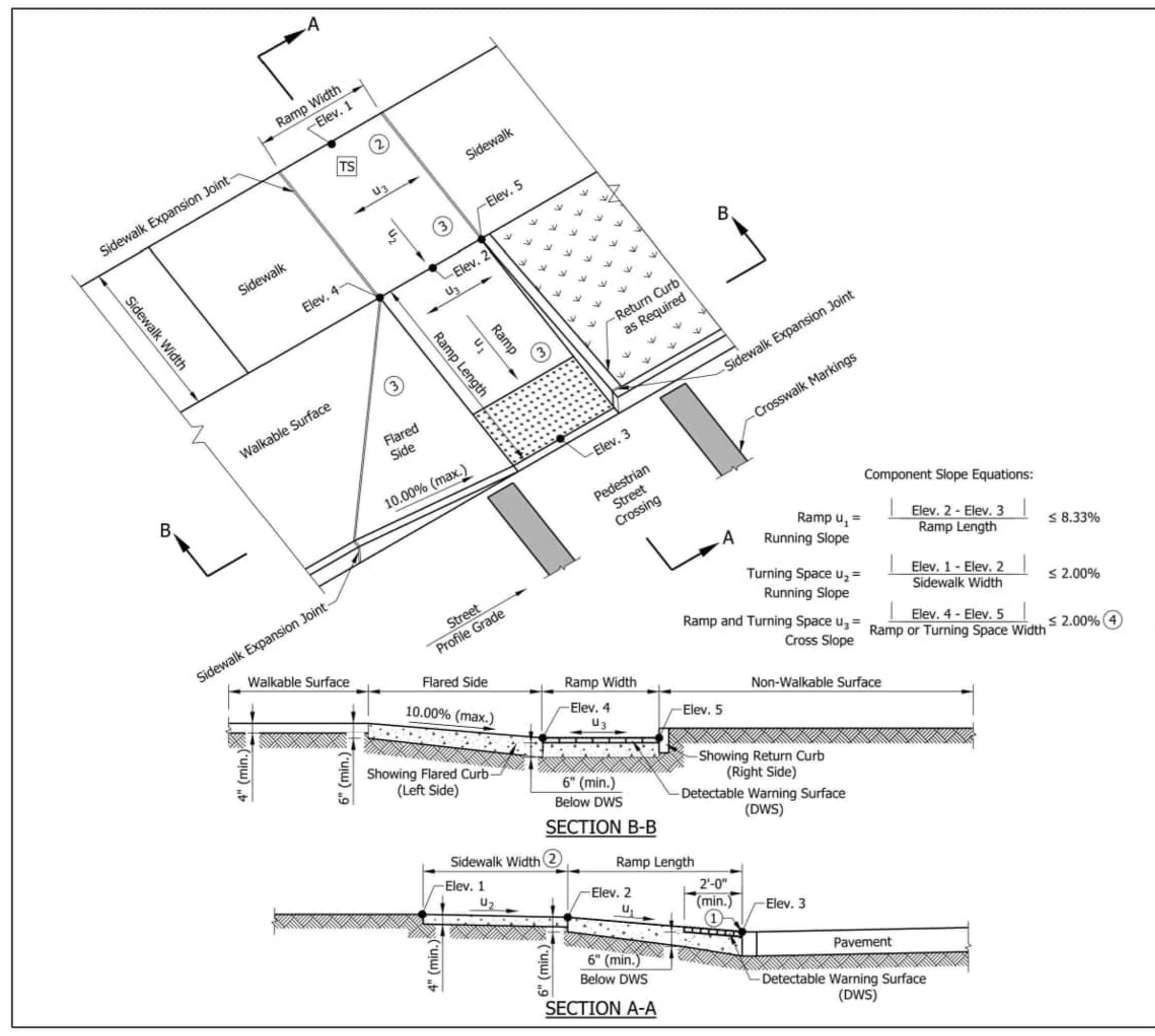
SIDEWALK SECTION C-C
NO SCALE

SIDEWALK REQUIREMENTS:

1. CONCRETE FOR SIDEWALKS SHALL MEET THE FOLLOWING SPECIFICATIONS:
   A) 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS
   B) 564 LBS. CEMENT PER CUBIC YARD CONCRETE
   C) MAXIMUM WATER CEMENT RATIO: 0.40
   D) AIR CONTENT: 5%-7%
   E) WATER REDUCING ADMIXTURE REQUIRED
2. SIDEWALKS SHALL HAVE A BROOM FINISH WITH TOOLED EDGES AND TOOLED CONTROL JOINTS.
3. CURING COMPOUND EQUAL TO "HYDROCIDE CURING COMPOUND" AS MANUFACTURED BY SONNEBORN, SHALL BE APPLIED TO FINISHED CONCRETE.
4. EXPANSION/CONTRACTION JOINTS SHALL BE INSTALLED AT MAXIMUM OF 50' INTERVALS, AND WHERE CONCRETE WILL ABUT EXISTING WALKS, CURBING, DRIVES, OR OTHER CONCRETE.
5. EXPANSION/CONTRACTION JOINT SHALL BE INSTALLED WITH THREE (3) 1/4" DIA. SMOOTH DOWEL BARS, EACH 12" LONG. DOWEL BARS SHALL HAVE A FULL END CAP ON ONE END. EXPANSION/CONTRACTION JOINT SHALL BE FILLED WITH EXPANSION JOINT FILLER. CONNECTION TO EXISTING WALKS OR SLABS SHALL REQUIRE DRILLING TO INSTALL DOWELS. EPOXY SHALL BE USED TO SET DOWELS IN EXISTING CONCRETE.
6. AT DRIVEWAYS, CONCRETE SHALL BE REINFORCED WITH 6 x 6 x 6/6 WELDED WIRE FABRIC. REINFORCING WELDED WIRE FABRIC SHALL CONFORM TO ASTM 185-73.
7. SIDEWALK THICKNESS IN DRIVEWAY AND APRON BETWEEN SIDEWALK AND CURB SHALL MATCH THE EXISTING CONCRETE DRIVEWAY, THE EQUIVALENT CONCRETE THICKNESS OF THE HMA DRIVEWAY OR SIX (6) INCHES, WHICHEVER IS GREATER.
8. DETAIL IS MEANT TO PROVIDE GUIDANCE ONLY, RAMPS SHALL MEET THE REQUIREMENT OF INDOT STANDARD DRAWINGS E 604-SWCR AND PROWAG.

SIDEWALK ADA RAMP DETAIL
NO SCALE

DETAIL NO. TR-07
REVISION DATE: SEPT 2016



SECTION B-B

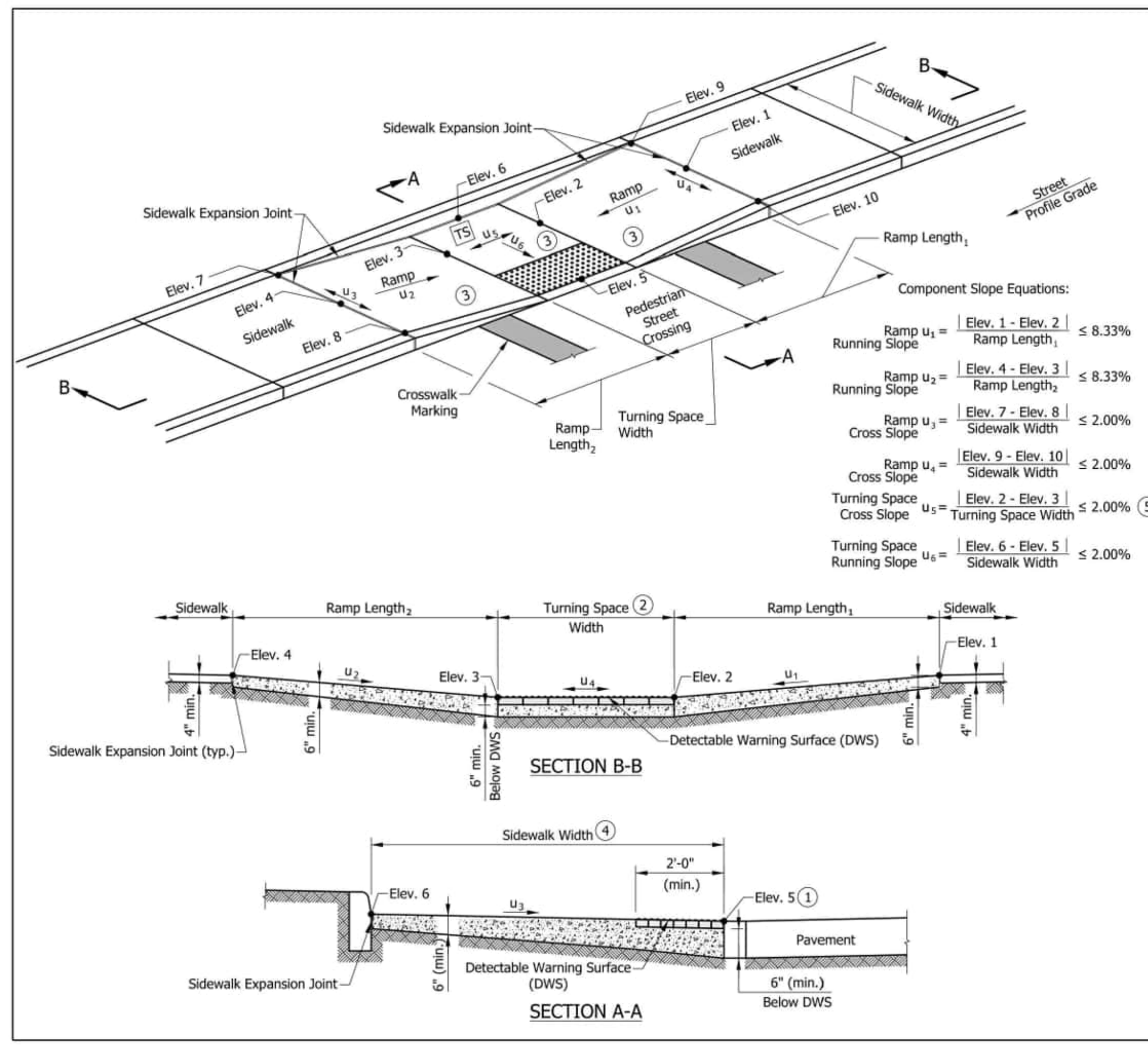
SECTION A-A

NOTES:

1. (1) The bottom edge of the ramp and top of curb shall be flush with the edge of adjacent pavement and gutter line.
2. (2) The turning space shall have a minimum clear dimension of 4 ft x 4 ft. Where the turning space is constrained at the back of the sidewalk, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope. Where a tiered perpendicular curb ramp is used, a constrained turning space shall have a minimum clear dimension of 5 ft x 5 ft.
3. (3) Curb ramp surface shall be coarse broomed transverse to the running slope.
4. (4) See Standard Drawing E 604-SWCR-01 for cross slope exceptions.
5. See Standard Drawing E 604-SWCR-12, -13, and -14 for Detectable Warning Surface placement, configuration, and details.
6. See Standard Drawing E 604-CCSJ-01 for sidewalk expansion joint details.

LEGEND:
- Buffer or Other Non-Walkable Surface
- Ramp
- Detectable Warning Surface
- TS Turning Space

INDIANA DEPARTMENT OF TRANSPORTATION
PERPENDICULAR CURB RAMP COMPONENT DETAILS
SEPTEMBER 2018
STANDARD DRAWING NO. E 604-SWCR-04
/s/ Elizabeth W. Phillips 03/29/18 DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18 CHIEF ENGINEER DATE



SECTION B-B

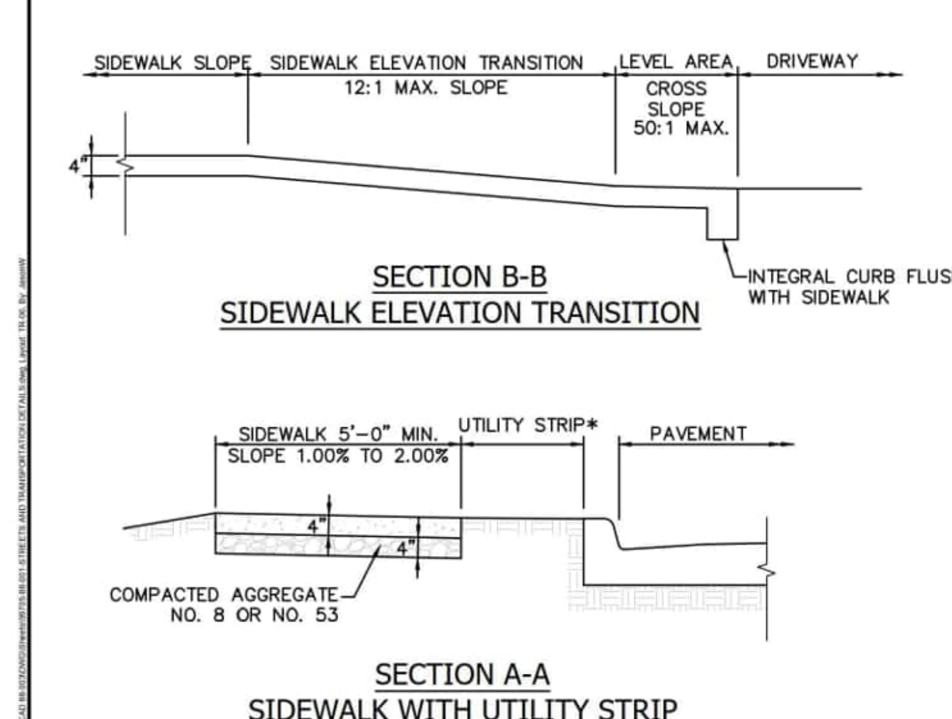
SECTION A-A

NOTES:

1. (1) The bottom edge of the turning space and top of curb shall be flush with the edge of adjacent pavement and gutter line.
2. (2) The turning space shall have a minimum clear dimension of 4 ft x 4 ft and a running slope of 2.00% maximum. Where the turning space is constrained at the back of the sidewalk, the minimum clear dimension shall be 4 ft x 5 ft, with the 5-ft dimension in the direction of the ramp running slope.
3. (3) Curb ramp surface shall be coarse broomed transverse to the running slope.
4. (4) Where there is no buffer between the sidewalk and curb, the preferred minimum sidewalk width is 6 ft. Where a buffer is placed between the sidewalk and curb, the preferred minimum sidewalk width is 5 ft. See Standard Drawing Series E 604-SDWK for sidewalk details.
5. (5) See Standard Drawing E 604-SWCR-01 for cross slope exceptions.
6. See Standard Drawing E 604-SWCR-12, -13, and -14 for Detectable Warning Surface placement, configuration, and details.
7. See Standard Drawing E 604-CCSJ-01 for sidewalk expansion joint details.

LEGEND:
- Ramp
- Detectable Warning Surface
- TS Turning Space

INDIANA DEPARTMENT OF TRANSPORTATION
PARALLEL CURB RAMP COMPONENT DETAILS
SEPTEMBER 2018
STANDARD DRAWING NO. E 604-SWCR-08
/s/ Elizabeth W. Phillips 03/29/18 DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18 CHIEF ENGINEER DATE



SECTION B-B
SIDEWALK ELEVATION TRANSITION

SECTION A-A
SIDEWALK WITH UTILITY STRIP

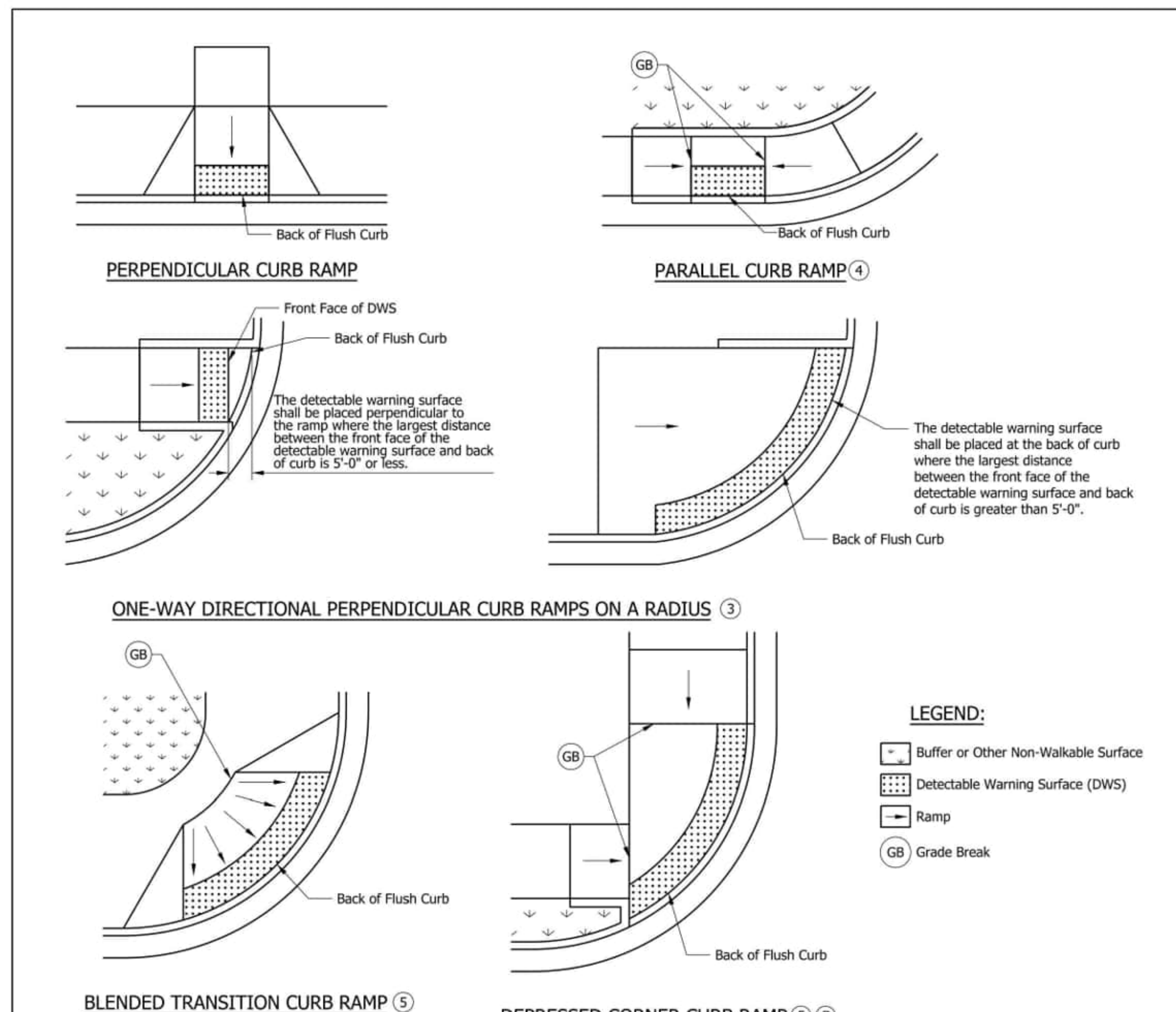
* UTILITY STRIP WIDTH SHALL COMPLY WITH THE CURRENT TOWN OF BROWNSBURG SUBDIVISION CONTROL ORDINANCE AND CURRENT TOWN OF BROWNSBURG THOROUGHFARE PLAN.

CONCRETE SIDEWALK DETAIL
NO SCALE

NOTE:

CONCRETE SIDEWALK SHALL BE INSTALLED ON COMPACTED SUBGRADE. NO. 8 OR NO. 53 STONE SHALL BE INSTALLED AND COMPACTED ON THE APPROVED SUBGRADE. CONCRETE SHALL BE INDOT CLASS A CONCRETE AND IT SHALL HAVE A 28-DAY MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 4,000 PSI. WHERE A SIDEWALK PASSES THROUGH A DRIVE APPROACH, IT SHALL BE THE SAME THICKNESS AS THE ADJACENT CONCRETE DRIVE, THE CONCRETE EQUIVALENT FOR THE ADJACENT HMA DRIVE, OR SIX (6) INCHES, WHICHEVER IS GREATER.

TOWN OF BROWNSBURG
DETAIL NO. TR-06
REVISION DATE: SEPT 2016



PERPENDICULAR CURB RAMP

PARALLEL CURB RAMP (4)

ONE-WAY DIRECTIONAL PERPENDICULAR CURB RAMPS ON A RADIUS (3)

BLENDED TRANSITION CURB RAMP (5)

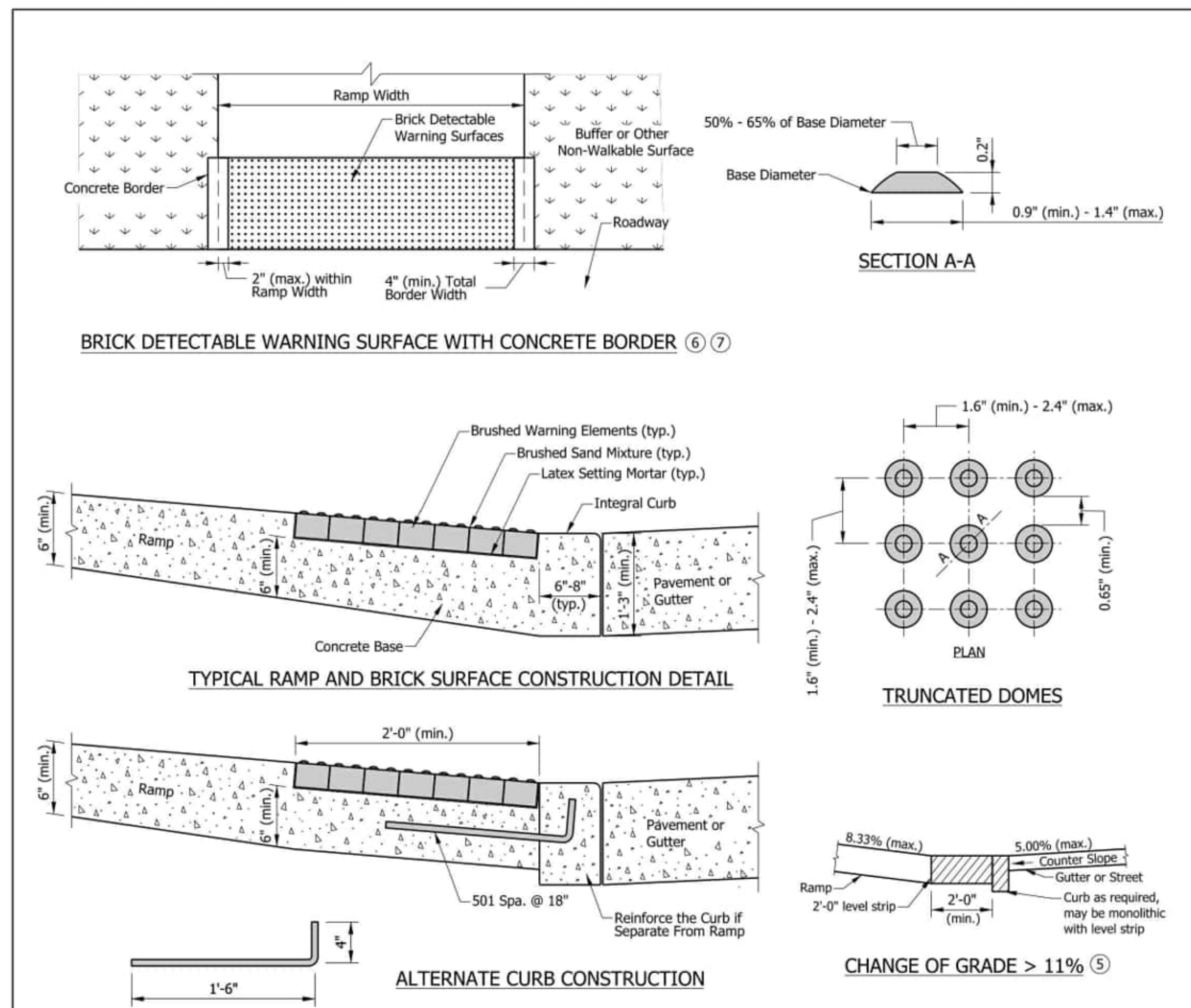
DEPRESSED CORNER CURB RAMP (5) (7)

NOTES:

1. A detectable warning surface shall be placed at each street, highway, or railroad crossing. See Standard Drawing E 604-SDWK-03 for a detectable warning surface placement at a sidewalk driveway crossing.
2. The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and extend the full width as shown. The detectable warning surface shall not be placed across a grade break.
3. (3) Where the distance from the face of the detectable warning surface is 5 ft or less from the back of curb, the detectable warning surface shall be placed perpendicular to the ramp. Where the distance from the face of the detectable warning surface is more than 5 ft from the back of curb, the detectable warning surface shall be placed at the back of curb as shown or in an alternate placement configuration. See Standard Drawing E 604-SWCR-13 for alternate detectable warning surface placement.
4. (4) The detectable warning surface on a parallel curb ramp shall be placed on the turning space at the flush transition between the street and turning space at the back of curb.
5. (5) The detectable warning surface on a blended transition or depressed corner shall be placed at the back of curb as shown or in an alternate placement configuration. See Standard Drawing E 604-SWCR-13 for alternate detectable warning surface placement.
6. See Standard Drawing E 604-SWCR-14 for detectable warning surface details.

LEGEND:
- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface (DWS)
- Ramp
- GB Grade Break

INDIANA DEPARTMENT OF TRANSPORTATION
DETECTABLE WARNING SURFACE PLACEMENT AND CONFIGURATION
SEPTEMBER 2018
STANDARD DRAWING NO. E 604-SWCR-12
/s/ Elizabeth W. Phillips 03/29/18 DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18 CHIEF ENGINEER DATE



BRICK DETECTABLE WARNING SURFACE WITH CONCRETE BORDER (6) (7)

SECTION A-A

TYPICAL RAMP AND BRICK SURFACE CONSTRUCTION DETAIL

TRUNCATED DOMES

ALTERNATE CURB CONSTRUCTION

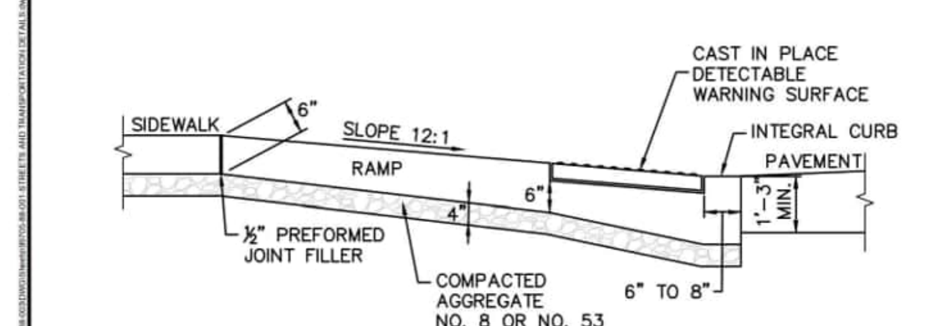
CHANGE OF GRADE > 11% (5)

Detecable Pavers Shsll be Black in Color

NOTES:

1. Detectable warning surface shall consist of truncated domes. Domes shall be aligned in a square or radial grid pattern with diameter and center-to-center spacing within the ranges specified.
2. The detectable warning surface may be field cut. Truncated dome spacing between adjacent panels shall be within the ranges specified.
3. The detectable warning surface shall contrast visually with adjacent surfaces, either light-on-dark or dark-on-light.
4. The detectable warning surface shall extend a minimum of 2 ft in the direction of pedestrian travel and extend the full width as shown. The detectable warning surface shall not be placed across a grade break.
5. (5) The maximum counter slope of the gutter or street at the bottom of the ramp shall be 5.00%. Where the algebraic difference between the running slope and the counter slope exceeds 11%, a 2-ft minimum level strip should be provided at the bottom of the ramp.
6. (6) Where a concrete border is used for forming, the border shall be cast monolithically with the curb ramp concrete. The concrete border shall not reduce the ramp width by more than 2 in. on each side.
7. (7) Where forming other than a concrete border is used, the edge restraint shall not encroach upon the ramp width.

INDIANA DEPARTMENT OF TRANSPORTATION
DETECTABLE WARNING SURFACE DETAILS
SEPTEMBER 2018
STANDARD DRAWING NO. E 604-SWCR-14
/s/ Elizabeth W. Phillips 03/29/18 DESIGN STANDARDS ENGINEER DATE
/s/ John Leckie 04/25/18 CHIEF ENGINEER DATE



DETECTABLE WARNING SURFACE DETAIL
NO SCALE

NOTE:

THIS DETAIL SHALL BE USED WHEN ACCESSIBLE RAMPS ARE TO BE INSTALLED. DETECTABLE WARNING SURFACE SHALL MEET APPLICABLE TOWN STANDARDS. WHEN PLACED IN CORNER RADII, MATERIAL SHALL BE CAST IRON DETECTABLE WARNING PLATES, SIMILAR TO NEENAH FOUNDRY PRODUCT, OR APPROVED EQUAL. WHEN PLACED ALONG TANGENT, MATERIAL MAY BE CAST IRON DETECTABLE WARNING PLATES, SIMILAR TO NEENAH FOUNDRY PRODUCT, ARMOR-TILE HERCULITE SERIES, OR APPROVED EQUAL.

DETAIL NO. TR-08
REVISION DATE: SEPT 2016

Gatherings at Aurora - Section 3 - 10/21/2024

REVISIONS:

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkconn.com

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

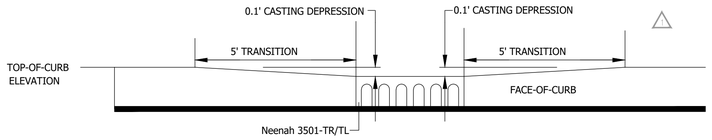
Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Construction Details

File Path\Name: D:\Benchmark01\Benchmark\24 Jobs\24006-Gatherings ar Aurora Section 3\dwgs\C801-C802.dwg - Date: Oct 21,2024 - 2:13pm

DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET #
C801

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695



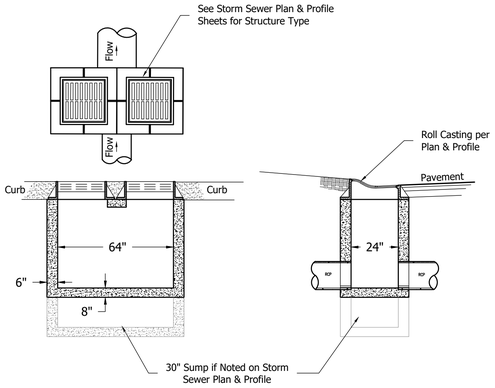
DEPRESSED INLET CURB TRANSITION

N.T.S.

Pond Warning Signs

NTS

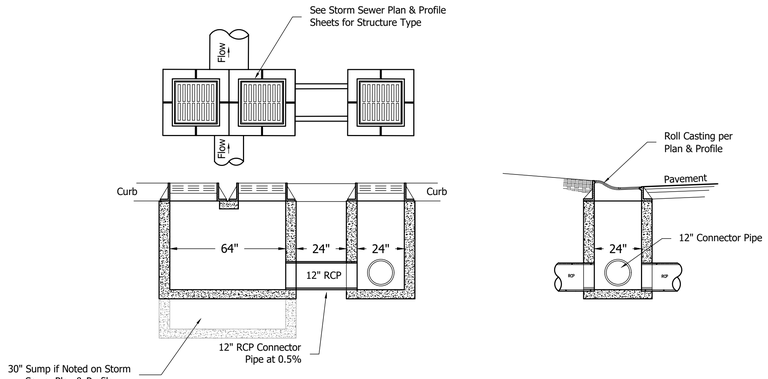
- Sign shown is for reference only. Final sign to be approved by owner.
- Signs to have a minimum area of one square foot and less than four square feet.
- Signs are to be installed before second building permit is issued. Sufficient time must be given for locating and installing new signs.
- Sign shall be permanent material, either wood or metal.
- Sign must have the words "DANGER" , "NO FISHING" and "STAY OFF ICE".
- Signs must have no swimming and stay off ice symbols.
- Coordinate additional restrictions with owner
- Sing to be responsibility of land owner or HOA.



24" 64" Double Inlet Box

NTS

1. See Storm Sewer Plan & Profile Sheets for Main Line Structure Type
2. See Plan & Profile Sheet for Casting



24" x 64" Double Inlet Box *& Catch Basin

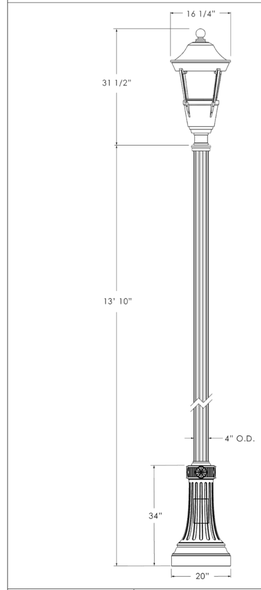
NTS

1. See Storm Sewer Plan & Profile Sheets for Main Line Structure Type
2. Off-line structure to be 24" x 24" Catch Basin
3. Crown of Connector Pipe to be No Lower than Crown of Main Downstream Pipe
4. See Plan & Profile Sheet for Offline Structure Orientation
5. See Plan & Profile Sheet for Casting

GLOBAL LIGHTING PERSPECTIVES
1605 N Main St. Bldg. B, Pearland TX 77581 | www.glplic.co

Quote #:	Date:	SO #:

Part String: GR1116-NL_G2LED65-T3-40K_BT



Rep Name: PROFESSIONAL LIGHTING SERVICE
Job Name: GATHERINGS AT AUROARA

Light Module Distribution:
- ○ Type II Distribution
- ● Type III Distribution
- ○ Type IV Distribution
- ○ Type V Distribution
- ○ Standard Symmetrical
- ○ Specify: ==========

Finish:
- ○ **BK** Black
- ● **BT** Textured Black
- ○ **GN** Green
- ○ **GV** Green Vein
- ○ **WH** White
- ○ **CV** Copper Vein
- ○ **SB** Statuary Bronze
- ○ **SV** Silver
- ○ Custom: ==========

Voltage:
- ○ 120
- ○ 208
- ○ 240
- ● Auto (120V-277V) [LED]
- ○ Specify: ==========
- ○ 277
- ○ 480
- ○ Multitap

Light Source:
- ○ 50W MH
- ○ 70W MH
- ○ 100W MH
- ○ 150W MH
- ○ 175W MH-PS
- ○ 250W MH-PS
- ○ PL13
- ○ 26W LED
- ● 65W LED
- ○ 115W LED
- ○ 50 HPS
- ○ 70 HPS
- ○ 100 HPS
- ○ 150 HPS
- ○ 250 HPS
- ○ Incandescent
- ○ CFL
- ○ 40W LED
- ○ 80W LED
- ○ SPEC

Specify: ==========

Note:
LED - Light Emitting Diode
MH - Metal Halide
HPS - High Pressure Sodium
PL & CF - Compact Fluorescents

Additional (If Any):

Hardware: Stainless Steel Hardware Included.

Filter Details:

Electrical: Auto-Sensing Voltage 120VAC-277VAC

Pole Details: Cast Aluminum Base Extruded Aluminum Shaft 1/2" X 18" Double Nut Double Washer Anchor Bolts

Drawn By: MC **Revision:** 000

Notes: Drawing for reference only, subject to change. Attach drawing with order. Do Not Scale.

GR1116 Luminaire - LED

Finish

The fixture will be finished with an electrostatically applied polyester powder coat suitable for exterior use. The fixtures are pretreated using industry standard environmentally responsible processes for a long lasting and durable finish.

Standard Finishes
BK - Black (Gloss)
BT - Black (Textured)
SB - Statuary Bronze
GN - Green

Premium Finishes
WH - White (Gloss)
CV - Copper Vein
GV - Green Vein
CF - Custom Finishes

LED Light Source Options

Light Source	Nominal Power	CCT	Distribution
G2LED40	41.2 W	2700K (27K)	Type II (T2)
G2LED65	67.9 W	3000K (30K)	Type III (T3)
G2LED80	82.1 W	4000K (40K)	Type IV (T4)
			Type V (T5)

LED Drivers are auto voltage sensing, standard 120V through 277V (347, 480V Version Available-Consult Factory)

LED Light Source Performance Data
In No Lens Fixture

Module Name	mA	Color Temp (CCT)	27K Delivered Lumens	27K Efficacy (LPW)	30K Delivered Lumens	30K Efficacy (LPW)	40K Delivered Lumens	40K Efficacy (LPW)
G2LED40	750	T2	3200.4	77.68	3297.8	80.04	3632.6	88.17
		T3	3445.2	83.62	3550.1	86.17	3910.5	94.92
		T4	3653.2	88.67	3764.4	91.37	4146.4	100.64
		T5	3690.3	89.57	3802.7	92.30	4188.6	101.67
G2LED65	1200	T2	4596.9	67.70	4737.1	69.77	6217.7	91.57
		T3	4948.4	72.88	5099.3	75.10	5616.8	82.72
		T4	5247.4	77.28	5407.3	79.64	5956.1	87.72
		T5	5300.5	78.06	5462.2	80.44	6016.6	88.61
G2LED80	1500	T2	6421.2	78.21	6616.7	80.59	7288.3	88.77
		T3	6861.2	83.57	7070.2	86.12	7787.6	94.86
		T4	7229.9	88.06	7450.0	90.74	8206.2	99.95
		T5	7285.0	88.73	7507.0	91.44	8268.6	100.71

Ordering Guide

	Luminaire		Lens Material/ Color		LED Light Source		Distribution Type		CCT	Optional Photocell	Optional House Side Shield	Finish
EXAMPLE	GR1116	–	AC-CL	/	G2LED80	–	T3	–	40K	/ PCLL	/ 26HSS	/ BT
	GR1116		NL		G2LED40		T3		27K	PCLL	26HSS	BK
			AC-CL		G2LED65		T5		30K			BT
					G2LED80				40K			SB
												GN
												Premium Finishes
												WH, CV, GV, CF
	Required									Optional		Choose Finish

1605 N. Main St. Bldg B | Pearland, TX 77581 Phone 281-412-2944 | www.glplic.co

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Gatherings at Aurora - Section 3 - 10/21/2024

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

STATE OF INDIANA — NATHAN A. WHITE — 19900548 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING
DATE: Nathan A. White

PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN

Construction Details

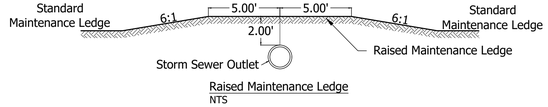
DATE: 10/21/24 CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C802

File Path\Name: D:\Benchmark01\Benchmark\24 Jobs\24006-Gatherings at Aurora Section 3\dwgs\C801-C802.dwg - Date: Oct 21,2024 - 2:14pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

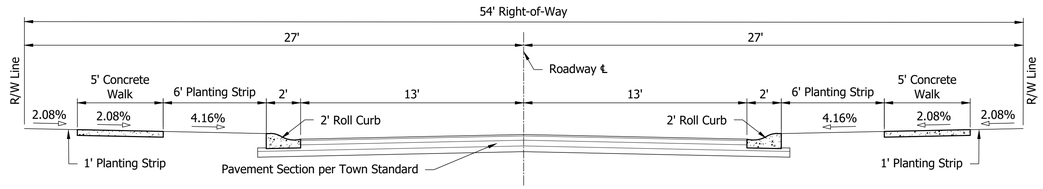
Typical Pond Section

Not to Scale



Raised Maintenance Ledge
NTS

1. Minimum pipe cover shall be 2 feet.



Typical Roadway Section

Not to Scale

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

REVISIONS:

Gatherings at Aurora - Section 3 - 10/21/2024

Nathan White Engineering, L.L.C. d.b.a.
BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695
Project Manager: Nathan White
nwhite@benchmarkcon.com

NATHAN A. WHITE
STATE OF INDIANA
PE 19005548
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY PLAT NOT FOR CONSTRUCTION
DATE:

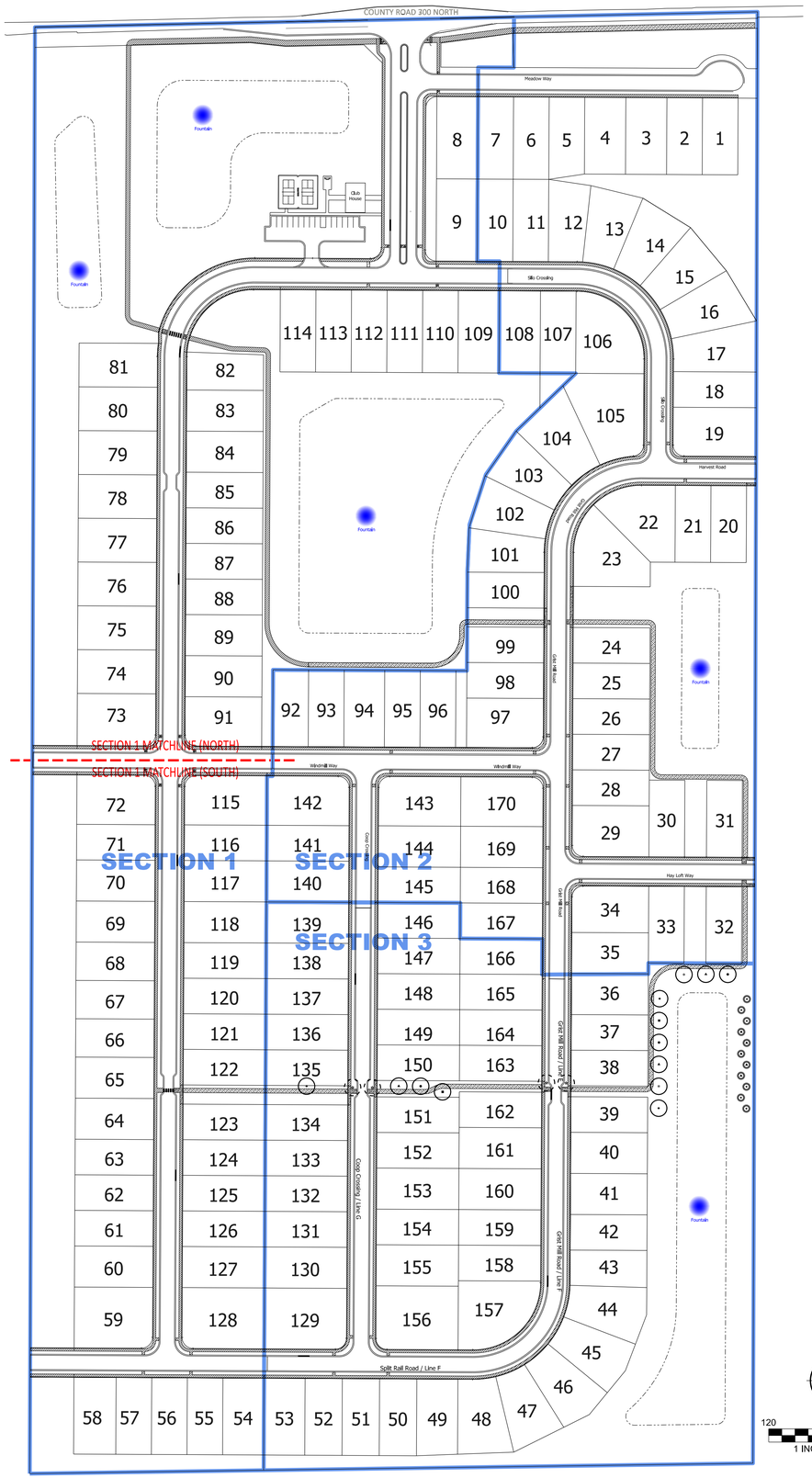
PREPARED FOR:
Beazer Homes of Indiana, LLP
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-935-2804
Rob Montgomery
rob.montgomery@beazer.com

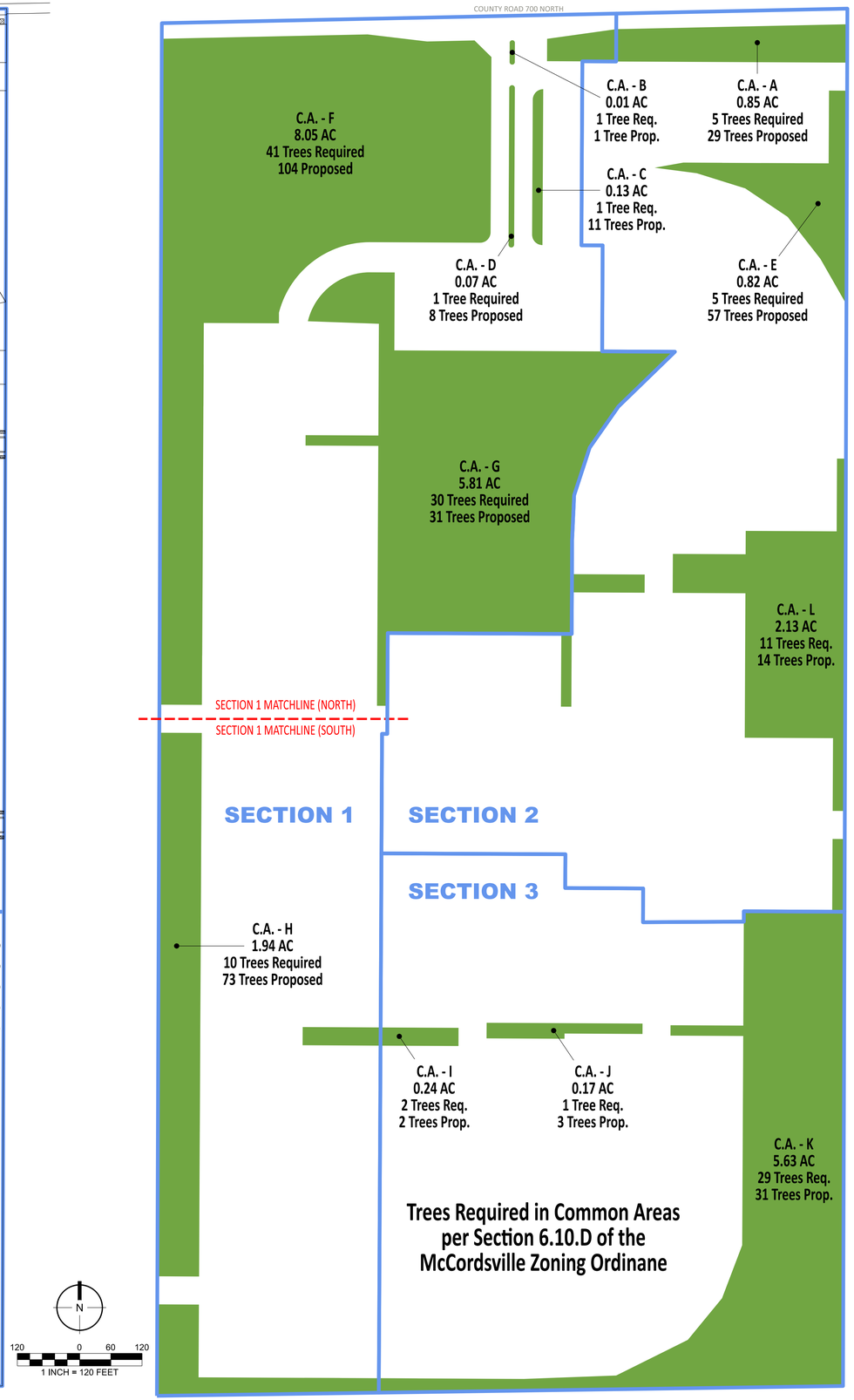
Gatherings at Aurora
Section 3
West CR 700 North McCordsville, IN
Construction Details

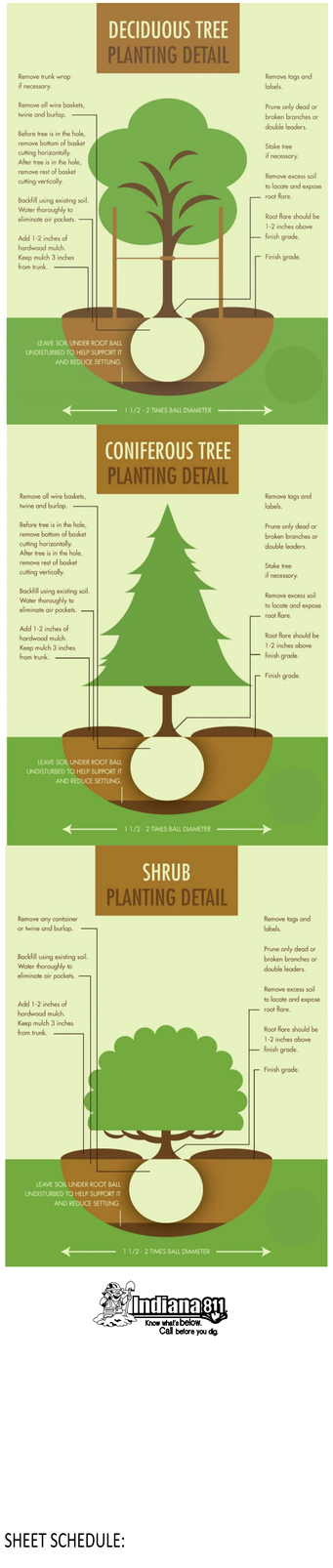
DATE: 10/21/24
CHECKED BY: N.A.W.
PROJECT NUMBER: 24006
SHEET # C803

File Path\Name: D:\Benchmark\01Benchmark\24-Jobs\24006-Gatherings ar Aurora Section 3\dwgs\C801-C802.dwg - Date: Oct 21,2024 - 2:14pm

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695







Indiana811
Know what's below.
Call before you dig.

SHEET SCHEDULE:

L101 SECTION 3 PLANTING PLAN

REVISIONS:

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

DATE:

PREPARED FOR:

Beazeer Homes
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-714-4118
Sean Sullivan
sean.sullivan@beazer.com

Gatherings at Aurora - Section Three
Construction Plans

McCordsville, Indiana

Landscaping Plan - Cover Sheet

DATE: 10/03/2024

DRAWN BY: EWS

PROJECT NUMBER: 24006

SHEET # L000

PLANT SCHEDULE:

Street Trees (2") by Developer:

- Gleditsia triacanthos var. inermis 'Draves' - 0 (Street Keeper Honeylocust)
- Platinus x acerifolia 'Bloodgood' - 0 (Bloodgood London Planetree)
- Ulmus 'Princeton' - 0 (Princeton Elm)
- Zelkova serrata 'Green Vase' - 4 (Green Vase Zelkova)

Shade Trees (2") by Developer:

- Acer rubrum 'Autumn Radiance' - 3 (Autumn Radiance Red Maple)
- Gleditsia triacanthos inermis 'Skycole' - 3 (Skyline Honeylocust)
- Liquidambar styraciflua 'Worplesdon' - 3 (Worplesdon Sweetgum)
- Liriodendron tulipifera - 2 (Tuliptree)
- Quercus rubra - 2 (Red Oak)

Evergreen Trees (6') by Developer:

- Abies balsamea var. phanerolepis - 6 (Canaan Fir)
- Picea abies - 5 (Norway Spruce)
- Pinus heldreichii - 0 (Bosnian Pine)
- Picea glauca var. densata - 0 (Black Hills Spruce)
- Thuja stadishii x plicata 'Green Giant' - 0 (Green Giant Arborvitae)

Shrubs (24") by Developer:

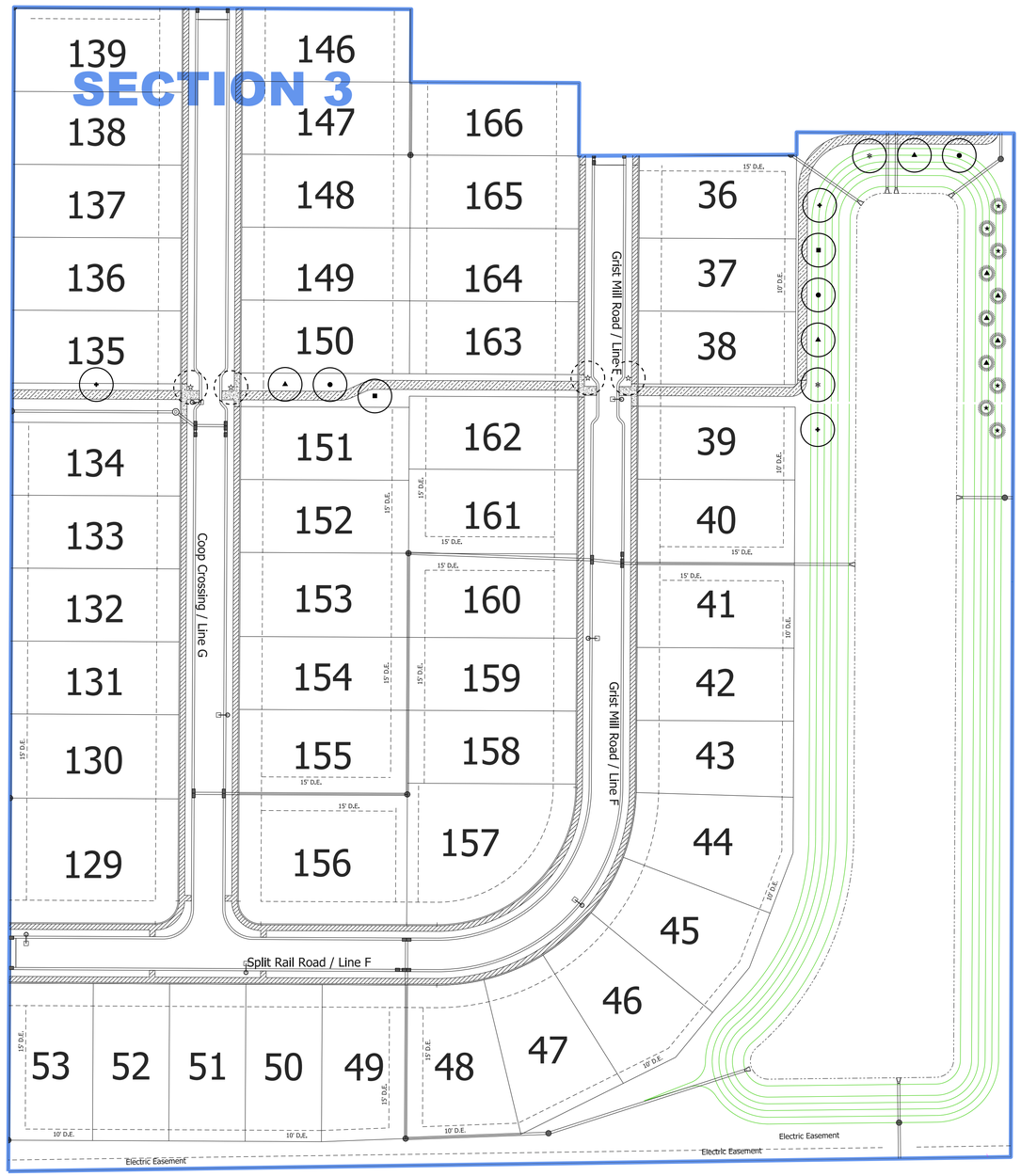
- Aronia melanocarpa 'Viking' - 0 (Viking Black Chokeberry)
- Hydrangea macrophylla 'Bailer' - 0 (Endless Summer Bigleaf Hydrangea)
- Thuja occidentalis 'Woodwardii' - 0 (Woodward Globe Arborvitae)
- Viburnum plicatum tomentosa 'Summer Snowflake) - 0 (Summer Snowflake Doublefile Viburnum)

LEGEND:

- Entry Feature (with Development Sign)
- One Foot Contours (Mound and/or Pond Bank)

NOTES:

1. In addition to the plantings shown on this sheet the Builder shall install on each residential Lot a minimum of i) one 2.5" caliper shade tree, ii) two trees consisting of any combination of 6' high evergreens and/or 1.5" caliper ornamentals, and iii) twelve 24" high shrubs. The shrubs shall be planted along the foundation of the primary building. Of the three trees required one deciduous tree must be planted within the front yard.



N

60 0 30 60

1 INCH = 60 FEET

REVISIONS:

BENCHMARK CONSULTING, INC.
69 AUGUSTA DRIVE BROWNSBURG, IN 46112
(317) 852-5695

DATE:

PREPARED FOR:

Beazeer Homes
9465 Counselors Row, Suite 125
Indianapolis, IN 46240
317-714-4118
Sean Sullivan
sean.sullivan@beazer.com

Gatherings at Aurora - Section Three
Construction Plans
McCordsville, Indiana

Landscaping Plan - Section 3

DATE: 10/03/2024

DRAWN BY: EWS

PROJECT NUMBER: 24006

SHEET # L101

McCORDSVILLE, INDIANA

TOWN STANDARDS

DIRECTIONS FOR USE

1.) The entire set of full size drawings shall be attached to the construction drawings and shall be considered part thereto. A partial set may be used for small projects when whole sections are not applicable. Approval of use of a partial set will be made by the Town Engineer at the time of approval of the construction drawings.

2.) Details prepared by outside sources shall not be included in the construction drawings when the said drawings cover work which is covered by McCordsville Standards.

3.) Individual McCordsville Standards that do not apply may be crossed out by the design engineer through placement of a single large X over the detail. Minor reference notations may be placed adjacent to individual standard titles for coordination. However, the standards themselves shall not be modified in any way.

4.) Details prepared by outside sources covering work which is not covered by the McCordsville Standards are the sole responsibility of the design engineer and shall be placed on sheets other than the McCordsville Standards.

GENERAL NOTES

1.) Contractor shall verify the exact location of all existing utilities at least 48 hours prior to any construction or excavation. All utilities shall be adequately supported to minimize damage. The contractor shall be responsible for repairing damaged utilities to the satisfaction of the Town of McCordsville and the owner of the utility.

2.) All benchmarks and elevations shall be from NAD 1983 (Conus) Datum. All coordinates shall conform with the Hancock County GIS standard.

3.) Wherever proprietary equipment is specified, all proposals for substitution shall be submitted in writing to the Town Engineer and shall be subject to the findings of the Town Engineer and may be appealed to the Public Works Committee.

4.) Whenever trench opening encroaches within 5 feet of an existing or proposed street or sidewalk, "B"-Borrow compacted in accordance with the most recent INDOT standard specifications shall be required. Approved backfill may be used under proposed sidewalks provided sidewalks are constructed six months after backfilling of the trench.

5.) Installation of or provisions for installation of all underground utilities (including service laterals) to be placed under pavement areas shall be established prior to the construction of pavements including lime stabilization.

HOLEY MOLEY SAYS

"DIG SAFELY"

"IT'S THE LAW"
CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-382-5544
CALL TOLL FREE
PER INDIANA STATE LAW IC8-1-26,
IT IS AGAINST THE LAW TO EXCAVATE
WITHOUT NOTIFYING THE UNDERGROUND
LOCATION SERVICE TWO (2) WORKING DAYS
BEFORE COMMENCING WORK.

REVISION LOG

SHEET NO.	SHEET DESCRIPTION	ISSUED	REVISED	REVISED	REVISED	REVISED
SHEET 1	DIRECTIONS FOR USE, GENERAL NOTES & REVISION LOG	06/14/05	05/02/2023			
SHEET 2	RIGHT-OF-WAY SECTIONS & PAVEMENT SPECIFICATIONS	06/14/05	05/02/2023			
SHEET 3	RIGHT-OF-WAY DETAILS	06/14/05	05/02/2023			
SHEET 4	UTILITY LOCATION GUIDELINES	06/14/05	05/02/2023			
SHEET 5	DRIVE WAYS, SIDEWALKS, AND HANDICAP RAMPS	06/14/05	05/02/2023			
SHEET 6	STORM SEWER STRUCTURE DETAILS	06/14/05	05/02/2023			
SHEET 7	STORM SEWER BEDDING DETAILS AND GENERAL NOTES	06/14/05	05/02/2023			
SHEET 8	SANITARY SEWER SPECIFICATIONS	06/14/05				
SHEET 9	SANITARY SEWER DETAILS	06/14/05				
SHEET 10	SANITARY SEWER LIFT STATION STANDARDS & GUIDELINES	06/14/05	05/02/2023			

TOWN OF McCORDSVILLE

THOMAS STRAYER — TOWN COUNCIL PRESIDENT

GRANT ADAMS — PUBLIC WORKS CHAIRMAN

TONYA GALBRAITH — TOWN MANAGER

RONALD D. CRIDER — PUBLIC WORKS COMMISSIONER

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL — DESIGN ENGINEER — DATE 7/12/05

TOWN OF McCORDSVILLE

DIRECTIONS FOR USE, GENERAL NOTES & REVISION LOG

SHEET 1 OF 10

LIME STABILIZATION

DESCRIPTION: This work shall consist of upgrading of mostly fine grained soils by uniformly mixing small amounts of lime ~~(3 to 6%)~~ 4.5% by weight to provide a working platform for the road subbase.

MATERIALS: Material shall meet the requirements of the Section 913 of the INDOT Standard Specification
Cement (3% by weight) may be used as an alternative.
LIME:

a) High calcium or dolomite Hydrated Lime (Ca(oH)2 +Mg(oH)2) shall have a minimum of 90% total available calcium hydroxide content and the hydrates must contain no more than 5 % carbon dioxide content if sampled at the lime plant, or no more than 7 % if sampled at the job site.

b) High calcium hydrated lime shall have a minimum available calcium hydroxide Ca(oH)2 content of 90%. The method used for determination of available lime shall conform to AASHTO T219-72 or ASTM C25.

c) Maximum Mechanical Moisture content shall be 4%.

d) Gradation: All hydrated lime shall conform to the following gradation requirement. At least 85% passing a #200 sieve (0.075 mm). Determination of particle size shall conform to the provision for wet sieving on ASTM C110.

e) Quicklime or Kiln dust shall not be used.

~~e) Other lime products such as quicklime - high calcium (CaO) or Dolomite (CaO- MgO) may be substituted with written approval by the Town Engineer. By product lime (kiln dust) shall not be used.~~

WATER: Water used for lime modification shall be in accordance with all applicable requirements of 913 and 913.01 of the INDOT Specifications, except that the minimum acceptable pH is 6.5.

STORAGE AND HANDLING

a) Hydrated lime shall be stored and handled in closed weatherproof containers until immediately before distribution on the subgrade. Hydrated lime in bags shall be stored in weather protected conditions with adequate protection from ground dampness, and the facility shall be approved by the Town Engineer prior to commencement of any lime work.

b) Each shipment shall be accompanied by a bill of loading and by a certificate of compliance stating conformance to the applicable specification requirements. The certificate of compliance shall be submitted to the Town Engineer prior to the proof roll on the subgrade.

c) The Contractor shall take appropriate preventive and protective (safety) measure that shall be exercised by those working with this material. All safety measures shall comply with applicable OSHA requirements.

MIXTURE COMPOSITION:

a) Mix Design: Lime will be proportioned within a range of 3 to 6 percent of soil (oven - dry basis). The required proportion of lime will be recommended by the Contractor and approved by the Town Engineer prior to construction using samples of soil and lime. The Town Engineer reserves the right to make such adjustments of lime proportioning as are considered necessary during the progress of the work within the range specified.

b) Source or type of lime shall not be changed during the progress of the work without permission of the Town Engineer. However, the Town Engineer may choose to use different types of lime on different portions of the project, but shall not be mixed.

CONSTRUCTION REQUIREMENTS:

a) Temperature and Weather Limitations: No lime modification shall be performed at a soil temperature less than 45 degrees Fahrenheit (7 degrees C) and the air temperature rising, of subgrade soil when it is measured 4" (100 mm) below the surface. Lime shall not be mixed with frozen soils or with soil containing frost.

b) Preparation of Existing Roadway: All deleterious material, such as stumps, roots, turf, etc. and aggregate larger than 3" (75 mm) shall be removed. Any soft organic soils shall be removed as directed by the Town Engineer.

c) Spreading of Lime: The roadbed shall be scarified or disked prior to distribution of the lime. The machine shall be of such design that a visible indication is given at all times that the machine is cutting to the required depth; The lime shall than be distributed uniformly over the surface by means of cyclone, screw-type, or pressure manifold type distributor. The Town Engineer may reject any procedure which does not provide even distribution of lime.

Lime shall not be applied when wind conditions are such that blowing lime becomes objectionable to adjacent property owners or creates a hazard to traffic on adjacent roadways.

The spreading of lime shall be limited to the amount which can be incorporated after mixing. In no case shall compaction be started later than three (3) days after mixing into the soil. In the event that rain intervenes causing cessation of work and exposure of the lime to washing or blowing, the Town Engineer may require additional lime to be spread.

d) Mixing: The lime, soil and water (if necessary) shall be thoroughly blended by rotary speed mixers or a disc harrow. The mixing shall continue until a homogeneous layer of the required thicknesses has been obtained and clods are broken down so that 100 %, exclusive of rock particle, will pass a one-inch (25 mm) sieve and at least 60% will pass a 4 sieve (4.75 mm). The loose thickness of a single lime modified layer shall not exceed eight (8) inches (200 mm) if a disc harrow is used and fourteen (14) inches (355 mm) if a rotary speed mixer Is used.

e) Compaction: Compaction of the mixture shall begin as soon as is practicable mixing unless approved by the Town Engineer. If compaction is to be delayed, the surface of the lime modified soil shall be crown-graded and sealed by either blade dragging or light rolling immediately after mixing.

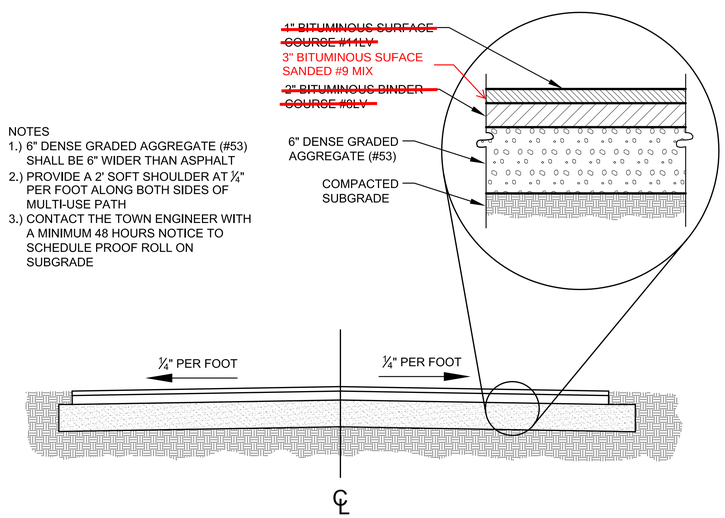
Compaction shall be continued until the Contractor has shown that the lime modified layer has a density not less than 100 percent within the special subgrade treatment zone and/or 95 percent below special subgrade treatment zone, of the maximum dry density.

The standard dry density of the lime treated soil shall be obtained by AASHTO 99. The field in-place dry density will be obtained by the Contractor in accordance with AASHTO T 191.

Aeration by means of further mixing, or the addition of water and further mixing, may be required by the Town Engineer to achieve the required compaction.

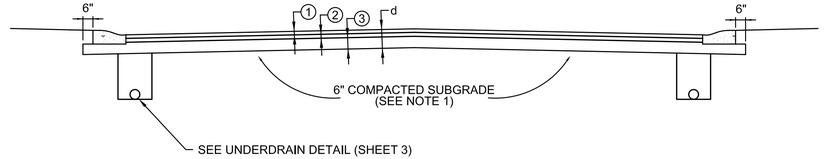
f) Finishing: When compaction of the lime modified soil is nearing completion, the surface shall be shaped to the required line, grades and cross section, and compaction continued until uniform and adequate compaction if obtained.

The Town Engineer reserves the right to determine the actual thickness of the completed and cured layer by coring or other means at the owner's expense, and any deficient areas shall be acceptably corrected.



MULTI-USE PATH DETAIL

SCALE: NONE



NOTES:

1. HMA SHALL BE PRODUCED FROM AN INDOT CERTIFIED HMA PLANT, IN ACCORDANCE WITH INDIANA TEST METHOD (ITM) 583.

2. THE CONTRACTOR SHALL PROVIDE A COPY OF THE CERTIFICATION TO THE TOWN ENGINEER AT OR BEFORE THE INSTALLATION OF THE HMA.

3. PG BINDER MATERIAL (LIQUID) SHALL BE PG 64-22 FOR TYPE A AND TYPE B MIXES.

4. RECYCLED MATERIALS, UP TO 25%, MAY BE USED BASE. IF OVER 15% RECYCLED MATERIAL IS USED, PG BINDER 58-28 SHALL BE USED RATHER THAN PG 64-22

LOCAL ROAD

d = 12"
① 1.5" ~~1"~~ HMA, TYPE A, 9.5 MM SURFACE
② 2.5" ~~3"~~ HMA, TYPE A, 19.0 MM INTERMEDIATE
③ 4" COMPACTED AGGREGATE BASE #53
4" COMPACTED AGGREGATE BASE #2

COLLECTOR
LOCAL ~~ARTERIAL~~ ROAD

d = 15"
① 1.5" ~~1"~~ HMA, TYPE A, 9.5 MM SURFACE
② 2.5" ~~3"~~ HMA, TYPE A, 19.0 MM INTERMEDIATE
③ 3" HMA, TYPE A, 25.0 MM BASE
④ 4" COMPACTED AGGREGATE BASE #53
4" COMPACTED AGGREGATE BASE #2

COLLECTOR ROAD

d = 18"
① 1.5" ~~1"~~ HMA, TYPE B, 9.5 MM SURFACE
② 2.5" ~~3"~~ HMA, TYPE B, 19.0 MM INTERMEDIATE
③ 6" HMA, TYPE B, 25.0 MM BASE
④ 4" COMPACTED AGGREGATE BASE #53
4" COMPACTED AGGREGATE BASE #2

PAVEMENT CONSTRUCTION

SCALE: NONE

PAVEMENT CONSTRUCTION

1.) Subgrade shall be lime stabilized per the lime stabilization specification on this sheet.

2.) Adequacy of existing subgrades shall be determined solely by the town based on a contractor performed proof roll with a fully loaded tri-axle dump truck. A proof roll shall be performed on all street subgrade prior to placing stone, under drains and installing curb. A second proof roll shall be performed on the stone prior to placing the asphalt base. The adequacy of the stone and subgrade shall be determined solely by the town.

3.) Place tack coat in accordance with the most recent INDOT standard specifications for asphalt pavement sections.

4.) Local ~~Arterial~~ Collector Road is defined as a low capacity and low speed roads within subdivisions whose function is to become a collector street for local subdivision traffic and move traffic from within the community to other locations in the community and to the existing county roads. Whether a street is defined as a Local Arterial Road is at the sole discretion of the Public Works Commissioner.

5.) Installation of or provisions for installation of all underground utilities (including service lines and laterals) shall be placed prior to the construction of pavement including lime stabilization.

6.) Paving of base and/or intermediate shall occur when temperatures are 32 degrees and rising. Surface paving of 1.5" or greater shall be when temperatures are 40 degrees and rising. Surface paving of 1" or less shall be when temperatures are 45 degrees and rising.

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

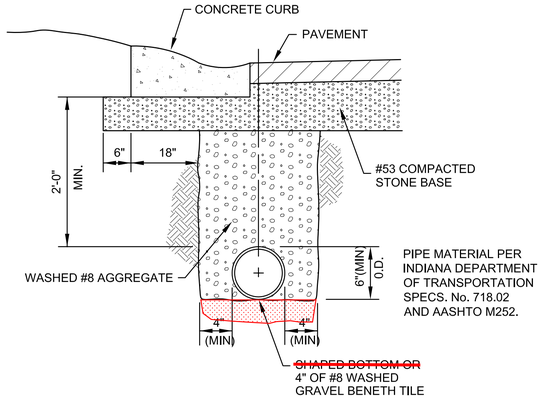
MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	7/12/05 DATE
APPROVED	PUBLIC WORKS COMMISIONER	7/12/05 DATE
APPROVED	TOWN COUNCIL PRESIDENT	7/12/05 DATE

TOWN OF McCORDSVILLE

TOWN STANDARDS RIGHT-OF-WAY SECTIONS & PAVEMENT SPECIFICATIONS

SHEET 2 OF 10



UNDERDRAIN DETAIL

SCALE: NONE

1. THE EXISTING PAVEMENT IS TO BE SAW CUT TO PROVIDE A CLEAN JOINT.

2. TRENCH SPOIL IS TO BE REMOVED FROM THE WORK SITE AND DISPOSED OF OUT OF THE RIGHT-OF-WAY AT A PREDESIGNATED APPROVED AREA.

3. FLOWABLE FILL IS TO BE POURED INTO THE TRENCH TO SERVE AS BACKFILL, TO THE DIMENSIONS AND SPECIFICATIONS LISTED IN THIS DETAIL.

4. THE ASPHALT PATCH IS TO CONSIST OF A MINIMUM OF 5 (FIVE) INCHES OF #8 HAC BITUMINOUS BINDER AND 1 (ONE) INCH OF #11 HAC BITUMINOUS SURFACE. IF THE EXISTING PAVEMENT IS THICKER THAN 6 (SIX) INCHES, ADDITIONAL BINDER IS TO BE USED TO MATCH THE EXISTING PAVEMENT THICKNESS. IN NO CASE IS LESS THAT 6 (SIX) INCHES OF ASPHALT TO BE USED.

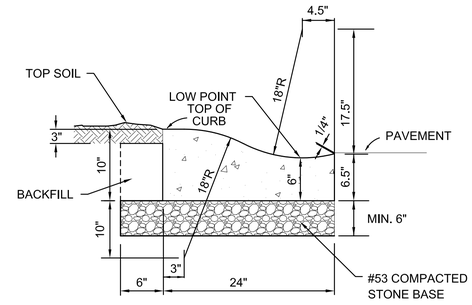
5. THE EXISTING PAVEMENT IS TO BE TACK COATED PRIOR TO THE LAYING OF NEW ASPHALT. TACK COAT IS TO BE APPLIED AS SPECIFIED IN THE LATEST INDOT SPECIFICATIONS, SECTIONS 409 AND 902.

6. THE NEW SURFACE IS TO BE SLOPED AT THE SAME RATE AS THE EXISTING SURFACE.

7. A 2 (TWO) INCH WIDE BAND OF CRACK SEALANT IS TO BE APPLIED ALONG THE JOINT BETWEEN THE EXISTING AND NEW ASPHALT SURFACE. SEALANT IS TO BE APPLIED IN ACCORDANCE WITH INDOT SPECIFICATIONS, SECTION 305.

8. THE FLOWABLE FILL MIX IS TO CONTAIN, FOR EVERY CUBIC YARD OF BATCH MATERIAL, NO MORE THAN 50 LBS OF PORTLAND CEMENT, NO MORE THAN 500 LBS OF WATER.

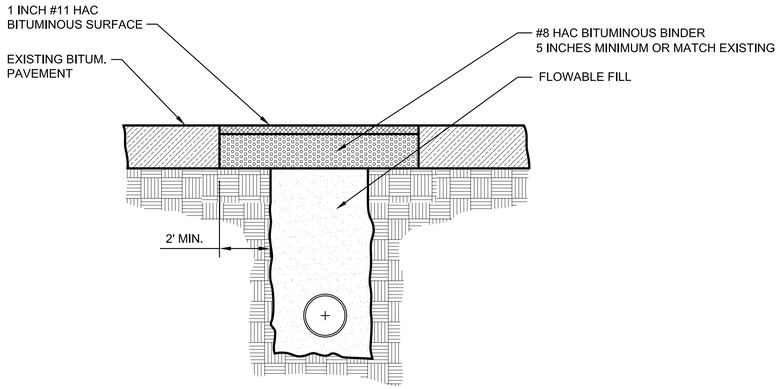
9. THE COMPRESSIVE STRENGTH OF THE FLOWABLE FILL IS NOT TO EXCEED 100 PSI AT 28 DAYS.



(TYPE I)

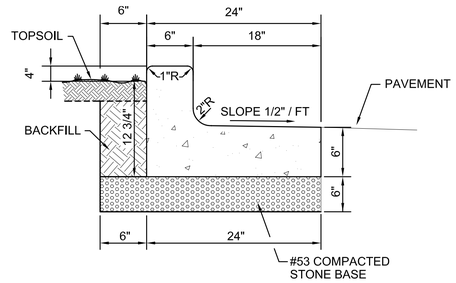
2' CONCRETE ROLL CURB & GUTTER

SCALE: NONE



ROAD CUT PATCH DETAIL

NOT TO SCALE



(TYPE II)

2' COMBINED CONCRETE CURB AND GUTTER

SCALE: NONE

STREET SIGN STANDARDS

All traffic and road name signs in and as a result of a major subdivision or a minor subdivision with newly constructed streets, shall be supplied and installed by the developer. The placement of the signs shall be as shown on the traffic sign plan that is to be submitted with the construction drawings. The traffic sign plan shall show the type of sign, size of sign, location of sign with dimensions and the streets to scale. A five (5) year maintenance bond shall be posted on the signs. The installer or developer shall notify the Town Engineer in writing when the signs are installed, so they can be inspected. Also include the date and time of installation of each sign. The plat shall not be recorded until the signs have been accepted.

TRAFFIC SIGNS

1.) Traffic signs shall be designed and installed to conform with the applicable requirements of the Indiana Manual of Uniform Traffic Control Devices, latest edition.
2.) No spliced sheeting unless acceptable by the Indiana Department of Transportation standard specifications, latest edition.
3.) Reflective sheeting for traffic signs shall be encapsulated lens (high intensity).
4.) Posts used for traffic signs shall be 3 lb. galvanized channel posts.
5.) Traffic sign height shall comply with the Indiana Manual of Uniform Traffic Control Devices, latest edition.
6.) Posts shall be installed with no less than three (3) feet of post in the ground.
6.) Backing material will be made of sheet aluminum.
7.) Bolts for mounting shall be 5/16" galvanized, stainless steel or plated carriage bolts.
8.) The number of posts for mounting and the minimum thickness or gage of sheet shall be as shown for the appropriate sign width:

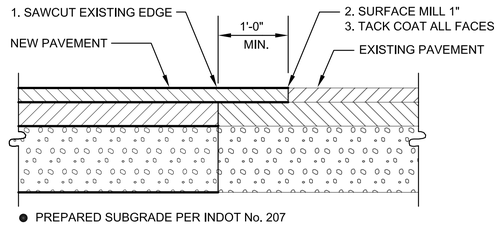
WIDTH(inches)	NO. OF POSTS	THICKNESS (inches) ALUMINUM SHEET
Up to 24"	1	0.080
25" to 30"	1	0.080
31" to 60"	2	0.100
61" and over	2	0.125

STREET NAME SIGNS

1.) Intersections shall have one (1) road name sign for each street.
2.) All road name signs shall be made of an aluminum extruded blade.
4.) Reflective sheeting for road name signs shall be inclosed lens (high intensity), green in color.
5.) Letters and numerals for the road name signs shall be high intensity reflective sheeting, series B letters, and white in color.
3.) Posts used for road name signs shall be 2 lb. galvanized channel posts.
6.) Minimum height to bottom of sign for road name signs shall be seven (7) feet.
7.) Posts shall be installed with no less than three (3) feet of post in the ground.
8.) Material for posts shall be galvanized steel.
7.) Bolts for mounting shall be 5/16" galvanized, stainless steel or plated carriage bolts.

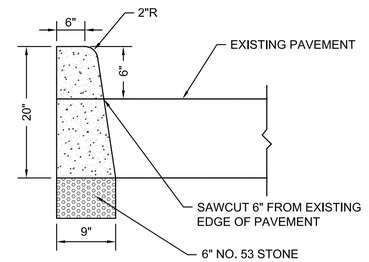
ROAD NAME SIGN DETAIL

SCALE: NONE



TYPICAL PAVEMENT TIE-IN

SCALE: NONE



CONCRETE CURB (BARRIER)

SCALE: NONE

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

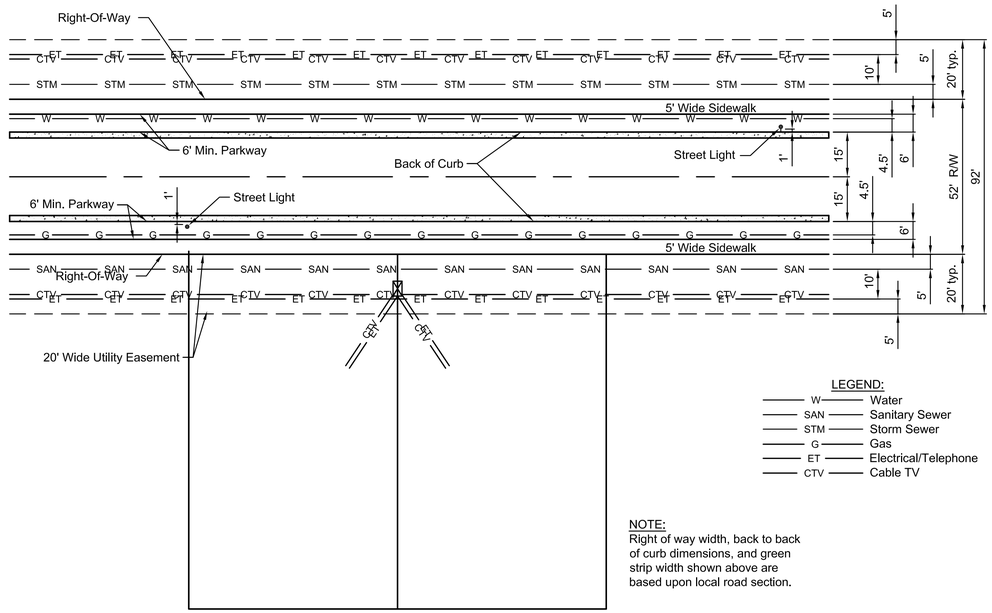
MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	DATE 7/12/05
APPROVED	PUBLIC WORKS COMMISIONER	DATE 7/12/05
APPROVED	TOWN COUNCIL PRESIDENT	DATE 7/12/05

TOWN OF McCORDSVILLE

TOWN STANDARDS RIGHT-OF-WAY DETAILS

SHEET 3 OF 10



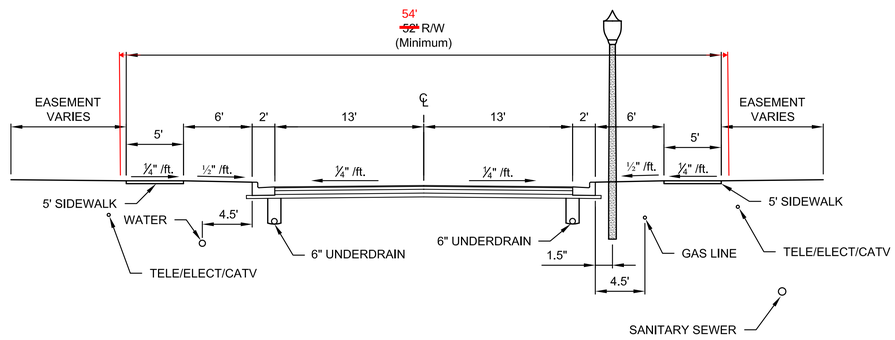
NOTE:
Right of way width, back to back of curb dimensions, and green strip width shown above are based upon local road section.

TYPICAL LOT UTILITY LOCATION

NOT TO SCALE

GENERAL NOTES:

1.) The location of proposed utilities as indicated hereon are based upon the orderly development of the land. Strict adherence to the indicated location is required. Requests to change the location of the proposed utilities shall be submitted in writing to the Public Works Commissioner. Utilities not meeting these requirements shall be removed and replaced as directed by the Public Works Commissioner at the owner's expense.



TYPICAL LOCAL ROAD UTILITY LOCATION

NOT TO SCALE

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	7/12/05 DATE
APPROVED	PUBLIC WORKS COMMISIONER	7/12/05 DATE
APPROVED	TOWN COUNCIL PRESIDENT	7/12/05 DATE

TOWN OF McCORDSVILLE

TOWN STANDARDS UTILITY LOCATION GUIDELINES

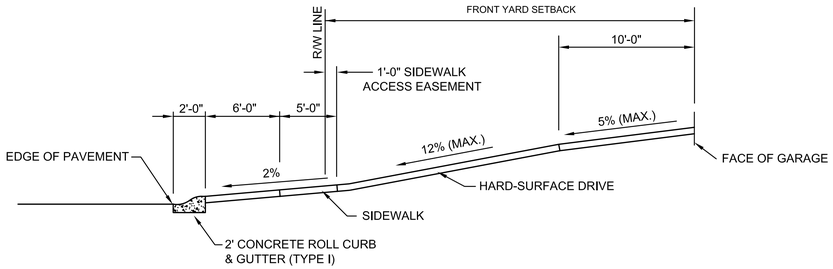
SHEET 4 OF 10

RESIDENTIAL DRIVES

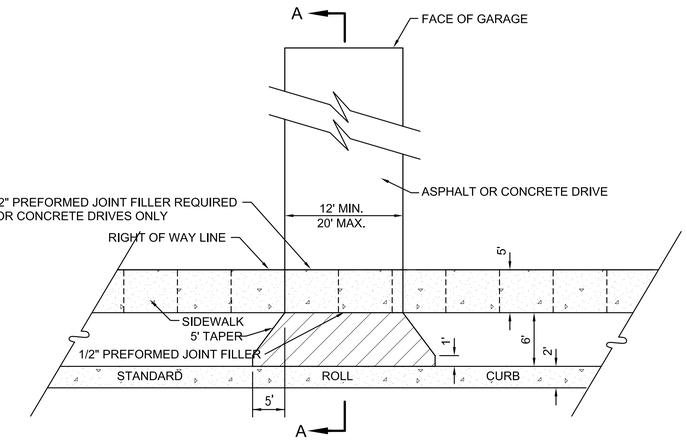
1.) THE MAXIMUM ALGEBRAIC DIFFERENCE IN GRADE FOR ANY 10 FOOT INTERVAL SHALL NOT EXCEED 8% FOR CREST VERTICAL CURVES. NOR 10% FOR SAG VERTICAL CURVES.

2.) ALL LOTS SHALL DRAIN TO ADJACENT STREETS EXCEPT WITH THE PRIOR APPROVAL OF THE PUBLIC WORKS COMMISSIONER.

3.) CONCRETE DRIVES REQUIRE CONTROL JOINTS EVERY 10 FEET EACH WAY.



SECTION "A-A"



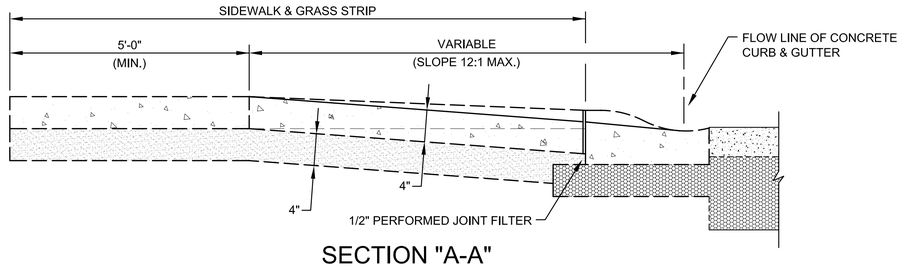
1. CROSS HATCHED AREAS SHALL BE EITHER 6" PLAIN CONCRETE OR 1" SURFACE ON 2" BITUMINOUS BASE ON 4" #53 COMPACTED AGGREGATE BASE, EXTENDING TO THE SIDEWALK OR R/W LINE WHICHEVER IS NEAREST TO THE ROADWAY.

2. SUBGRADE UNDER ALL SIDEWALKS AND DRIVES SHALL BE IN ACCORDANCE WITH SECTION 207.02 OF CURRENT INDOT STANDARD SPECIFICATIONS.

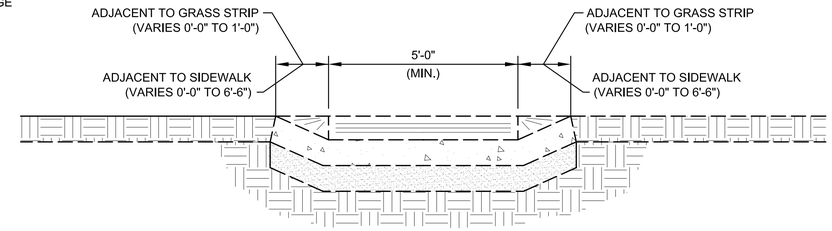
3. SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE STANDARD AND SHALL BE CONTINUOUS ACROSS THE DRIVEWAY. SIDEWALK SECTION ACROSS DRIVEWAY SHALL BE SAME THICKNESS AS DRIVEWAY WITH A 6-INCH MINIMUM.

RESIDENTIAL DRIVEWAY DETAIL

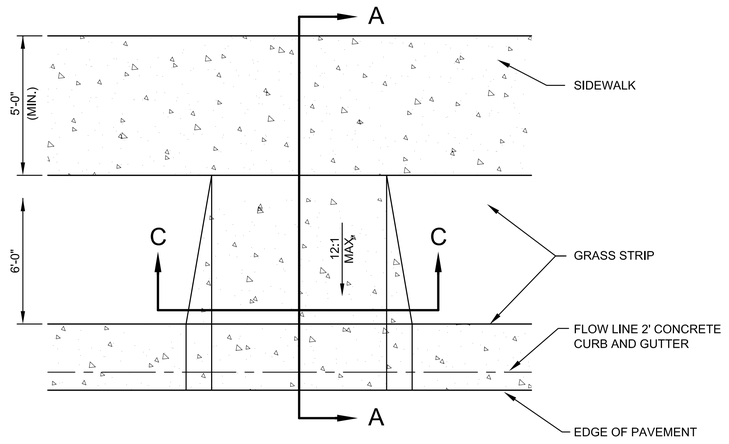
SCALE: NONE



SECTION "A-A"



SECTION "C-C"



HANDICAP RAMP CONSTRUCTION

SCALE: NONE

HANDICAP RAMP CONSTRUCTION

1.) All handicap ramps shall meet the requirements of the American Disabilities Act, the most recent INDOT standard specifications, and the Town of McCordsville's most recent standards. Curb modifications required for handicap ramps shall be provided at time of initial construction.

2.) Minimum width of curb ramp shall be 5 feet not including flares. Maximum slope of ramps and flares shall be 12:1.

3.) Handicap ramps are to be located as shown on the plans or as directed by the Public Works Commissioner.

4.) Ramps shall be provided at the centerline of radius at all corners of every street intersection where there is an existing or proposed sidewalk and curb. Ramps shall also be provided at walk locations at mid-block in vicinity of hospitals, medical centers, or athletic stadiums. The use of details contrary to those shown hereon shall require the prior written approval of the Public Works Commissioner.

~~5.) Surface texture of the ramp shall be ramp groves located 2" on center and 0.3" deep.~~

6.) Care shall be taken to assure a uniform grade on all ramps with no breaks in grade.

7.) Drainage structures shall not be placed in line with the ramps except where existing drainage structures are being utilized in the new construction. Location of the ramps shall take precedence over location of drainage structures.

8.) The normal gutter line profile shall not be maintained through the area of the ramp. Drainage inlets should be located uphill from the curb ramps to prevent puddles at the path of travel.

9.) Expansion joint for the ramp shall be a maximum 1/2" wide. The top of the joint filler for all ramp types shall be flush with adjacent concrete.

10.) Crosswalk and stop line marking, if used, shall be so located as to stop traffic short of ramp crossing.

SIDEWALK CONSTRUCTION

1.) Sidewalks shall be constructed of plain concrete four (4) inches thick except where crossing driveways where the sidewalk shall be a minimum of six (6) inches thick.

2.) Sidewalks shall be constructed on 2" of crushed stone or sand.

3.) Control joints shall be placed every 5 feet on center.

4.) Expansion joints shall be placed every 40 feet on center.

5.) Broom finish across the direction of travel and include a 1" steel trowel finish along both sides of the sidewalk and along either side of all expansion and control joints.

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

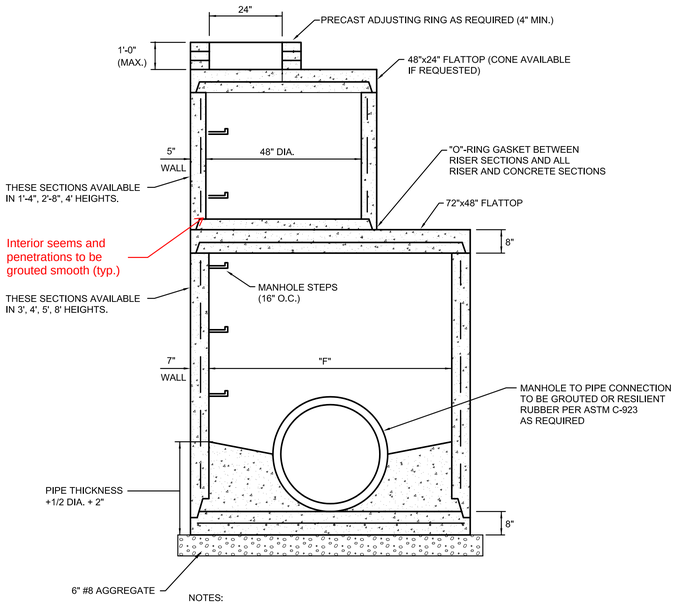
MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	7/12/05 DATE
APPROVED	PUBLIC WORKS COMMISIONER	7/12/05 DATE
APPROVED	TOWN COUNCIL PRESIDENT	7/12/05 DATE

TOWN OF McCORDSVILLE

TOWN STANDARDS DRIVE WAY AND HANDICAP RAMP DETAILS

SHEET 5 OF 10



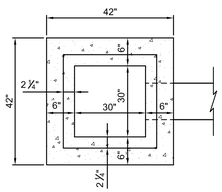
NOTES:

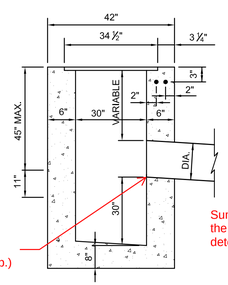
1.) MANHOLE CONFORMS TO A.S.T.M. C-478.

2.) TONGUE AND GROOVE JOINT WITH MASTIC, BUTYL ROPE OR GASKETED PER ASTM C-443 AS REQUIRED.

MANHOLE TYPE	MANHOLE DIAMETER "F"	MAXIMUM PIPE SIZE	
		PIPE ENTERING / PIPE EXITING AT 0°-45° BEND	PIPE ENTERING / PIPE EXITING AT 45°-90° BEND
J	60"	36"	33"
K	72"	48"	36"
L	96"	54"	48"
M	102"	72"	66"
N	108"	84"	72"

STORM MANHOLES TYPE "J - K - L - M & N"
NOT TO SCALE





NOTE:

1.) STRUCTURE SHALL COMPLY WITH INDOT SPECIFICATIONS

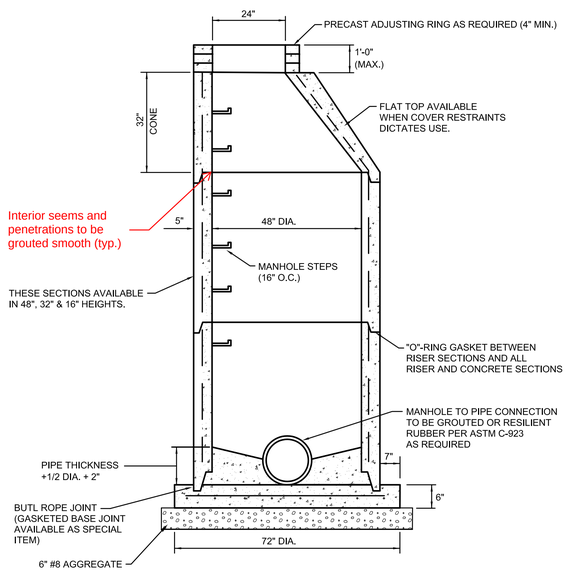
2.) MIMIMUM CONCRETE COMPRESSIVE STRENGHT 4000 PSI

3.) MAXIMUM OF FOUR 2" ADJUSTING SECTIONS, STRIKE CLEAN INSIDE

Interior seems and penetrations to be grouted smooth (typ.)

Sumps are to be included only on the last curb inlet before a detention pond.

CATCH BASIN
NOT TO SCALE

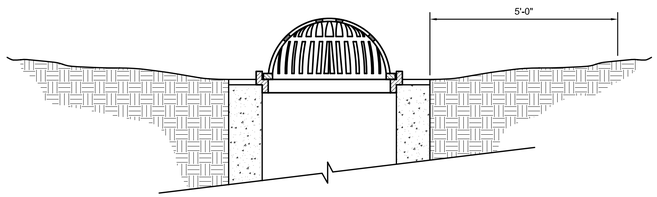


NOTE:

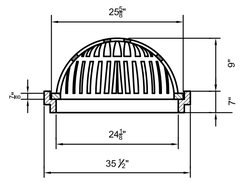
1.) MANHOLE CONFORMS TO A.S.T.M. C-478.

MAXIMUM PIPE SIZE	
PIPE ENTERING / PIPE EXITING AT 0°-45° BEND	PIPE ENTERING / PIPE EXITING AT 45°-90° BEND
24"	21"

STORM MANHOLES TYPE "C"
NOT TO SCALE



NOTE: ALL CASTINGS SHALL BE STAMPED "DUMP NO WASTE"



BEEHIVE GRATE CASTING WITH FRAME - NEENAH R-2560-E2
NOT TO SCALE

MANHOLE NOTES:

1.) Type "J, K, L, M & N" manholes as detailed hereon require a certain minimum depth. In cases where the depth of the storm sewer is not sufficient to meet the minimum depth as by the detail, "F" diameter manhole section may be used required by the detail, "F" diameter manhole section may be used throughout the depth of the manhole.

2.) Manholes shall conform to ASTM C-478. Joints shall conform to ASTM C-443. The use of cast-in-place concrete structures shall require the prior written approval of the Town Engineer. Regardless of the type of casting used, the casting shall be centered over the manhole steps.

3.) Manhole steps shall be made from a steel reinforcing rod encapsulated in a copolymer polypropylene resin. The manhole steps shall equal or exceed OSHA requirements manhole steps, PS1-PF as manufactured by M.A. Industries, Inc. Peachtree City, Georgia, or approved equal.

STORM SEWER TELEVISING:

1.) All storm lines 12" in diameter and greater upon completion and 3 months prior to the expiration of the maintenance bond shall be televised. Smaller lines may be required to be televised by the Town Engineer at his discretion if it is necessary to ensure proper installation and/or operation. The storm sewer shall also be jetted clean if necessary in the judgment of the Town's representative after observing the televising.

CASTING NOTES:

1.) Castings which drain combined curb and gutter, Type II curbing shall be Neenah R-3286-8V or Neenah R-3287-10V or as approved by the Town Engineer. Manholes shall not be used to drain combined curb and gutter, Type II curbing.

2.) Castings which drain roll curb and gutter, Type I curbing shall be Neenah R-3501-TR, or Neenah R-3501-TL or as approved by the Town Engineer. Manholes shall not be used to drain roll curb and gutter, Type I curbing.

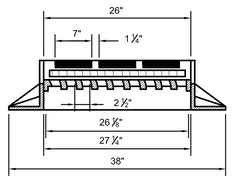
3.) Castings for inlets which drain open pavement areas without curbing shall be Neenah R-3402-E or as approved by the Town Engineer.

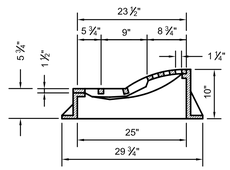
4.) Castings for manholes which drain open pavement areas without curbing shall be Neenah R-2501 or as approved by the Town Engineer.

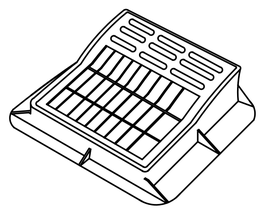
5.) Castings for use on inlets or manholes which drain swales or dry bottom detention basins shall be Neenah R-2560 or as approved by the Town Engineer.

6.) Castings for manholes which do not collect surface water shall be Neenah R-1772-A or as approved by the Town Engineer.

7.) All castings shall be stamped "DUMP NO WASTE".







NOTE: ALL CASTINGS SHALL BE STAMPED "DUMP NO WASTE"

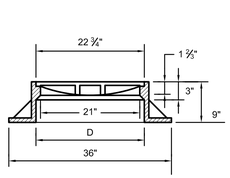
R-3501-T(L&R) NEENAH CURB INLET FRAME, GRATE & CURB BOX DETAIL
NOT TO SCALE

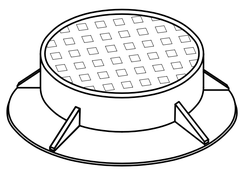
CATALOG NO.	D	Wt. Lbs.
R-1772	25"	250
R-1772-A	25"	285

HEAVY DUTY

FURNISHED WITH PLATEN LID, SIMILAR TO R-1706-1

NOTE: ALL CASTINGS SHALL BE STAMPED "DUMP NO WASTE"





STORM MANHOLE R-1772-A WITH CONCEALED PICK HOLES
NOT TO SCALE

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL — DESIGN ENGINEER — DATE 7/12/05

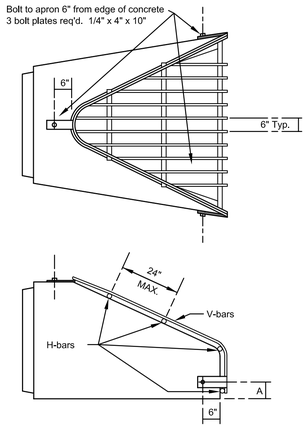
APPROVED — PUBLIC WORKS COMMISIONER — DATE 7/12/05

APPROVED — TOWN COUNCIL PRESIDENT — DATE 7/12/05

TOWN OF McCORDSVILLE

TOWN STANDARDS STORM SEWER STRUCTURE DETAILS

SHEET 6 OF 10

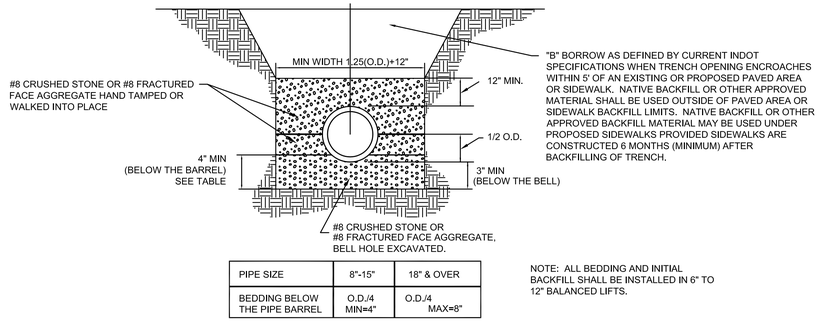


NOTES:

1. BARS & PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES & PIPE ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANIZED.
4. SEE STD. PLATES A-10 & A-11 FOR APRON DIMENSIONS.
5. TRASH GUARDS WITH DIFFERENT DIAMETER BARS ARE AVAILABLE, SPECIAL ORDER.

TRASH GUARDS FOR CONCRETE APRONS

NOT TO SCALE

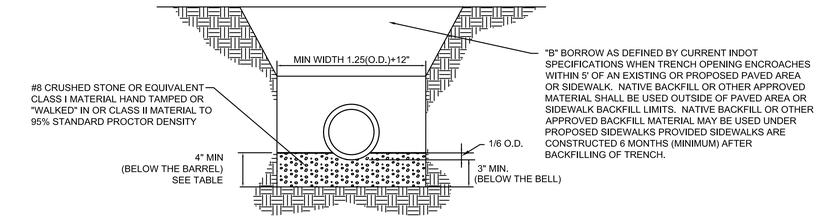


PIPE SIZE	8"-15"	18" & OVER
BEDDING BELOW THE PIPE BARREL	O.D./4 MIN=4"	O.D./4 MAX=8"

NOTE: ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.

FLEXIBLE PIPE (HDPE & PVC) TRENCH DETAIL

NOT TO SCALE



PIPE SIZE	8"-15"	18" & OVER
BEDDING BELOW THE PIPE BARREL	O.D./4 MIN=4"	O.D./4 MAX=8"

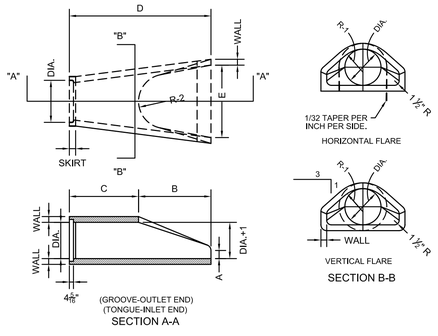
NOTE: ALL BEDDING AND INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.

RIDGID PIPE (RCP) TRENCH DETAIL

NOT TO SCALE

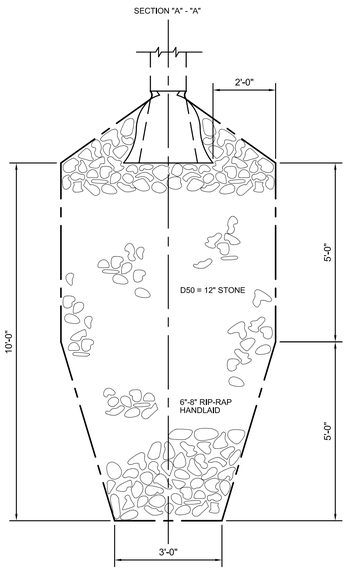
DIA.	WALL	G or T	WT. SEC	A	B	C	D	E	DIA. +1	R-1	R-2	SKIRT
12	2	1 1/2	530	4	24	48 1/8	72 7/8	24	13	10 1/16	9	3 1/2
15	2 1/4	2	740	6	27	46	73	30	16	12 1/2	11	3 1/2
18	2 1/2	2 1/2	990	9	27	46	73	36	19	15 1/2	12	4
21	2 3/4	2 1/4	1280	9	35	38	73	42	22	16 1/8	13	4
24	3	2 1/2	1520	9 1/2	43 1/2	30	73 1/2	48	25	16 11/16	14	4 1/2
27	3 1/4	2 1/2	1930	10 1/2	48	25 1/2	73 1/2	54	28	17 3/4	14 1/2	4 1/2
30	3 1/2	3	2190	12	54	19 3/4	73 3/4	60	31	18 5/16	15	5
33	3 3/4	3 3/8	3150	13 1/3	58 1/2	39 1/4	97 3/4	66	34	23 3/4	17 1/2	5 1/2
36	4	3 1/2	4100	15	63	34 3/4	97 3/4	72	37	24 1/16	20	5 1/2
42	4 1/2	3 3/4	5380	21	63	35	98	78	43	27 1/4	22	5 1/2
48	5	4 1/4	6550	24	72	26	98	84	49	28 1/8	22	5 3/4
54	5 1/2	4 3/4	8040	27	65	35	100	90	55	32 7/8	24	6 1/4
60	6	5	8750	30	60	39	99	96	61	36 3/4	24	6 3/4
66	6 1/2	5 1/2	10630	24	78	21	99	102	67	35 11/16	24	7 1/4
72	7	6	12520	34	78	21	99	108	73	38 5/8	24	7 3/4
78	7 1/2	6 1/2	14430	24	78	21	99	114	79	41 15/16	24	8 1/2
84	8	7	16350	24	78	21	99	120	85	44 13/16	24	9

NOTES: 1. MANUFACTURE OF END SECTION IS IN ACCORDANCE WITH APPLICABLE PORTIONS OF A.S.T.M. SPECIFICATION C76.



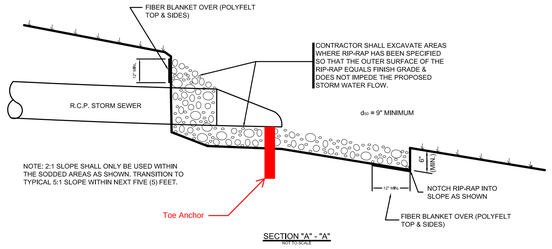
PRECAST CONCRETE END SECTION DETAIL

NOT TO SCALE

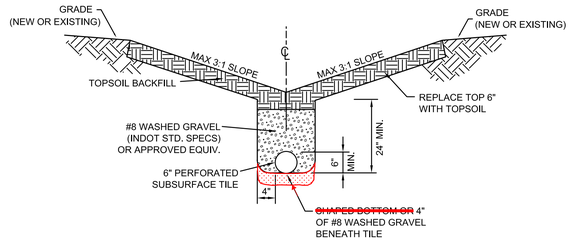


RIP-RAP DETAIL

NOT TO SCALE

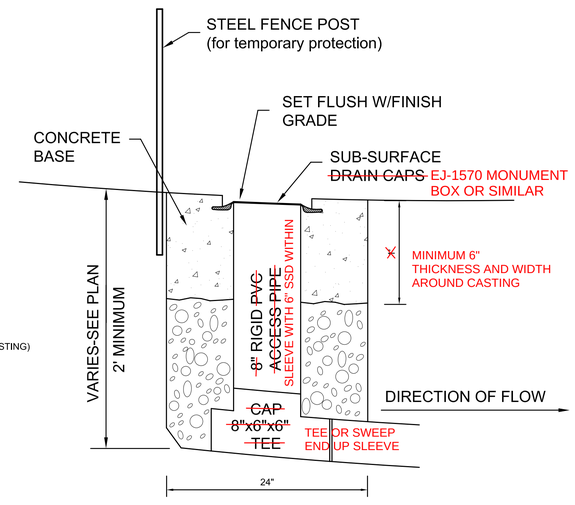


NOTE: SWALES SHALL BE CONSTRUCTED WITH A MINIMUM 1.0 PERCENT PROFILE GRADE. A 6" INCH DIAMETER UNDER DRAIN IS REQUIRED FOR ALL REAR YARD SWALES. SEE DETAIL SHOWN ON THIS SHEET.



SWALE UNDERDRAIN DETAIL

NOT TO SCALE



SUBSURFACE DRAIN (SSD) RISER DETAIL

NOT TO SCALE

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	7/12/05 DATE
APPROVED	PUBLIC WORKS COMMISSIONER	7/12/05 DATE
APPROVED	TOWN COUNCIL PRESIDENT	7/12/05 DATE

TOWN OF McCORDSVILLE

TOWN STANDARDS STORM SEWER BEDDING DETAILS AND GENERAL NOTES

SHEET 7 OF 10

GENERAL NOTES

1.) Sanitary sewer pipe of other material not meeting Town of McCordsville Standards shall require the prior written approval of the Town Engineer.
2.) The Contractor shall submit information to the Town Engineer showing conformance with these specifications upon request.
3.) Forty-eight (48) hours notice shall be given to the Town Engineer prior to the start of sewer construction and prior to any testing.
4.) The contractor shall be responsible for verifying that all state highways, city, and county permits have been obtained by the developer prior to start of construction.
5.) Backfill around all structures and all cuts under paved areas with B-barrow as defined by current INDOT specifications. Trenches opening within 5-feet of paved roadways shall be backfilled with B-barrow as defined by current INDOT specifications. Backfill under sidewalks shall be B-barrow; unless the walks are constructed a minimum of 6 months after backfill has been in place. The Town of McCordsville may require an analysis of the B-barrow to confirm its compliance with INDOT specifications at the contractor's expense.
6.) Water and sewer line crossings and separations shall be in accordance with 327 IAC 3-6-9.
7.) Trench shall be opened sufficiently ahead of pipe laying to reveal obstruction, and shall be properly protected and/or barricaded when left unattended.
8.) No water shall be permitted to flow into the sanitary sewer system during construction. The contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet in accordance with local, state and federal laws and regulations. Any pipe entering existing sewers shall be plugged with screw type mechanical, braced plug and tied in place until such time as all tests on the sewers have been completed and the lines have passed all punch lists.
9.) The contractor shall use a laser and target wherever possible to insure proper construction at the planned grade.
10.) The contractor shall provide measurements of the slope of the sewer for each manhole section as construction progresses. Such measurements shall be certified by a registered land surveyor or engineer and be available on-site for observation by the Town Engineer. No more than three manhole sections can be constructed in advance of such measurements.
11.) The contractor shall be required to furnish the developer's engineer with a set of prints, marked in red pencil, showing actual sewer location and invert, to include lateral location, depth and length. Such asbuilt prints must be received by the developer's engineer before the final contract payment can be authorized. The sanitary sewer laterals and stubs termination shall be indicated on the surface with a 2"x4" wood board or other appropriate marker set immediately above the said termination point.
12.) Record drawings shall be provided to the Town Engineer for review and approval. Once approved, two copies and electronic images of the approved record drawings will be provided. The electronic images will be in an acceptable format approved by the Town Engineer. A site plan in state plane coordinates compatible with the Hancock County GIS system will also be provided with the electronic files showing the property lines, easements, streets and right-of-ways and as-built locations of the sanitary sewer, storm sewer and water lines.

SANITARY SEWER PIPE

1.) Sanitary sewer pipe between 6 and 15 inches in diameter shall be SDR 35 PVC in accordance with ASTM D3034 and ASTM 2321. Sanitary sewer pipe buried 15 feet or greater shall be SDR 26 PVC in accordance with ASTM D3034. PVC pipe shall have grooved bell and gasket. The pipe shall be made of PVC plastic in accordance with ASTM D1784.
2.) Sanitary sewer pipe greater than 15 inches in diameter shall be either:
   a. PVC SDR 35 in accordance with ASTM D3034 and ASTM 2321. PVC pipe shall have grooved bell and gasket. The pipe shall be made of PVC plastic as defined in ASTM D1784. Sanitary sewer pipe buried 15 feet or greater shall be SDR 26 PVC in accordance with ASTM D3034.
   b. Profile sewer in accordance with ASTM F949. The pipe and fittings shall have a minimum cell classification of 12454 in accordance with ASTM D1784. The joints shall be push-on bell and spigot type using elastomeric ring gaskets conforming to ASTM D3212 and ASTM F477. The pipe shall have a minimum stiffness of 46 PSI when measured in accordance with ASTM D2412. Profile sewer pipe is not permitted at depths 15 feet or greater.
3.) PVC sewer fittings shall be SDR 26 in accordance with ASTM D3034. Fittings in sizes through 8-inches shall be molded in one piece with elastomeric joints and minimum socket depths as specified in sections 6.2 and 7.3.2. Fittings 10-inches and larger shall be molded or fabricated in accordance with section 7.11 with manufacturers standard pipe bells and gaskets. Gaskets for elastomeric joints shall be molded with a minimum cross-sectional area of 0.20 square inches and conform to ASTM F-477 specification.
4.) The minimum slope for sewer acceptance by the Town of McCordsville are:

Size of pipe	Minimum constructed slope
8-inch	0.40%
10-inch	0.28%
12-inch	0.22%
15-inch	0.15%
18-inch	0.12%
21-inch	0.10%
24-inch	0.08%

In the event the contractor does not meet the minimum slopes, the sewer section and any other affected sewer sections shall be reconstructed to meet such minimum slopes.

SANITARY SEWER LATERALS OUTSIDE OF THE RIGHT OF WAY/EASEMENT

1.) Only approved contractors may install sewer laterals. Contractors must provide proof of liability insurance and a reference list for consideration to be added to the approved list.
2.) If working within an existing right-of-way, the contractor must obtain a right-of-way permit from the appropriate local jurisdiction.
3.) Contractors are responsible for obtaining all appropriate permits prior to construction. No deviations from the approved plot plan are permitted unless instructed by the Office of Public Works. Immediately notify the office of Public Works of any conflicts or discrepancies noted on the approved plot plan. It is the sole responsibility of the owner to ensure all contractors and subcontractors comply with the approved plot plan. A copy of the approved plot plan is to be provided to the Inspector at the time of inspection.
4.) The portion of the lateral installed from the right-of-way/easement to the building shall be inspected by the Office of Public Works prior to being backfilled.
5.) Lateral inspections shall be scheduled forty-eight (48) hours in advance with the Office of Public Works.
6.) A 6" diameter pipe Type I clean out shall be installed 3' away from building. A threaded plug shall be used to ensure the pipe is 100% watertight. For laterals greater than 100 LF as measured along the pipe, clean outs shall be installed at the right-of-way or property line or at 100 feet increments to provide access every 100 feet.
7.) Clean outs are not to be installed in sidewalks, driveways, or any other paved or unpaved traffic areas or pedestrian paths.
8.) All clean outs except within 3 feet of the building are to be Type II cleanouts.
9.) The connection of the building plumbing to the lateral shall be made with a fernco coupling within three (3) feet of the building before the cleanout except when the building has a basement. If the connection is made at the basement and there is not an adjacent slab or craw space, then a glued joint connection shall be made.
10.) The connection point shall not be made under porches or foundations.
11.) The fernco coupling shall be sealed watertight using steel band clamps. The piping on either side of the connection point shall be aligned and have no offsets or angles.

SANITARY SEWER LATERALS - GENERAL NOTES

1.) Laterals are to be constructed to the right-of-way/easement line and plugged tight with a braced plastic disc or cap capable of withstanding a low pressure air test without leakage. Only after the sanitary sewer has been tested and accepted by the Town Engineer is further installation of the laterals outside the right-of-way/easement permitted.
2.) Normal lateral slope is 1/4" per foot. Minimum lateral slope is 1/8" per foot. Any areas found not to comply with the minimum slope shall be removed and reinstalled.
3.) Lateral pipe shall be a minimum of 6" diameter and shall be SDR 35 PVC in accordance with ASTM D3034 and ASTM 2321. Laterals with any portion buried 15 feet or greater shall be SDR 26 PVC in accordance with ASTM D3034 to the terminus point either the right-of-way or easement line. PVC pipe shall have grooved bell and gasket. The pipe shall be made of PVC plastic conforming to ASTM D1784. Size and conformance shall be clearly labeled on pipe for inspection.
4.) All PVC sewer fittings shall be SDR 26 in accordance with ASTM D3034. Fittings shall be molded in one piece with elastomeric joints and minimum socket depths as specified in sections 6.2 and 7.3.2. Gaskets for elastomeric joints shall be molded with a minimum cross-sectional area of 0.20 square inches and conform to ASTM F-477 specification.
5.) All sewer laterals shall be bedded the same as the main line sewer. A minimum D/4 or 6-inches of compacted #8 stone under the pipe, 6-inches on either side of the pipe, and 12" above the pipe are required.
6.) Laterals are not to be installed under driveways.
7.) Full depth granular backfill is required for the lateral trench in areas within five (5) feet of drive ways, sidewalks or other traffic areas.
8.) Laterals are to be traced along the top of the pipe with a minimum size of 14 gauge wire from the wye to the clean out within three (3) feet of the building and extended above grade. The contractor will install the tracer wire utilizing a method does not require any splices in the tracer wire. The tracer wire will be mounted to the top of the pipe in at least three locations along each stick of pipe. Any splices that become necessary during construction will be sealed water tight.
9.) Laterals will be separated from water mains and water service lines by ten (10) feet when measured horizontally from the outside edge of the lateral to the outside edge of any existing or proposed water mains or water service lines except when crossing water mains or water service lines which shall be separated by eighteen (18) inches when measured vertically. Crossings must be at a minimum angle of 45 degrees.

SANITARY MANHOLES AND CASTINGS

1.) All sanitary manholes shall be precast concrete manholes in accordance with ASTM C-478 and section 720. O-rings shall conform to C-443. Kent seal or approved equal shall also be applied to all joints and between riser rings and castings. Manhole step spacing shall be no more than 16-inches.
2.) The casting elevations are set by plan. However, the castings are to be adjusted in the field by the Town's representative should a discrepancy occur between plan grade and existing grade. A new manhole ring and cover shall be installed to establish grade. Maximum height of adjusting rings from the top of the cone to the bottom of the casting shall be 12-inches.
3.) Butyl rubber coating shall be applied around each manhole joint from 6-inches above to 6-inches below each joint. The appropriate primer shall be applied prior to applying the double row of kent seal. Each manhole joint will then be wrapped four times with minimum 15 inch wide 80 gage (0.8 mil) polyethylene plastic stretch wrap. Inside joints to be filled with non-shrink grout or precoat plug material.
4.) The manhole chimneys, including all riser rings shall be sealed the same as the manhole joints. The butyl rubber and plastic stretch wrap shall extend over the flange of the casting.
5.) Manhole castings shall be East Jordan casting 1022-2 or approved equal with a heavy duty self-sealing lid stamped "SANITARY SEWER." Waterproof castings shall be East Jordan casting 1022-2 WT with a heavy duty lid stamped "SANITARY SEWER" or approved equal.

TESTING

1.) Manholes shall be air tested for leakage in accordance with ASTM C1244-93, standard test method for concrete sewer manholes by the negative air pressure (vacuum) test.
   a. Installation and operation of vacuum equipment and indicating devices must be in accordance with manufacturer's recommendations and performance specifications which have been provided by the manufacturer and accepted by the engineer.
   b. With the vacuum tester set in place:
      1. Using a plate testing device, connect the vacuum pump to the outlet port with the valve open.
      2. Draw a vacuum of ten (10) inches of hg. And close the valve.
   c. Accepted standards for leakage will be established from the elapsed time for a negative pressure change from ten (10) inches to nine (9) inches of mercury. The maximum allowable leakage rate for a four (4) foot diameter manhole must be in accordance with the following:

Minimum elapsed time for a manhole depth pressure change of 1 inch hg	
10 feet or less	60 seconds
>10 feet but <15 feet	75 seconds
>15 feet	90 seconds

   For manholes five (5) feet in diameter, add an additional fifteen (15) seconds and for manholes six (6) feet in diameter, add an additional thirty (30) seconds to the time requirements for four (4) foot diameter manholes.
   d. If manhole joint sealants are pulled out during the vacuum test, the manhole must be disassembled and the joint sealants replaced.
   e. Manholes will be subject to visual inspection with all visual leaks being repaired.
2.) All sanitary sewer lines upon completion will be required to pass a low pressure air test. The test shall be conducted according to ASTM 1417-92, and witnessed by a representative of the Town of McCordsville. The testing shall be in accordance with Table 1. Add 0.5 psig for each foot of water above the sewer line being tested.
3.) Deflection tests shall be performed on all flexible* pipe after the final backfill has been in place at least 30 days. No pipe shall exceed a vertical deflection of 5% deflection test results. (*the following are considered non-flexible pipes: concrete pipe, ductile iron pipe, and cast iron pipe). The deflection test shall be performed with a nine-point mandrel. Proving rings shall be available.
4.) All sanitary sewer lines upon completion and six months prior to the expiration of the maintenance bond will be televised. The sanitary sewer lines will also be cleaned if necessary in the judgment of the Town's representative after observing the televising tapes.
5.) All testing shall be observed by a representative of the Town of McCordsville.

OIL/GREASE TRAP REQUIREMENTS

1.) All new commercial of industrial entities, which either generate and/or waste oil, grease or their by-products, shall construct a 1,000 gallon (minimum) grease trap. The design engineer shall submit detailed calculations for size justification of the trap. Calculations shall be accompanied with references, specifically denoted origin of sizing calculation method.
2.) Toilets, urinals and other similar fixtures shall not waste through the grease interceptor. All other waste shall enter through the grease interceptor, through the inlet pipe only.
3.) The grease interceptor and grease trap shall be sized such that it is easily accessible at all times for inspection/sampling and cleaning. The grease trap shall have a minimum of two (2) compartments with fittings designed for grease interception.
4.) The oil/ grease trap shall be located outside the building and at a distance far enough to allow soluble grease/oil to become insoluble.

SPECIFICATION TIME REQUIRED FOR A 0.5 PSIG PRESSURE DROP
FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q=0.0015

1 Pipe Diameter (in.)	2 Minimum Time (sec)	3 Length For Minimum Time (ft)	4 Time for Longer Length (sec)	Specification Time for Length (L) Shown (min:sec)							
				100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
8	3:47	298	0.760 L	3:47	3:47	3:47	3:47	3:48	4:26	5:04	5:42
10	4:43	239	1.187 L	4:43	4:43	4:43	4:56	5:56	6:55	7:54	8:54
12	5:40	199	1.709 L	5:40	5:40	5:42	7:07	8:32	9:58	11:23	12:49
15	7:05	159	2.671 L	7:05	7:05	8:54	11:07	13:21	15:34	17:48	20:02
18	8:30	133	3.846 L	8:30	9:37	12:49	16:02	19:14	22:26	25:38	28:51
21	9:55	114	5.235 L	9:55	13:05	17:27	21:49	26:11	30:32	34:54	39:16
24	11:23	100	6.846 L	11:23	17:07	22:49	28:31	34:14	39:56	45:38	51:21

REVISIONS		
REV. NO.	DESCRIPTION	DATE

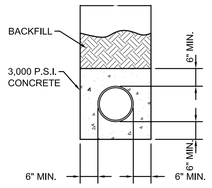
MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	7/12/05 DATE
APPROVED	PUBLIC WORKS COMMISIONER	7/12/05 DATE
APPROVED	TOWN COUNCIL PRESIDENT	7/12/05 DATE

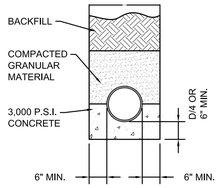
TOWN OF McCORDSVILLE

TOWN STANDARDS SANITARY SEWER SPECIFICATIONS

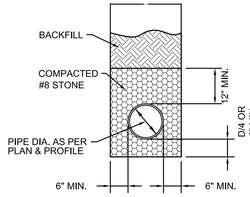
1. CONCRETE OR STONE BEDDING TO EXTEND TO UNDISTURBED TRENCH WALLS.
2. FOR PIPE DIA., REFER TO PLAN AND PROFILES.



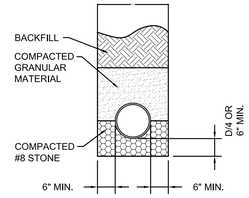
CONCRETE ENCASEMENT
CLASS "A-A"



CONCRETE CRADLE
CLASS "A"



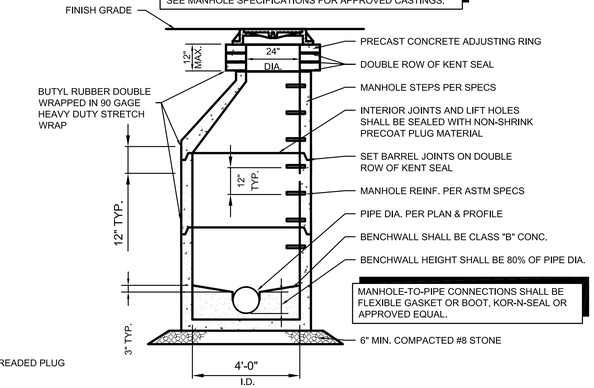
FLEXIBLE PIPE BEDDING
TYP. PVC



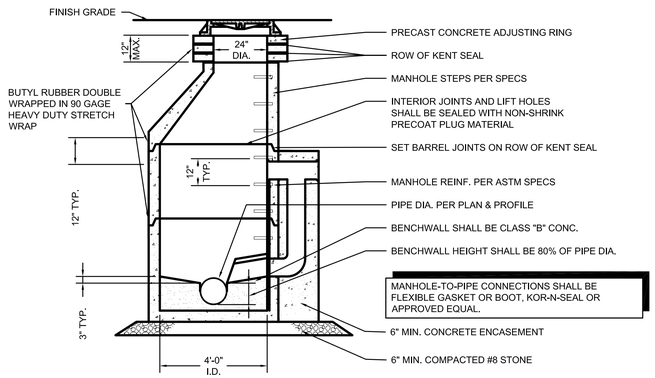
RIGID PIPE BEDDING
TYP. DI

PIPE BEDDING DETAILS
NOT TO SCALE

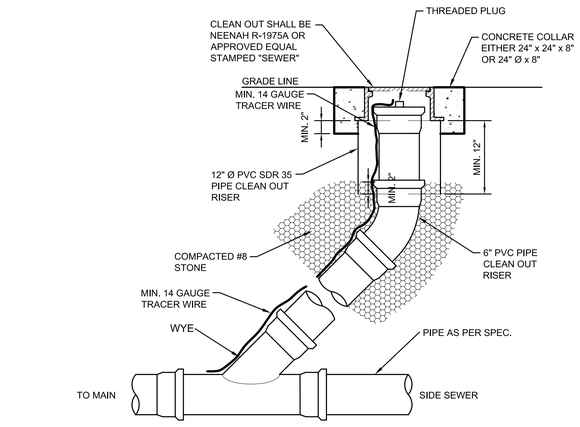
CASTING SHALL BE EITHER SELF-SEALING OR WATERTIGHT, (SEE PLAN & PROFILE SHEETS FOR CASTING TYPE). LIDS SHALL BE STAMPED "SANITARY SEWER" AND HAVE CLOSED PICKHOLES. FRAME SHALL BE SET ON ROW OF KENT SEAL. SEE MANHOLE SPECIFICATIONS FOR APPROVED CASTINGS.



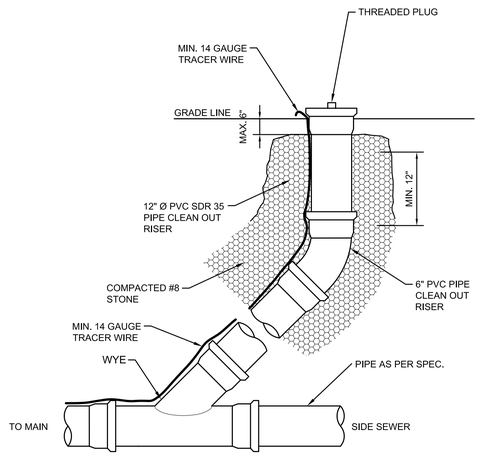
SANITARY MANHOLE
NOT TO SCALE



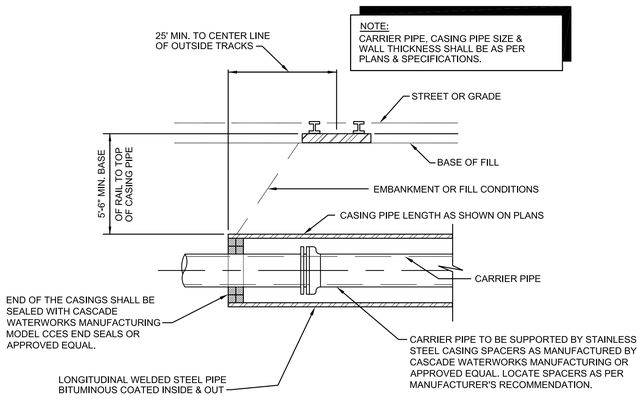
DROP SANITARY MANHOLE
NOT TO SCALE



CLEAN OUT TYPE II
SCALE: NONE

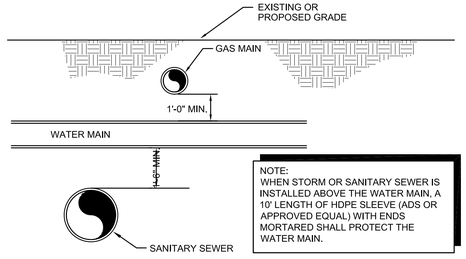


CLEAN OUT TYPE I
SCALE: NONE

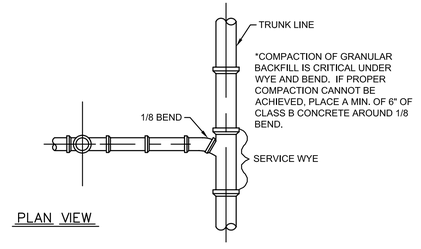


NOTE
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE I.N.D.O.T. STANDARD SPECIFICATIONS. WHERE NO PROCEDURES FOR A PARTICULAR PORTION OF THE WORK ARE GIVEN, THE RECOMMENDATIONS OF THE HORIZONTAL EARTH BORING AND PIPE JACKING MANUAL OR THE AMERICAN RAILWAY ENGINEERING ASSOCIATION SHALL BE FOLLOWED.

TYPICAL RAILROAD AND HIGHWAY BORING DETAIL
NOT TO SCALE

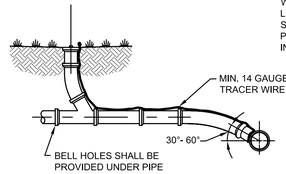


TYPICAL UTILITY CROSSING
NOT TO SCALE



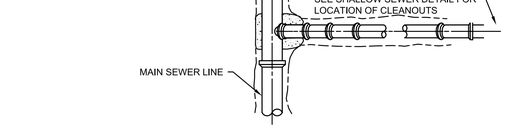
PLAN VIEW

NOTE: A MINIMUM 6" DIA PIPE TYPE I CLEAN OUT SHALL BE INSTALLED 3' AWAY FROM BUILDING. A THREADED PLUG SHALL BE USED TO ENSURE 100% WATERTIGHTNESS. FOR LATERALS GREATER THAN 100 LF AS MEASURED ALONG THE PIPE, TYPE II CLEAN OUTS SHALL BE INSTALLED AT THE STREET RIGHT-OF-WAY OR PROPERTY LINE AS APPLICABLE AND AT 100 FOOT INCREMENTS AS APPROPRIATE.

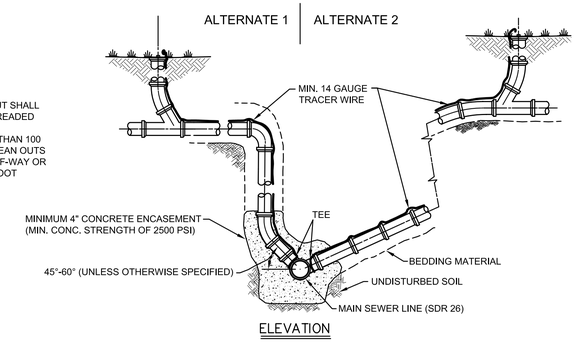


ELEVATION

SERVICE CONNECTION FOR SHALLOW SEWERS
LESS THAN 15' DEEP



PLAN VIEW



ELEVATION

SERVICE CONNECTION FOR DEEP SEWERS (2 ALTERNATIVES)
15' DEEP AND OVER

REVISIONS		
REV. NO.	DESCRIPTION	DATE

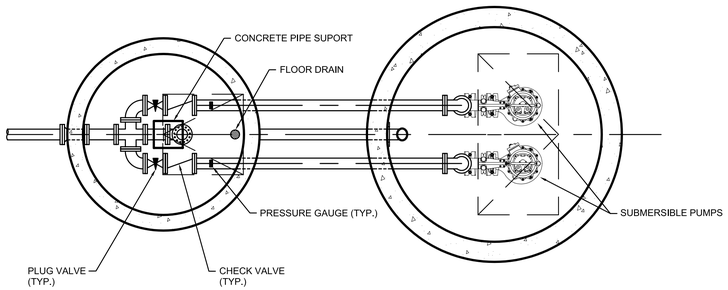
MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	7/12/05 DATE
APPROVED	PUBLIC WORKS COMMISIONER	7/12/05 DATE
APPROVED	TOWN COUNCIL PRESIDENT	7/12/05 DATE

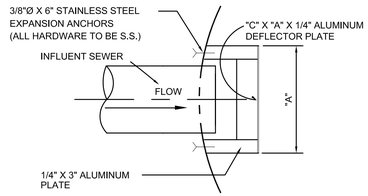
TOWN OF McCORDSVILLE

TOWN STANDARDS SANITARY SEWER DETAILS

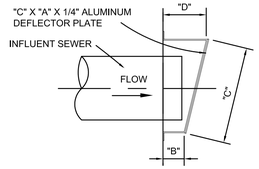
SHEET 9 OF 10



LIFT STATION - PLAN
SCALE: NONE



PLAN

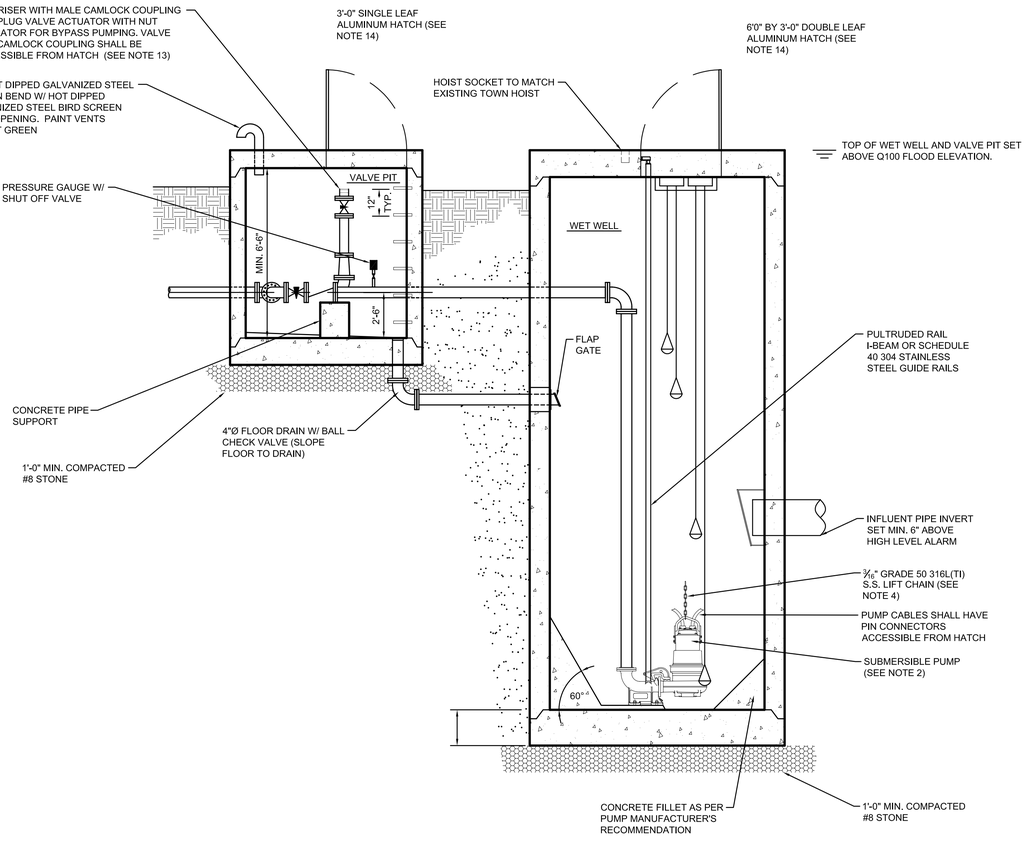


SECTION

ALL SURFACES CONTACTING CONCRETE SHALL HAVE A BITUMINOUS COATING

MATERIALS SCHEDULE				
INFLUENT SEWER I.D.	"A"	"B"	"C"	"D"
6"-10"Ø	19"	5"	13"	10"
10"-14"Ø	23"	5"	18"	10"
14"-18"Ø	27"	5"	23"	10"
18"-22"Ø	31"	5"	28"	10"
22"-26"Ø	35"	5"	37"	10"

DEFLECTION PLATE DETAILS
SCALE: NONE



LIFT STATION SECTION
SCALE: NONE

GENERAL NOTES

1.) Actual lift station dimensions, control settings, & pump selection to be indicated by the design engineer's certification sheet.

2.) Pumps "A" and "B" shall be identical, centrifugal, submersible, solids handling, non-clog design capable of handling 3" sphere solids, fibrous material, sludge, and material found in typical raw sewage. Fit replaceable bronze wear ring to volute. Pumps shall be ~~Flygt,~~ Hydromatic or approved equal. Manufacturer shall warrant the pumps for five years after installation. Barnes,

All mating surfaces intended to be watertight shall be machined and fitted with nitrile rubber o-rings with sealing complete when metal-to-metal contact is made, resulting in controlled compression of o-rings without specific torque limit. Fasteners shall be 316 S.S.

Mechanical shaft seal system running in an oil reservoir shall have separate, constantly lubricated lapped seal faces. The lower seal unit between media and oil reservoir shall consist of one stationary seat and one rotating ring held in place by its own spring. The rotating seat ring and the stationary seat ring shall be made of Tungsten-Carbide. The lower seal shall be removable without disassembling the seal chamber. The upper seal between seal chamber and motor shall be of the same design with its own spring. Seals shall be maintenance free, but shall be easily inspectable.

The lift station control panel shall be stainless steel construction, NEMA 4X rating mounted on an aluminum pedestal. The control cabinet shall house the following controls and indication: Warning lights for each pump, Indicator lights, Common alarm, H-O-A switches, Silence button, Pump alternator, Warning reset buttons, Relays, Heater, Surge protection, Phase monitoring, Hour meters, and a GFI 110 volt, single phase convenience outlet.
Lower seal failure alarm shall be engaged by seal failure sensor provided in the seal chamber, which senses water intrusion through lower seal. A mini-float in the motor chamber which signals pump shutdown and alarm upon water intrusion through upper seal may be acceptable when approved by Town of McCordsville.

Over temperature alarm and pump shutdown shall be engaged by heat sensor attached to the motor windings. Motor winding and stator lead insulation shall be class F with maximum temperature capability of 155 degree C. Housing shall be filled with High-Dielectric Oil. Air filled housing may be acceptable when approved by Town of McCordsville.
Pump and motor shall be designed to operate partially or fully submerged in pumped media without the use of cooling jackets.

Rail system shall enable the easy removal of the pump without the need for a person to enter the wet well. A non-corrosive FRP I-beam or schedule 40 stainless steel guide rails shall be provided for each pump. The guide rail shall be supported at the bottom by the discharge elbow, aligned perfectly plumb and securely affixed to access frame. One intermediate guide rail support is required for each 9' of guide rail length.

3.) Check valve shall use packing material to seal the integral shaft or hinge pin. O-ring side plugs and O-ring shall not be used to seal integral shaft or hinge pin. Check valve shall be provided with bolted covers for easy access to the discs and shall be outside adjustable weight & Lever and shall be Clow F-5382 or approved by Town of McCordsville.

4.) Provide sufficient lift chain, float mounting cable, and pump power & control cable to enable non-spliced field adjustment. 304L stainless steel lift chain w/ 4:1 saftey factor shall have a minimum workload limit of 1100 pounds. Pump power & control cables shall be suitable for submersible pump applications and this shall be indicated by a code/legend permanently embossed on the cable. Provide sleve and pin on pump control cable and locate on bracket near hatch.

5.) Plug valve shall be hand lever operated and shall be Dezurik Fig. 118, Clow F-5412, or Town of McCordsville approved equal.

6.) Pressure gauge shall be Trerice Model 450 LFB or Town of McCordsville approved equal. Drill & tap run of pipe to install pressure gauge.

7.) Piping not within 2 feet of wet well and valve pit shall be DI Class 53, PVC ASTM D2241 SDR 21, PVC AWWA C900 or C905, or Town of McCordsville approved equal.

8.) Piping in and within 2 feet of wet well and valve pit shall be class 53 flanged ductile iron pipe.

9.) Piping, valves, and fittings in wet well and valve pit shall be factory primed Tnemec series 140 - 1211 to a dry film thickness of 5.0 to 11.0 mils and shall be field painted with Tnemec series 69 to a dry film thickness of 5.0 to 6.0 mils.

10.) Lift station and valve pit manholes shall be pre-cast concrete in accordance with ASTM C-478, with rubber gaskets equal to ASTM-443 with double row of 1/2"' Hamilton Kent-Seal Extrudable Preformed Gasket material or Town of McCordsville approved equal. Exterior joints to have butyl rubber applied over the joint to a minimum of 1'-0" above and below the joint. Interior joints are to be sealed with non-shrink grout or precoat plug material.

11.) Valve pit shall be constructed on undisturbed soil or compacted granular material compacted with ½ inch nominal size to 95% standard proctor density.

12.) Horizontal projections from precast integral base and riser may be required to enable the weight of the vertical soil ring above the projection to resist buoyancy forces. See design engineer's certification sheet.

13.) Camlock flanged coupler and dust cap shall be used within valve vault. Camlock coupling and eccentric plug valve on by-pass line shall be 6" diameter with transition to force main size occurring with concentric reducer placed on top of base elbow. Fix operating nut for eccentric plug in vertical position to enable wrench operation from surface. Layout of all valve vault fittings and equipment to be based upon by-pass line being up close to hatch opening as shown.

14.) Aluminum hatches shall be Bilco, Halliday or Town of McCordsville approved equal. Leaf shall be ¼" aluminum diamond plate live load rated to 300PSF. Access frames and covers shall be 1/4 inch thick one-piece, mill finish, extruded aluminum frame, incorporating a continuous concrete anchor. All surfaces contacting concrete shall have a bituminous coating. Hatch shall be provided with type 316 S.S. hardware throughout, compression spring operators, automatic hold-open arm with release handle, and non-corrosive locking bar used in conjunction with a Town of McCordsville supplied padlock.

15.) Sewer connection to wet well shall be KOR-N-SEAL, A-LOK, DURA-SEAL, or Town of McCordsville approved equal.

16.) Force main penetrations of wet well shall be KOR-N-SEAL, A-LOK, DURA-SEAL, or Town of McCordsville approved equal.

17.) Automatic pump control system shall include all necessary items and appurtenances, which might normally be considered a part of a complete system. System shall be supplied by one manufacturer, shall be factory assembled, wired and tested, and shall be per complete electrical drawings and instructions. Major components and sub-assemblies shall be identified as function with laminated, engraved, bakelite nameplates. System shall be built in a NEMA 4X S.S. enclosure suitable for the specified horsepower and voltage of the pumps. The outer door of the panel shall be a hinged dead front with provisions for padlocking. Inside shall be a separate hinged panel to protect all electrical components, H-O-A switches, run lights, circuit breakers, etc., mounted such that only the faces protrude through said panel with no wiring fixed to said panel. The manufacturer shall warrant the control center for one year after installation covering 100% parts and labor.

Provide the services of a factory-trained, qualified representative to inspect, to adjust, and to place the system in trouble-free operation and to instruct the operating personnel in the proper operation and care of the system.

All major components of control center shall be available from local sources. Pump manufacturer shall accept the control center in writing to ensure unit responsibility and warranty.

Provide a disconnect switch housed in a separate NEMA 4X S.S. enclosure with external operation handle capable of being locked in the "on" position. Provide 480 volt, 200 amp, 4 wire weatherproof receptacle, Crouse Hindes AR204 or equal, to match plug on existing portable generator.

Provide a Omni-site.net Crystall WM housed within the NEMA 4X control panel.

An incoming power terminal block shall be located at the bottom of the control enclosure. A lightning arrestor shall be provided at the terminal block and connected to each line of the incoming side of the power input terminals. A single main fusible/breaker disconnect switch of adequate size to provide power for control, operation, and appurtenant components shall be provided. Provide a circuit breaker and magnetic starter with each leg manual reset overload protected for each pump. Starters shall have auxiliary contacts on 3Φ applications to operate both pumps simultaneously. Provide a circuit breaker and transformer to power the control panel with 1Φ, 115 volt service for all control functions. Provide a green "run" light and H-O-A switch to enable field connections.

Materials and installation of the required equipment grounding shall be in accordance with NEC section 250-83(c). All wiring shall have not less than 600 volt insulation. Wiring and buss shall be in accordance with NEC, state, local, and NEMA standards. All wiring shall be color coded.

Minimum 4" diameter, schedule 40 conduit shall be provided from wet well to control panel enabling pump power & sensor cables and float switch cables to be easily pulled. Seal conduit at control panel to prevent sewer gases from entering. All conduits, fittings, or connections shall enter from the bottom of enclosures.

Sump level rise to lead pump run float causes lead pump to operate. Lead pump operating and sump level falling to pumps off float causes lead pump to shut off. Lead pump operating and sump level rising to lag pump run float causes lag pump to operate. Lag pump operating and sump level falling to pumps off float causes both pumps to shut off. Sump level rise to high level alarm causes high level alarm to operate. An alternating relay shall be provided to cause pumps to alternate whenever pumps off float is de-energized. If one pump fails for any reason, the remaining pump shall operate upon sump level rise to lag pump run float. An hour meter shall be provided for each pump to record the elapsed operating time of each pump.

18.) Four manuals shall be presented to the owner, which shall include the following minimum information: 1) Operation instructions, 2) Maintenance instructions, 3) Recommended spare parts list, 4) Lubrication schedule, 5) Structural diagrams, 6) As-built wiring diagrams, & 7) Bill of materials.

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	Various changes in red	4/18/2023

MARK J. WITSMAN REGISTERED No. 10100264 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMEND FOR APPROVAL	DESIGN ENGINEER	7/12/05 DATE
APPROVED	PUBLIC WORKS COMMISIONER	7/12/05 DATE
APPROVED	TOWN COUNCIL PRESIDENT	7/12/05 DATE

TOWN OF McCORDSVILLE

TOWN STANDARDS SANITARY SEWER LIFT STATION STANDARDS & GUIDELINES

SHEET 10 OF 10