Plan Commission (PC)

INITIAL Petition Filings

Docket # : 2020-46-PP

Petitioner: Pock Family Farms LLC

Public Hearing Date: 11/16/2020

Staff Reports and Petition Packets will be posted with the public meeting agenda at the following location http://www.zionsville-in.gov/AgendaCenter

Town of Zionsville
Petition for Subdivision Plat Approval

Application Packet
And
General Instructions

Office Use Only
Petition No.: 2020-46-PP
Hearing Date:
Recommendation:

Town of Zionsville

Petition for Plan Commission Approval

1. SITE INFORMATION:

Address of Property: 6125 S 700 E, Zionsville, IN 46077

Existing Use of Property: Agricultural

Current Zoning: Rural GB Name of Subdivision:

Area in acres: 28.64 Number of lots: 4

2. PETITIONER/PROPERTY OWNER

Petitioner:
Name: John W. Demaree, Pock Family Farm LLC
Address: 241 N Pennsylvania St Ste 300
Indianapolis, IN 46204
Phone: (317) 213-6708
Fax:
E-Mail: john.demaree@colliers.com

Owner (If different from Petitioner):
Name: Same
Address:
Phone:
Fax:
E-Mail:

3. PETITIONER'S ATTORNEY/CONTACT PERSON AND PROJECT ENGINEER (IF ANY):

Attorney / Contact Person:
Name:
Address:
Phone:
Fax:
E-Mail:

Project Engineer / Architect:
Name: Greg Ripple
Address: 250 E 96th St Ste 580
Indianapolis, IN 46240
Phone: 317-912-4171
Fax:
E-Mail: Greg.Ripple@kimley-horn.com

4. APPROVALS REQUESTED:

☒ **Primary Plat** ☐ **Secondary Plat**

☐ **Minor Plat** ☐ **RePlat**

☐ Waivers of Subdivision Control Ordinance Requirements *(Describe specific waivers being requested and reasons for the request. Attach additional pages if necessary):*

5. ATTACHMENTS:

☒ Legal description of property
NA Owner's Authorization (if petitioner is not the owner)
☐ Copy of Covenants (if proposed)
☒ Application Fee
☒ Proof of Ownership (copy of Warranty Deed)
☒ Copies of the Proposed Plat
☒ Draft of Proposed Legal Notice
NA Road Impact Calculation Form

The undersigned, having been duly sworn on oath states the above information is true and correct as (s)he is informed and believes. Further, the applicant understands that this project may be assigned Engineering and Stormwater review fees, which are payable upon invoicing. Road Impact Fees are payable upon Improvement Location Permit release.

Signature of Owner or Attorney for Owner: _____

Date: 10/12/20

State of Indiana)

SS

County of Marion)

Subscribed and sworn to before me this _____ day of October 12, 2020.

Laura F Campins / Laura F. Campins

Notary Public Signature / Notary Public Printed

My commission expires 4/7/24

My county of residence is Boone County.

My Commission No. is 683283

STATE OF INDIANA NOTARY SEAL

LAURA F CAMPINS
Notary Public, State of Indiana
Boone County
Commission # 683283
My Commission Expires
April 07, 2024

PETITION FOR SUBDIVISION PLAT APPROVAL PROCEDURES AND REQUIREMENTS:

SUBMISSION OF PETITION FOR SUBDIVISION PLAT APPROVAL:

1. A complete Petition for Subdivision Plat Approval ("petition") must be submitted by **3:00 PM** a minimum of **45 days for a minor plat and 60 day for a major plat** prior to the initial hearing before the Plan Commission.

2. **Only complete Petitions will be docketed for the next Plan Commission meeting.** If a Petition is incomplete by filing deadline, the Petition will not be docketed until the Petitioner submits a complete Petition.

3. Ten sets of the following information must be submitted with the notarized Petition:

   ☒ Legal description of property (Metes and bounds description must include a perimeter survey, drawn to scale – or– recorded subdivision legal description must include lot number, section number, subdivision name, either the plat book number of the recorded instrument number and a copy of the plat map.)

   ☒ Proof of Ownership (copy of deed)

   ☐ Owner's Authorization (if Petitioner is not the owner)

   ☒ Proposed Plat

   ☐ Covenants (if proposed)

   ☒ Draft of proposed Legal Notice (Primary Plats only)

   ☒ Application Fee (Make checks payable to the Town of Zionsville)

PUBLIC HEARING NOTIFICATION:

Notice of Public Hearing for Primary Plat is to be completed as set forth in the Zoning Ordinance and Rules of Procedure for the Plan Commission. The procedures relating to notification of public hearings that are contained in this Packet are provided for convenience purposes only.

1. Approval of Notice: The Petitioner shall submit a proposed Notice of Public Hearing with its petition for review and approval by the Secretary of the Plan Commission.

2. Notice by Publication: Petitioner shall submit the approved Notice of Public Hearing to the Zionsville Times Sentinel to be **published at least 10 days prior** to the Public Hearing. The petitioner shall bear the cost of publishing the Legal Notice. The Secretary of the Plan Commission will provide the Petitioner with the filing and publication deadlines for the Legal Notice.

3. Notice by Mailing: The Petitioner is to send the approved Notice of Public Hearing to each interested party via certified mail with return receipt requested at least ten(10) days prior to the Public Hearing. Generally, all owners of adjoining parcels to a depth of one (1) ownership surrounding the perimeter of the area described in the Petition, and any owners of property within the area included in the Petition who are not Petitioners are to be notified. Please review the Rules of Procedure of the Plan Commission to ensure proper notification is given. The names and addresses of Interested Parties should be obtained from the Boone County Auditor's Office.

4. Affidavit of Notice: At least three (3) days prior to the Public Hearing, an Affidavit of Notice of Public Hearing must be completed and submitted to the Secretary of the Plan Commission. Copies of all "Receipt for Certified Mail" (white slips) shall be filed with the Affidavit of Notice of Public Hearing. The originals of the "Domestic Return Receipts" (green cards) shall be filed with the Secretary upon the later of: the public hearing or receipt by the Petitioner.

PETITION REVIEW PROCEDURES

1. Prior to acceptance, the Petition will be reviewed for completeness.

2. Once complete, the Petition will be docketed for the next Plan Commission meeting. The petitioner shall be responsible for delivering the Legal Notice (after it has been approved) to the Zionsville Times Sentinel for publication and for sending the Legal Notice to all Interested Parties.

3. The Petition and all supporting documentation will be forwarded to the Plan Commission members.

4. The Secretary, members of the Plan Commission's staff or advisors to the Plan Commission may submit a written report, stating any facts concerning the physical characteristics of the area involved in the Petition, together with a recital of surrounding land use and public facilities available to service the area, or other pertinent facts. A copy of such statement shall be made available to the Petitioner and all remonstrators of record, if any.

5. The Plan Commission typically meets on the third Monday or each month at 7:00 p.m. in the Town Hall located at 1100 West Oak Street, Zionsville, Indiana 46077.

6. The Petitioner or remonstrators may request continuation of the Public Hearing at or one week prior to the Plan Commission meeting.

7. The Petitioner, Petitioner's attorney, or someone authorized by the Petitioner must be present at the Public Hearing to make a presentation of the Petition to the Plan Commission.

8. At the Public Hearing, the Plan Commission may continue the Public Hearing or may approve or deny the plat.

OWNER'S AUTHORIZATION

The undersigned, Pock Family Farm, LLC, being the owner of the property commonly known as 6125 S 700 E, Zionsville, IN 46077, hereby authorize(s) Kimley-Horn & Associates, Inc. to file a Petition for (zone map change / variance / special exception / subdivision plat approval / other) for the aforementioned property.

By: _____ (Authorized signature) - or - _____ (print owner name)

JOHN W DEWAREE
(Printed name)

Managing Member
(Title)

State of Indiana)

County of Marion) **SS:**

Subscribed and sworn to before me this day of October 12, 2020.

Laura F Campins
Notary Public Signature

Laura F. Campins
Notary Public Printed

My commission expires 4/7/24

My county of residence is Boone County.

My Commission No. is 683283

STATE OF INDIANA NOTARY SEAL
LAURA F CAMPINS
Notary Public, State of Indiana
Boone County
Commission # 683283
My Commission Expires
April 07, 2024

NOTICE OF PUBLIC HEARING
BY THE TOWN OF ZIONSVILLE PLAN COMMISSION

Notice is hereby given of a Public Hearing to be held by the Town of Zionsville Plan Commission

on Monday, November 16, 2020 at 7:00 p.m. in the Zionsville Town Hall, 1100 West
(DATE OF PUBLIC HEARING)

Oak Street, Zionsville, Indiana 46077 to consider the following:

_____, _____ **requests Primary**
(PETITION NUMBER) **(NAME OF PETITIONER)**

Plat approval for the division of 28.64 **acres into** 4 **lots for a subdivision to be known as** Pock Farm **(including waiver(s) of the Subdivision Control Ordinance to allow for:** (DESCRIPTION OF WAIVER)

_____

_____

_____

The property involved commonly known as: 6125 S 700 E, Zionsville, IN 46077,
(COMMON ADDRESS)

is currently zoned to the GB zoning district, and is legally described as:

(INSERT LEGAL DESCRIPTION OF PROPERTY)

A copy of the Petition for Primary Plat Approval and all plans pertaining thereto are on file and may be examined prior to the Public Hearing from 8:00 a.m. to 4:00 p.m. Monday through Friday, except for holidays, in the Office of Planning and Development at the Town Hall, 1100 West Oak Street, Zionsville, Indiana 46077. Written comments in support of or in opposition to the Petition for Plan Commission Approval are filed with the Secretary of the Town of Zionsville Plan Commission prior to the Public Hearing will be considered. The Public Hearing is open to the public. Oral comments to the Petition for Plan Commission Approval will be heard at the Public Hearing.
The Public Hearing may be continued from time to time as may be found necessary.

Upon request, the Town of Zionsville will provide auxiliary aids and services. Please provide advance notification to the Technology Department, assistance@zionsville-in.gov or 317-873-1577, to ensure the proper accommodations are made prior to the meeting.

_____
(President)

_____
(Secretary)

PUBLISH: Newspaper of General Circulation

AFFIDAVIT OF NOTICE OF PUBLIC HEARING
OF THE TOWN OF ZIONSVILLE PLAN COMMISSION

STATE OF _____)

COUNTY OF _____) SS:

I, Greg Ripple, DO HEREBY CERTIFY THAT LEGAL NOTICE
(Name of person mailing letters)

TO INTERESTED PARTIES OF THE PUBLIC HEARING TO BE HELD BY THE TOWN OF ZIONSVILLE PLAN COMMISSION, to consider the application of Pock Family Farm, LLC
(Name of person on Petition)

Requesting: Approval of a Primary Plat, Pock Farm, of a proposed +/- 28 Acre Mixed Use Development

was sent by CERTIFIED MAIL, RETURN RECEIPT REQUESTED, to each of the following property owners at the following addresses:

OWNER	ADDRESS
See attached list	

and that said Legal Notices were sent by Certified Mail, Return Receipt Requested on or before the 6 day of November, 20 20, being at least ten (10)days prior to the date of the Public Hearing (copies of the "Receipt for Certified Mail" (white slips) attached).

and that said Legal Notice was published in a newspaper of general circulation at least ten (10) days prior to the date of Public Hearing (Proof of Publication attached).

_____
(Name of person mailing letters)

State of _____)

County of _____) **SS:**

Subscribed and sworn to before me this . day of _____ , _____ .

_____/_____
Notary Public Signature Notary Public Printed

My commission expires _____

My county of residence is _____ County.

My Commission No. is_____

P:\PLAN COMMISSION - 2010

TOWN OF ZIONSVILLE PLAN COMMISSION
BOONE COUNTY, INDIANA

FINDINGS OF FACT

The Town of Zionsville Plan Commission (the "Commission"), after a Public Hearing held on Monday ___November 16, 2020_____ has determined that the Primary Plat **is/is not** in full compliance with all terms and provisions of the Town of Zionsville Subdivision Control Ordinance and the Town of Zionsville Zoning Ordinance.

The Town of Zionsville Plan Commission finds that:

a. Adequate provisions have been made for regulation of minimum lot depth and minimum lot area;

b. Adequate provisions have been made for the widths, grades, curves and coordination of subdivision public ways with current and planned public ways; and,

c. Adequate provisions have been made for the extension of water, sewer, and other municipal services.

TOWN OF ZIONSVILLE PLAN COMMISSION

The Primary Plat was APPROVED/DENIED on the _____ day of _____, 20_____, subject to any conditions agreed to at the public hearing and listed in the Letter of Grant.

_____ _____

President, Town of Zionsville Plan Commission

_____ _____

_____ _____

_____

(4) 22.00 + 1 Non Johnson City

201200001600
Filed for Record in
BOONE COUNTY, INDIANA
MARY ALICE "SAM" BALDWIN, RECORDER
02-16-2012 At 12:20 pm.
DEED 23.00

WARRANTY DEED

This Indenture Witnesseth that **RICHARD EUGENE POCK**, ("Grantor") of Boone County, in the State of Indiana, ***Convey(s) and Warrant(s)*** to **THE POCK FAMILY FARM, LLC, an Indiana limited liability company**, ("Grantee"), for the sum of Ten Dollars ($10.00) and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the following described real estate in Boone County, State of Indiana:

SEE ATTACHED EXHIBIT A FOR COMPLETE LEGAL DESCRIPTION MADE A PART HEREOF.

Subject to current taxes not delinquent, and all easements, agreements and restrictions of record and all public rights of way.

Property Address: Southwest Corner of S.R. 334 & C.R. 700, Whitestown, Indiana
Grantee's Address: 241 N Pennsylvania Street, Suite 300, Indianapolis, IN 46204

In Witness Whereof, Grantor has executed this Warranty Deed this 30th day of January 2012.

DULY ENTERED FOR TAXATION
2-16-12
Melodyn Price
SUBJECT TO FINAL ACCEPTANCE
AUDITOR, BOONE COUNTY

Signature Richard E Pock
Printed: **RICHARD EUGENE POCK**

STATE OF INDIANA

SS:

COUNTY OF BOONE

Before me, a Notary Public in and for said County and State, personally appeared **RICHARD EUGENE POCK**, who acknowledged the execution of the foregoing Warranty Deed, and who, having been duly sworn, stated that any representations therein contained are true.

Witness my hand and Notarial Seal this 30th day of January 2012.

My Commission Expires: 05-06-2016
My County of Residence: Boone

Signature: Barbara J Revell
Printed: Barbara J Revell

Grantee's Address/Tax Bill Address: 241 N Pennsylvania Street, Suite 300, Indianapolis, IN 46204

This Instrument Prepared By: Alan F. Kolb, Attorney at Law, 50 S. Meridian St., Suite 600, Indianapolis, IN 46204
Phone: (317) 681-6090, Fax: (317) 681-6091,
E-mail: alankolbets@aol.com

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security Number in this document, unless required by law. (Alan F. Kolb)

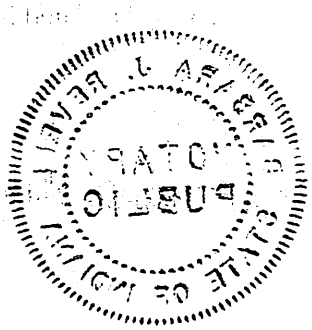
NOTARY
PUBLIC
STATE OF MONTANA

EXHIBIT "A"

A part of the Northeast quarter of Section 6, Township 17 North, Range 2 East, in Boone County, Indiana, more particularly described as follows:

Beginning at a point on the South line of aforesaid quarter section 1361.10 feet West of the Southeast corner thereof, said point being in an existing fence line projected Southwardly, run thence Northwardly deflecting right from the aforesaid South line 88 degrees 49 minutes 30 seconds along and with said existing fence line 1256 74 feet to a point; thence Eastwardly deflecting right 91 degrees 10 minutes 30 seconds a distance of 1332.05 feet to a point in the center line of North 96th Road (formerly the original State Road 334), said point being 36.55 feet West of the East line of the aforesaid Northeast quarter; run thence Southwestwardly and Southwardly on a 10 degree curve to the left along and with the centerline of said North 96th Road (formerly the original State Road 334) a distance of 636.50 feet to the p.c. of said curve; thence continue Southwardly tangent to the last above described curve at the last above described, point along, the center line of said road 152.80 feet; thence Southwardly and Southwestwardly along a 10 degree curve to the right along the center line of said road 911.10 feet to the p.c. of said curve, said point being also on the South line of the aforesaid quarter section; thence Westwardly along and with said South line and on the center line of aforesaid road 429.00 feet to the place of beginning, containing 28.641 acres, more or less.

EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded September 5, 2006 as Instrument No. 200600009673, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34.minutes52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof and the point of beginning of this description; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point, (the following 2 courses are along the East line of said R/W Exhibit drawing and the Northerly extension thereof); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet to the point on a non-tangent curve to the left,

the radius point of which bears South 01 degrees 37 minutes 33 seconds East 46945.00 feet; thence along said curve to the left an arc distance of 565.57 feet to the point of tangency which bears North 02 degrees 18 minutes 58 seconds West 46945.00 feet from said radius point; thence South 87 degrees 40 minutes 59 seconds West 382.64 feet to a point on the West line of said Instrument No. 9609811; thence North 00 degrees 34 minutes 52 seconds West 54.05 feet to the point of beginning, and containing 1.05 acres, more or less.

AND EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded March 7, 2007 as Instrument No. 200700002428, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line, of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 9609811 (as recorded in the Office of the Recorder of Boone County, Indiana'); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said.28.66'40 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right-of-way line of the Southerly extension of County Road 700 East (as per R/W Exhibit drawing by American Consulting, Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point and is the point of beginning of this description; (the following 5 courses are along the East, North and Westerly lines of said R/W Exhibit drawing); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet; 3) thence South 46 degrees 07 minutes 24 seconds East 36.54 feet; 4) thence South 00 degrees 31 minutes 22 seconds East 486.43 feet; 5) thence North 89 degrees 28 minutes 38 seconds East 39.85 feet to a point on a non-tangent curve to the right, the radius of which bears North 89 degrees 28 minutes 38 seconds East 572.963 feet; thence Northeasterly along said curve an arc distance of 252.78 feet to the point of beginning, and containing 0.64 acres, more or less.

ETS 2212-B
JCLT-Ø

ESCROW & TITLE SERVICES LLC
50 S MERIDIAN ST - STE 600
INDIANAPOLIS IN 46204
105030

LAND DESCRIPTIONS (from title commitment)

A part of the Northeast quarter of Section 6, Township 17 North, Range 2 East, in Boone County, Indiana, more particularly described as follows:

Beginning at a point on the South line of aforesaid quarter section 1361.10 feet West of the Southeast corner thereof, said point being in an existing fence line projected Southwardly, run thence Northwardly deflecting right from the aforesaid South line 88 degrees 49 minutes 30 seconds along and with said existing fence line 1256.74 feet to a point; thence Eastwardly deflecting right 91 degrees 10 minutes 30 seconds a distance of 1332.05 feet to a point in the center line of North 96th Road (formerly the original State Road 334), said point being 36.55 feet West of the East line of the aforesaid Northeast quarter; run thence Southwestwardly and Southwardly on a 10 degree curve to the left along and with the centerline of said North 96th Road (formerly the original State Road 334) a distance of 636.50 feet to the p.c. of said curve; thence continue Southwardly tangent to the last above described curve at the last above described point along the center line of said road 152.80 feet; thence Southwardly and Southwestwardly along a 10 degree curve to the right along the center line of said road 911.10 feet to the p.c. of said curve, said point being also on the South line of the aforesaid quarter section; thence Westwardly along and with said South line and on the center line of aforesaid road 429.00 feet to the Place of Beginning. Containing 28.641 acres, more or less.

EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded September 5, 2006 as Instrument No. 200600009673, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

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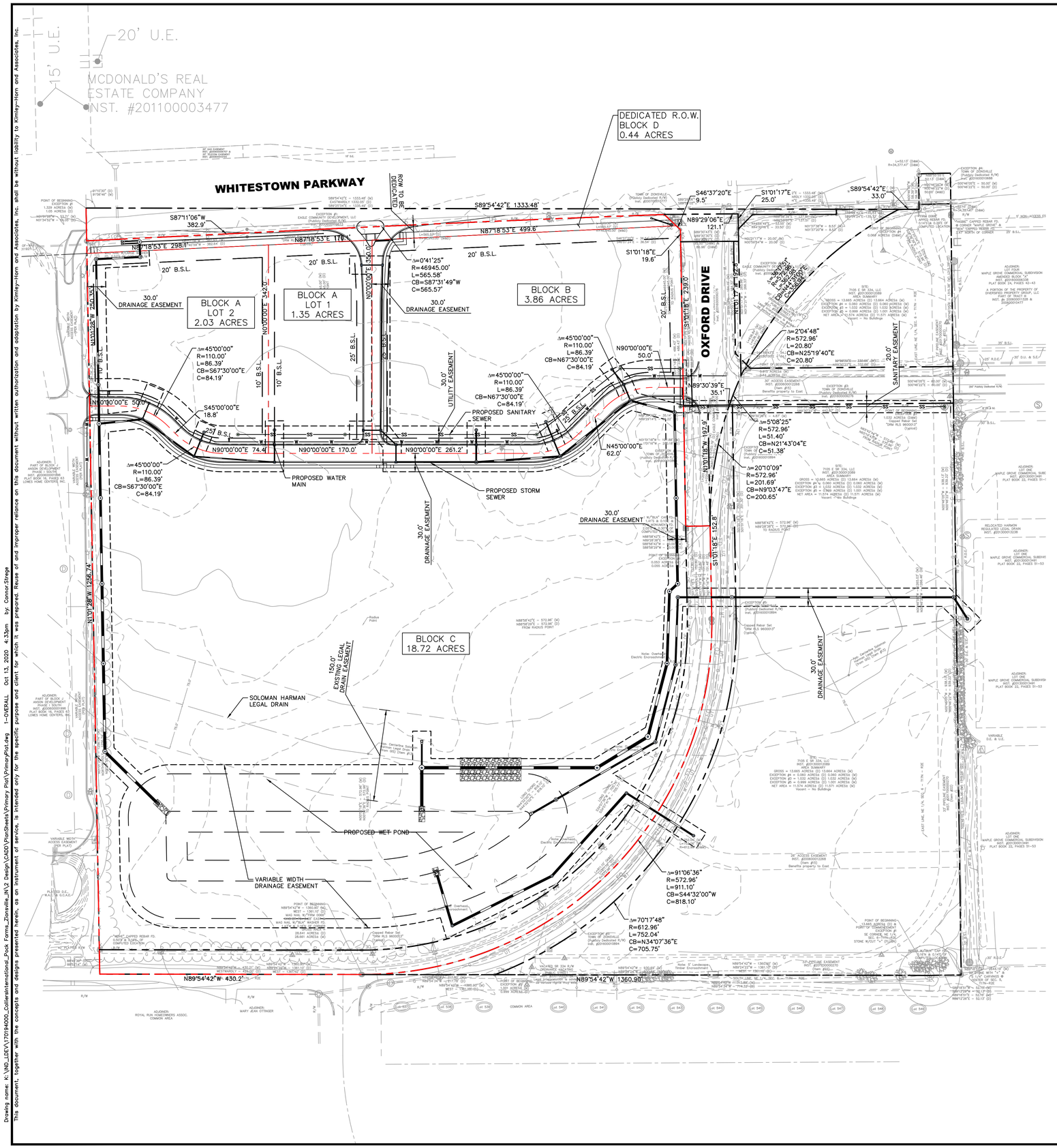
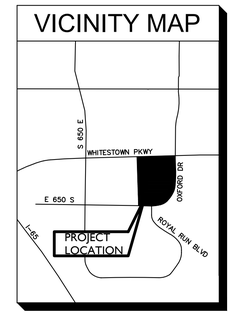
Pock Farm Primary Plat Project Description

Subdivision of an existing parcel into 4 blocks, of which 1 block will establish 2 lots, and another block to be dedicated as Right of Way.

PRIMARY PLAT
POCK FARMS



VICINITY MAP



OWNER/DEVELOPER:
POCK FAMILY FARMS, LLC.
2025 N WABASH AVE.
KOKOMO, IN 46901
317-213-6708

CIVIL ENGINEER:
GREG RIPPLE, PE
KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 580
INDIANAPOLIS, IN 46240
317-218-9560

SURVEYOR:
BRIAN RISMILLER, PS
V3, INC.
454 GRADLE DR,
CARMEL, IN 46032
317-844-3333

PROPOSED LEGEND

D.&U.E.	DRAINAGE & UTILITY EASEMENT
V.W.	VARIABLE WIDTH
B.S.L.	BUILDING SETBACK LINE
	BUILDING SETBACK LINE
	PROPERTY BOUNDARY
	PROPOSED EASEMENT

LEGAL DESCRIPTION

LAND DESCRIPTIONS (from title commitment)

A part of the Northeast quarter of Section 6, Township 17 North, Range 2 East, in Boone County, Indiana, more particularly described as follows:

Beginning at a point on the South line of aforesaid quarter section 1361.10 feet West of the Southeast corner thereof, said point being in an existing fence line projected Southwardly, run thence Northwardly deflecting right from the aforesaid South line 88 degrees 49 minutes 30 seconds along and with said existing fence line 1256.74 feet to a point; thence Eastwardly deflecting right 91 degrees 10 minutes 30 seconds a distance of 1332.05 feet to a point in the center line of North 96th Road (formerly the original State Road 334), said point being 36.55 feet West of the East line of the aforesaid Northeast quarter; run thence Southwestwardly and Southwardly on a 10 degree curve to the left along and with the centerline of said North 96th Road (formerly the original State Road 334) a distance of 636.50 feet to the p.c. of said curve; thence continue Southwardly tangent to the last above described curve at the last above described point along the center line of said road 152.80 feet; thence Southwardly and Southwestwardly along a 10 degree curve to the right along the center line of said road 911.10 feet to the p.c. of said curve, said point being also on the South line of the aforesaid quarter section; thence Westwardly along and with said South line and on the center line of aforesaid road 429.00 feet to the Place of Beginning. Containing 28.641 acres, more or less.

EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded September 5, 2006 as Instrument No. 200600009673, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof and the Point of Beginning of this description; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point, (the following 2 courses are along the East line of said R/W Exhibit drawing and the Northerly extension thereof); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet to the point on a non-tangent curve to the left, the radius point of which bears South 01 degrees 37 minutes 33 seconds East 46945.00 feet; thence along said curve to the left an arc distance of 565.57 feet to the point of tangency which bears North 02 degrees 18 minutes 58 seconds West 46945.00 feet from said radius point; thence South 87 degrees 40 minutes 59 seconds West 382.64 feet to a point on the West line of said Instrument No. 9609811; thence North 00 degrees 34 minutes 52 seconds West 54.05 feet to the Point of Beginning. Containing 1.05 acres, more or less.

AND EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded March 7, 2007 as Instrument No. 200700002428, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point and is the Point of Beginning of this description; (the following 5 courses are along the East, North and Westerly lines of said R/W Exhibit drawing); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet; 3) thence South 46 degrees 07 minutes 24 seconds East 36.54 feet; 4) thence South 00 degrees 31 minutes 22 seconds East 486.43 feet; 5) thence North 89 degrees 28 minutes 38 seconds East 39.85 feet to a point on a non-tangent curve to the right, the radius of which bears North 89 degrees 28 minutes 38 seconds East 572.963 feet; thence Northeasterly along said curve an arc distance of 252.78 feet to the Point of Beginning. Containing 0.64 acres, more or less.

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.

250 EAST 96TH STREET, SUITE 580,
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RIPPLE — REGISTERED — 10100066 — STATE OF INDIANA — PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

OVERALL PRIMARY PLAT

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020

KHA PROJECT NO. 170194000

SHEET NUMBER

C1.20

Drawing name: K:\IND_LDEV\170194000_Collerettenational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\Primary Plat\PrimaryPlat.dwg 1-OVERALL Oct 13, 2020 4:33pm by: Connor.Strage
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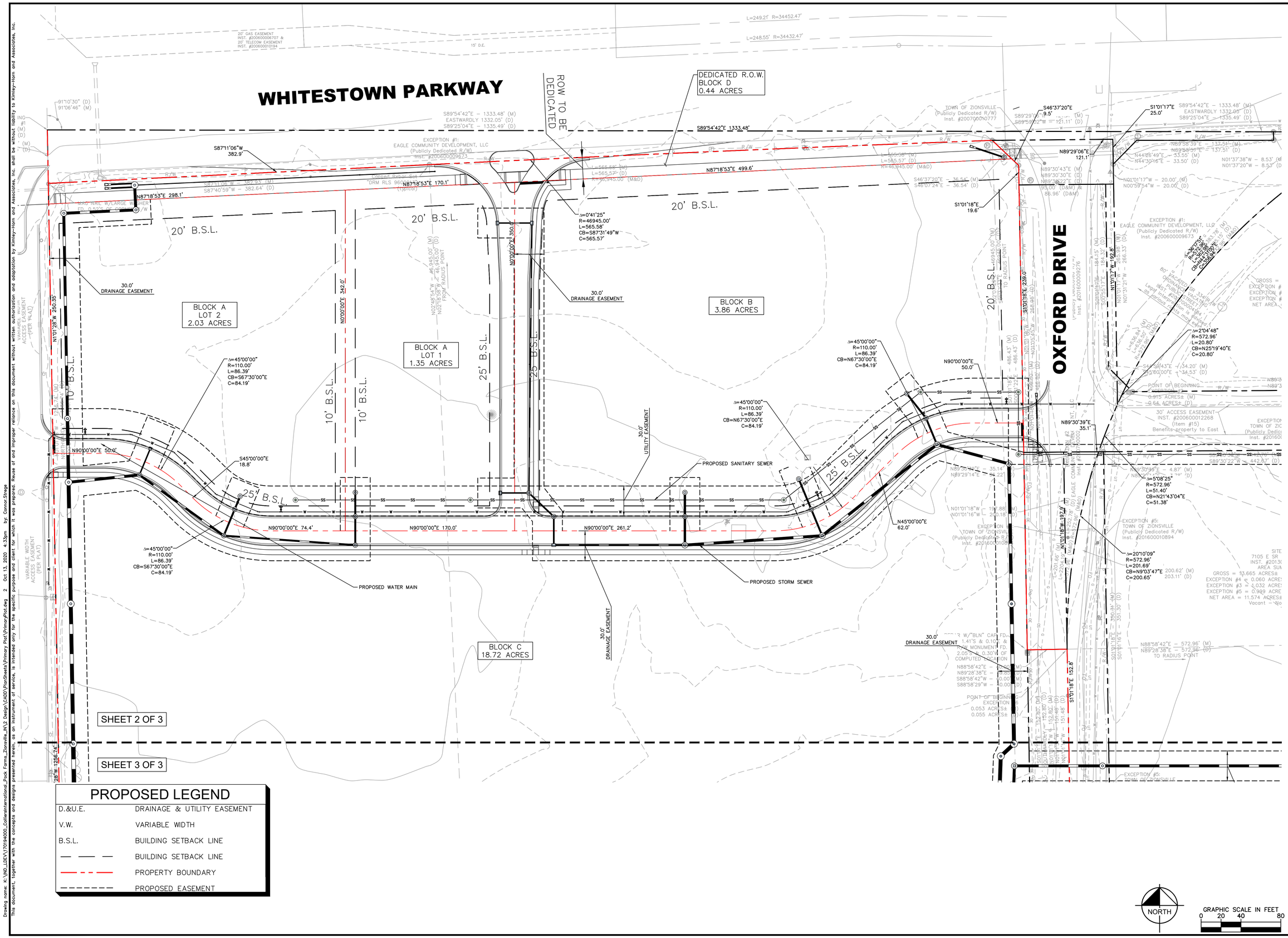

PROPOSED LEGEND

D.&U.E.	DRAINAGE & UTILITY EASEMENT
V.W.	VARIABLE WIDTH
B.S.L.	BUILDING SETBACK LINE
— — —	BUILDING SETBACK LINE
— — —	PROPERTY BOUNDARY
- - - -	PROPOSED EASEMENT

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2020 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 580,
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUSH REGISTERED 10800066 INDIANA PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

PRIMARY PLAT (1 OF 2)

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C1.21

Drawing name: K:\IND_LDEV\170194000_Callieratentional_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\Primary Plat\PrimaryPlat.dwg 2 Oct 13, 2020 4:33pm by: Connor.Strege
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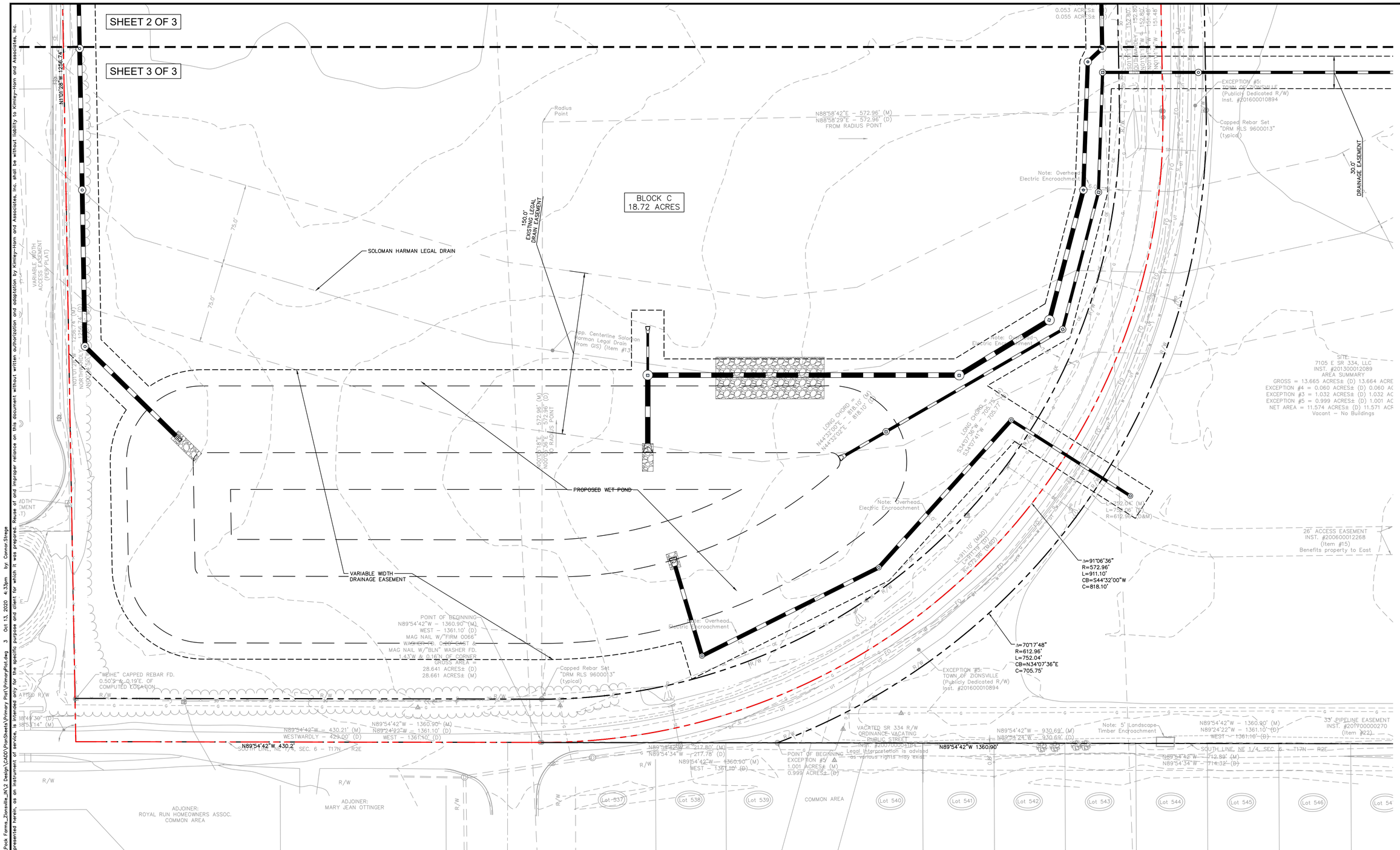

PROPOSED LEGEND

D.&U.E.	DRAINAGE & UTILITY EASEMENT
V.W.	VARIABLE WIDTH
B.S.L.	BUILDING SETBACK LINE
— — —	BUILDING SETBACK LINE
— — —	PROPERTY BOUNDARY
— — —	PROPOSED EASEMENT

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2020 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 580,
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUSH
REGISTERED
NOT APPROVED FOR CONSTRUCTION
INDIANA
PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

PRIMARY PLAT (2 OF 2)

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C1.22

Drawing name: K:\IND_LDEV\170194000_CollerettInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\Primary Plat\PrimaryPlat.dwg 3 Oct 13, 2020 4:33pm by: Connor.Strege
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PRELIMINARY ENGINEERING PLANS

POCK FARM INFRASTRUCTURE

PHASE 1

STREET ADDRESS TBD
ZIONSVILLE, INDIANA 46077

Indiana Utilities Protection Service
Call 811
before you dig

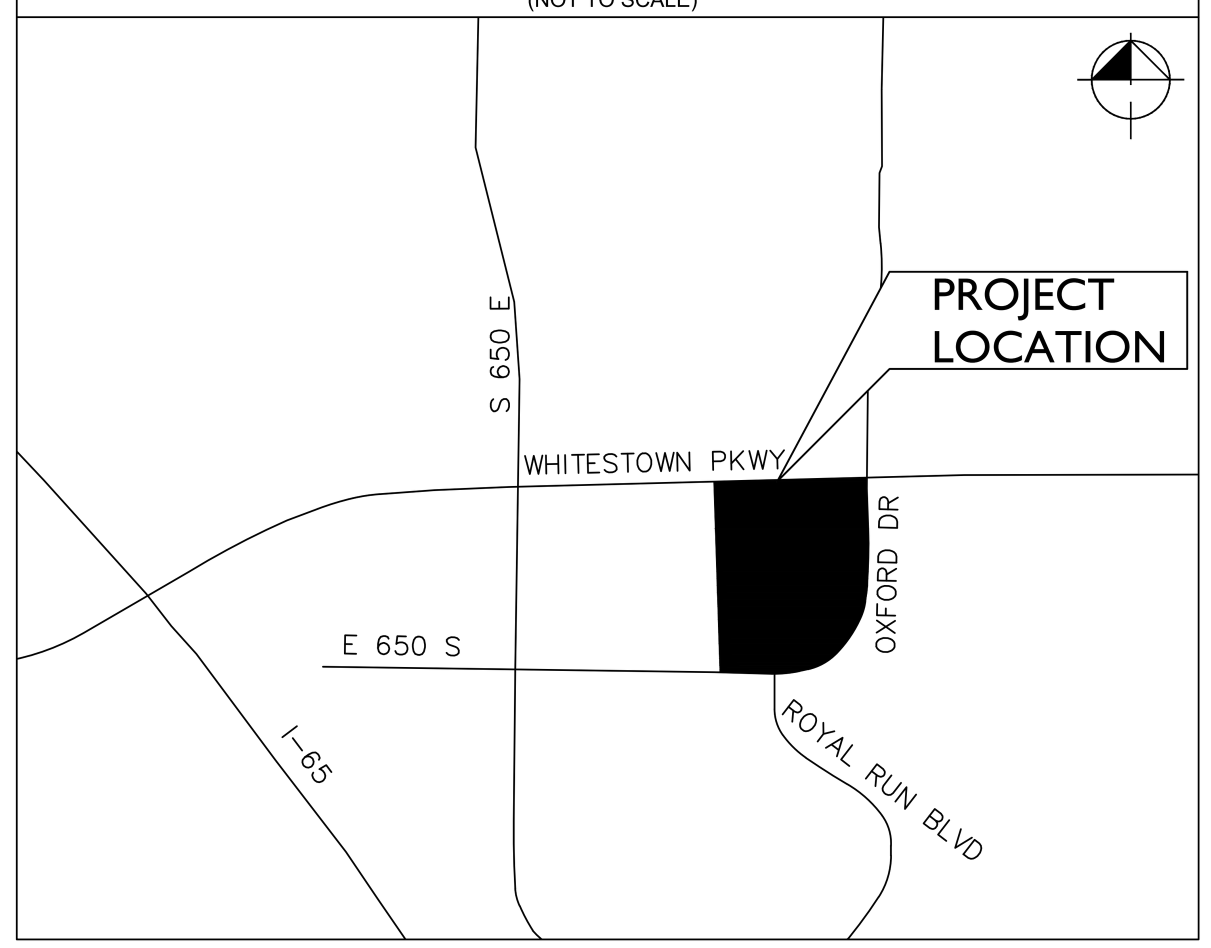
UTILITY AND GOVERNING AGENCY CONTACTS

SERVICE / JURISDICTION	COMPANY / DEPT.	ADDRESS	PHONE NUMBER	CONTACT
PLANNING AND ECONOMIC DEVELOPMENT	TOWN OF ZIONSVILLE	1100 W. OAK STREET ZIONSVILLE, INDIANA 46077	(317) 873-8247	JANICE STEVANOVIC
SANITARY SEWER SERVICE	WHITESTOWN MUNICIPLE UTILITIES	6210 VETERANS DRIVE, WHITESTOWN, IN 46075	(317) 733-8584	DANNY POWERS
STORM SEWER SERVICE	TOWN OF ZIONSVILLE STREET AND STORMWATER DEPARTMENT	1075 PARKWAY DRIVE ZIONSVILLE, INDIANA 46077	(317) 873-4544	WAYNE DELONG
STORM SEWER SERVICE	BOONE COUNTY SURVEYOR'S OFFICE	116 W WASHINGTON STREET #102, LEBANON, IN 46052	(765) 483-4444	CAROL CUNNINGHAM
WATER SERVICE	WHITESTOWN MUNICIPLE UTILITIES	6210 VETERANS DRIVE, WHITESTOWN, IN 46075	(317) 733-8584	DANNY POWERS
POWER COMPANY	DUKE ENERGY CORPORATION	1000 E. MAIN STREET PLAINFIELD, INDIANA 46168	(800) 521-2232	
POWER COMPANY	INDIANAPOLIS POWER & LIGHTING	1230 WEST MORRIS STREET INDIANAPOLIS, INDIANA 46221	(317) 261-4826	DAN FLECK, PE
NATURAL GAS COMPANY	VECTREN CORPORATION		(317) 776-5533 (317) 776-5574	JOE BARCUS SHAWN WILLIAMS
TELEPHONE	AT&T	240 N. MERIDIAN STREET INDIANAPOLIS, INDIANA 46204	(317) 252-4275	

PROJECT TEAM

ROLE	COMPANY	ADDRESS	PHONE NUMBER	CONTACT
DEVELOPER/OWNER	POCK FAMILY FARMS, LLC	2025 N WABASH AVE. KOKOMO, IN 46901	(317) 213-6708	JOHN DEMAREE
CIVIL ENGINEER	KIMLEY-HORN & ASSOCIATES, INC.	250 E. 96TH ST., STE 580, INDIANAPOLIS, IN 46240	(317) 218-9560	GREG RIPPLE, PE
LAND SURVEYOR	V3	494 GRADLE DR. CARMEL, IN 46032	(317) 844-3333	BRIAN RISMILLER, PS

LOCATION MAP
(NOT TO SCALE)



BOONE COUNTY

CONSTRUCTION OF A ±1,070 LF & A ±370 LF PRIVATE DRIVE AND MASS GRADING OF A ±25.07 AC PROJECT IN SECTION 6 OF T17N, R2E IN THE TOWN OF ZIONSVILLE, BOONE COUNTY, INDIANA

SHEET LIST TABLE

Sheet Number	Sheet Title
C0.0	COVER SHEET
1 OF 5	ALTA SURVEY
2 OF 5	ALTA SURVEY
3 OF 5	ALTA SURVEY
4 OF 5	ALTA SURVEY
5 OF 5	ALTA SURVEY
C1.0	GENERAL SPECIFICATIONS
C1.1	GENERAL NOTES
C1.20	OVERALL PRIMARY PLAT
C1.21	PRIMARY PLAT (1 OF 2)
C1.22	PRIMARY PLAT (2 OF 2)
C2.0	TYPICAL CROSS SECTIONS
C2.1	GEOMETRIC TIE-UP PLAN
C3.0	EXISTING CONDITIONS AND DEMO PLAN
C4.0	OVERALL EROSION CONTROL PLAN
C4.1	EROSION CONTROL PLAN
C4.2	EROSION CONTROL PLAN
C4.3	EROSION CONTROL PLAN
C4.4	EROSION CONTROL PLAN
C4.5	EROSION CONTROL DETAILS
C4.6	SWPPP
C5.0	OVERALL GRADING AND DRAINAGE PLAN
C5.1	INTERSECTION GRADING PLAN
C5.2	ROAD PLAN AND PROFILES
C5.3	ROAD PLAN AND PROFILES
C5.4	ROAD PLAN AND PROFILES
C6.0	OVERALL UTILITY PLAN
C6.1	UTILITY PLAN
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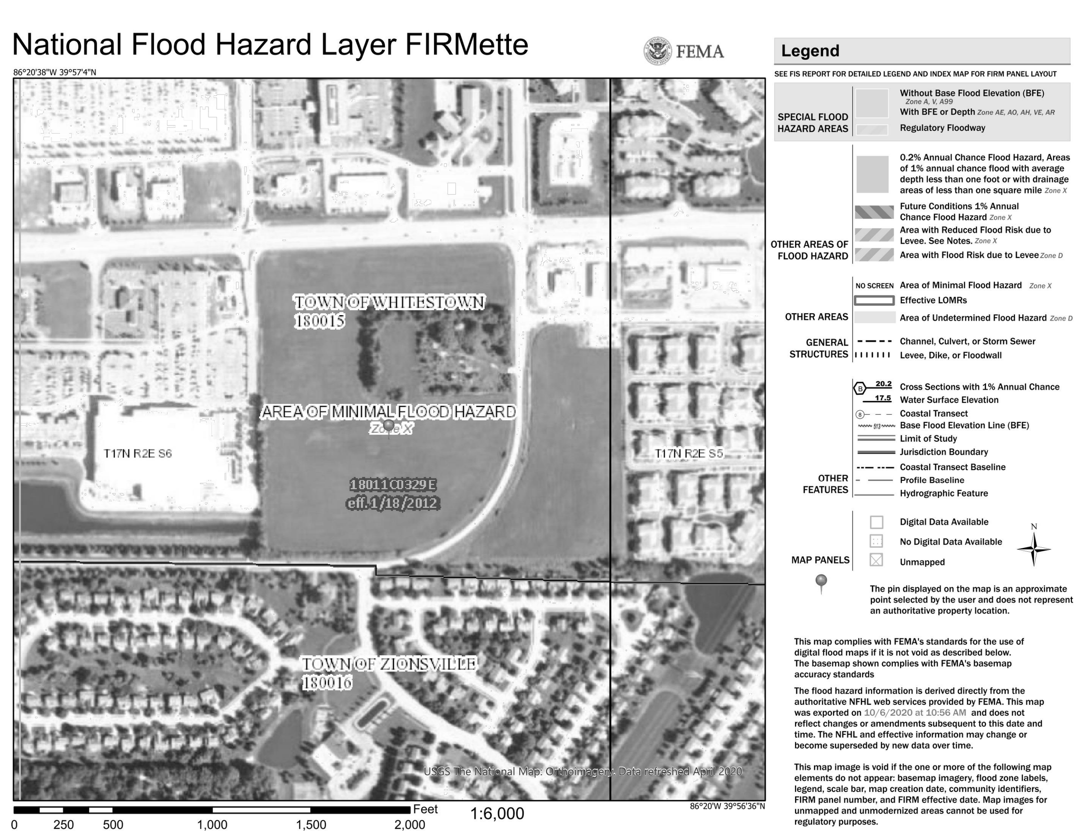
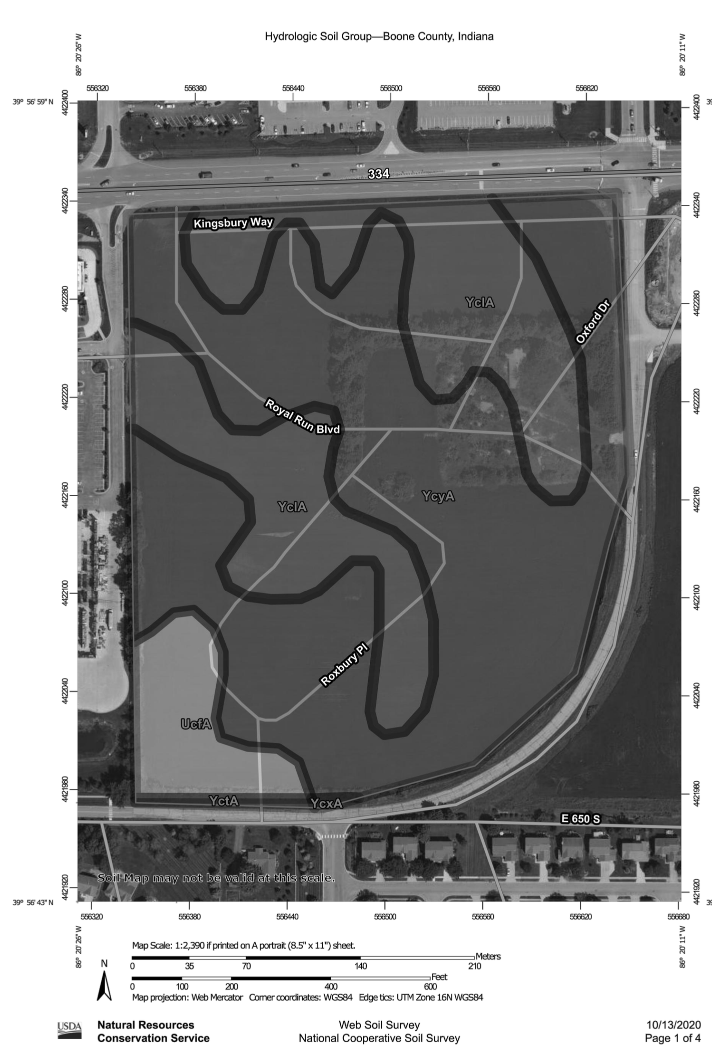
C6.3	UTILITY PLAN
C6.4	UTILITY PLAN
C6.5	UTILITY PROFILES
C6.6	UTILITY PROFILES
C6.7	UTILITY PROFILES
C6.8	UTILITY PROFILES
C6.9	UTILITY PROFILES
C6.10	UTILITY PROFILES
C7.0	CONSTRUCTION DETAILS
C7.1	CONSTRUCTION DETAILS
C7.2	CONSTRUCTION DETAILS
C7.3	CONSTRUCTION DETAILS





LEGAL DESCRIPTION

LAND DESCRIPTIONS (from title commitment)

A part of the Northeast quarter of Section 6, Township 17 North, Range 2 East, in Boone County, Indiana, more particularly described as follows:

Beginning at a point on the South line of aforesaid quarter section 1361.10 feet West of the Southeast corner thereof, said point being in an existing fence line projected Southwardly, run thence Northwardly deflecting right from the aforesaid South line 88 degrees 49 minutes 30 seconds along and with said existing fence line 1256.74 feet to a point; thence Eastwardly deflecting right 91 degrees 10 minutes 30 seconds a distance of 1332.05 feet to a point in the center line of North 96th Road (formerly the original State Road 334), said point being 36.55 feet West of the East line of the aforesaid Northeast quarter; run thence Southwestwardly and Southwardly on a 10 degree curve to the left along and with the centerline of said North 96th Road (formerly the original State Road 334) a distance of 636.50 feet to the p.c. of said curve; thence continue Southwardly tangent to the last above described curve at the last above described point along the center line of said road 152.80 feet; thence Southwardly and Southwestwardly along a 10 degree curve to the right along the center line of said road 911.10 feet to the p.c. of said curve, said point being also on the South line of the aforesaid quarter section; thence Westwardly along and with said South line and on the center line of aforesaid road 429.00 feet to the Place of Beginning. Containing 28.641 acres, more or less.

EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded September 5, 2006 as Instrument No. 200600009673, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof and the Point of Beginning of this description; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point, (the following 2 courses are along the East line of said R/W Exhibit drawing and the Northerly extension thereof); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet to the point on a non-tangent curve to the left, the radius point of which bears South 01 degrees 37 minutes 33 seconds East 46945.00 feet; thence along said curve to the left an arc distance of 565.57 feet to the point of tangency which bears North 02 degrees 18 minutes 58 seconds West 46945.00 feet from said radius point; thence South 87 degrees 40 minutes 59 seconds West 382.64 feet to a point on the West line of said Instrument No. 9609811; thence North 00 degrees 34 minutes 52 seconds West 54.05 feet to the Point of Beginning. Containing 1.05 acres, more or less.

AND EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded March 7, 2007 as Instrument No. 200700002428, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point and is the Point of Beginning of this description; (the following 5 courses are along the East, North and Westerly lines of said R/W Exhibit drawing); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet; 3) thence South 46 degrees 07 minutes 24 seconds East 36.54 feet; 4) thence South 00 degrees 31 minutes 22 seconds East 486.43 feet; 5) thence North 89 degrees 28 minutes 38 seconds East 39.85 feet to a point on a non-tangent curve to the right, the radius of which bears North 89 degrees 28 minutes 38 seconds East 572.963 feet; thence Northeasterly along said curve an arc distance of 252.78 feet to the Point of Beginning. Containing 0.64 acres, more or less.

No.	REVISIONS	DATE	BY

Kimley-Horn
250 EAST 96TH STREET, SUITE 580, INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RIPPLE, REGISTERED PROFESSIONAL ENGINEER, STATE OF INDIANA
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

COVER SHEET

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C0.0

Drawing name: K:\IND_LDEV\170194000_ColliersInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C0.0-Title Sheet.dwg COVER SHEET Oct 13, 2020 1:24pm by: Eric.Fiacable

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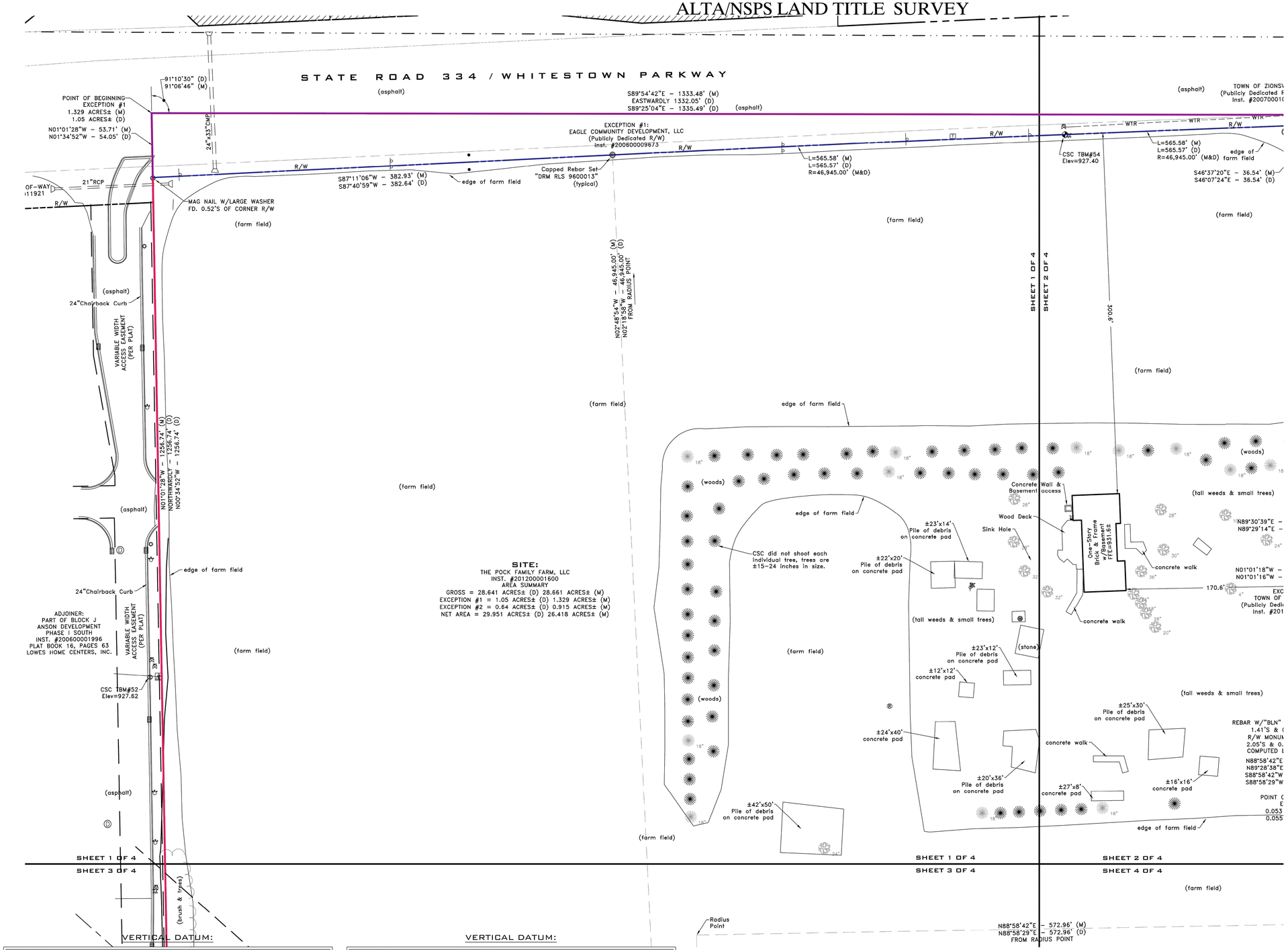
ALTA/NSPS LAND TITLE SURVEY

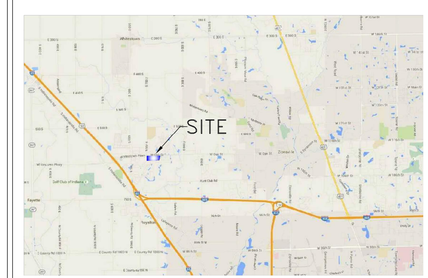


LEGEND:

	DESCRIPTION:
	SIGN / TWO POST SIGN
	WATER VALVE
	FIRE HYDRANT
	WATER METER
	GAS METER
	GAS VALVE
	CLEAN-OUT
	ELECTRIC METER BOX
	ELECTRIC TRANSFORMER
	ELECTRIC PEDESTAL
	GUARD POST
	AIR CONDITIONER UNIT
	LIGHT POLE ROUND
	REBAR SET/FOUND
	FLAT GRATE INLET
	COMBINATION POLE
	TELEPHONE PEDESTAL
	WOODEN LIGHT POLE
	LIGHT POLE SQUARE
12"	CONIFEROUS TREE & SIZE
36"	DECIDUOUS TREE & SIZE
	BUSH
	DRAINAGE MANHOLE
	SANITARY MANHOLE
	CURB INLET
	GROUND ACCENT LIGHT
	GUY WIRE
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

VICINITY MAP

NOT TO SCALE



VERTICAL DATUM:

NGS BM Z 79 1946 ELEV 904.26 (NAVD 88)

A DISK STAMPED Z 79 1946 ON THE EAST END OF A CONCRETE WING WALL ON THE SOUTH SIDE OF STATE ROAD 334, ALSO ±200 FEET EAST OF BLACKSTONE BOULEVARD.

CSC TBM #1 ELEV 918.60

CUT SQUARE ON THE SOUTHWEST CORNER OF CONCRETE LIFT STATION PAD NEAR THE NORTHEAST CORNER OF A WHITESTOWN UTILITY OFFICE BUILDING ON THE SOUTH SIDE OF 334 JUST EAST OF MAPLE GROVE BLVD

CSC TBM #54 ELEV 927.40

A CUT "X" ON THE WEST MOST BONNET BOLT OF FIRE HYDRANT ON THE SOUTH SIDE OF WHITESTOWN PARKWAY, ±258 FEET WEST OF CO. RD. 700 WEST (AKA OXFORD DR.).

VERTICAL DATUM:

CSC TBM #52 ELEV 927.62

A CUT "X" FOUND ON THE EASTERN CURB LINE OF THE EXISTING LOWES PARKING LOT, ±475 FEET SOUTH OF WHITESTOWN PARKWAY, ALSO ±8 FEET WEST OF LARGE ELECTRIC TRANSFORMER.

CSC TBM #2 ELEV 923.56

A CUT "X" SET ON THE EAST CURB LINE OF THE INTERSECTION OF ROYAL RUN BLVD AND EAST COUNTY ROAD 650 SOUTH/SOUTH COUNTY ROAD 700 EAST, ALSO ±35.5 FEET EAST FROM THE CENTER OF THE CENTERLINE OF ROYAL RUN BLVD & ±19.5 FEET SOUTH OF THE CENTER OF THE AFOREMENTIONED COUNTY ROAD(S).

CSC TBM #6 ELEV 922.39

A MAG-NAIL w/NPS WASHER LOCATED NEAR THE CENTERLINE OF A CONCRETE WALK, LOCATED ±406 FEET EAST OF THE CENTERLINE OF OF COUNTY ROAD 700 WEST (AKA OXFORD DR.) AND ±27 FEET SOUTH OF THE CENTERLINE OF GROVE PASS.

40 0 20 40

(IN FEET)
1 inch = 40 ft.

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.

PREPARED FOR:

INNOVATIVE ENGINEERING, INC.
3961 PERRY BLVD
WHITESTOWN, INDIANA 46075

PREPARED BY:

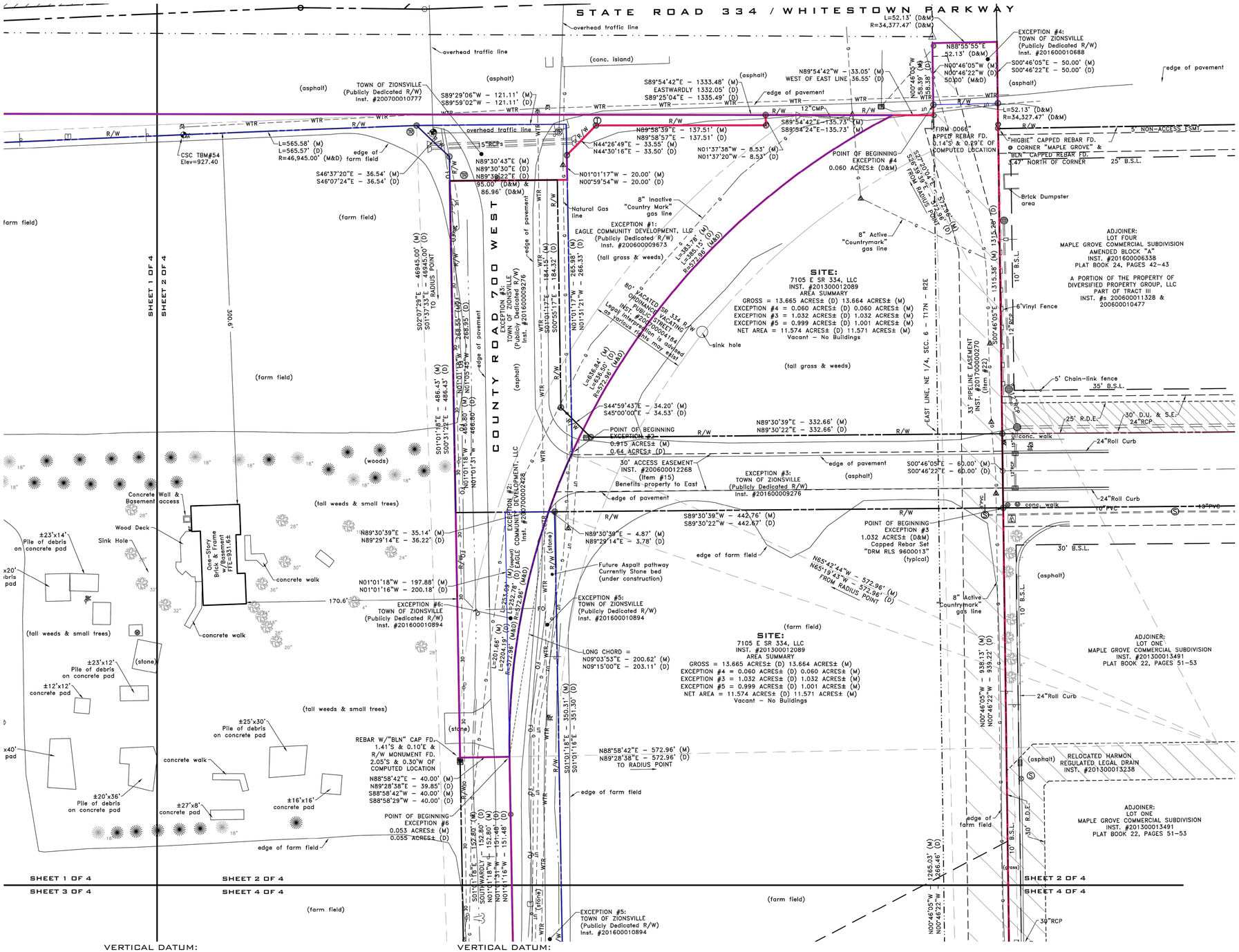
CENTRAL STATES CONSULTING, LLC
23-B NORTH GREEN STREET
BROWNSBURG, INDIANA 46112
PHONE: 317-858-8662 FAX: 317-858-8672

CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND
TITLE SURVEY
POCK FARMS
ZIONSVILLE, INDIANA

DATE:	04-05-2018	PROJECT NUMBER	18-016
DWN. BY:	RJM		
CHKD. BY:	DRM		
SCALE:	1" = 40'	SHEET 1 OF 5	

ALTA/NSPS LAND TITLE SURVEY



LEGEND:

	DESCRIPTION:
	SIGN / TWO POST SIGN
	WATER VALVE
	FIRE HYDRANT
	WATER METER
	GAS METER
	GAS VALVE
	CLEAN-OUT
	ELECTRIC METER BOX
	ELECTRIC TRANSFORMER
	ELECTRIC PEDESTAL
	GUARD POST
	AIR CONDITIONER UNIT
	LIGHT POLE ROUND
	REBAR SET/FOUND
	FLAT GRATE INLET
	COMBINATION POLE
	TELEPHONE PEDESTAL
	WOODEN LIGHT POLE
	LIGHT POLE SQUARE
12"	CONIFEROUS TREE & SIZE
36"	DECIDUOUS TREE & SIZE
	BUSH
	DRAINAGE MANHOLE
	SANITARY MANHOLE
	CURB INLET
	GROUND ACCENT LIGHT
	GUY WIRE
WTR	UNDG. WATER LINE
G	UNDG. GAS LINE
UT	UNDG. TELEPHONE LINE
UE	UNDG. ELECTRIC LINE
OCT	OVERHEAD ELE. & TEL
OETC	OVERHEAD ELE TEL & CAB
OE	OVERHEAD ELECTRIC
VCP	vitrified clay pipe
RCP	reinforced concrete pipe
PVC	polyethylene coated pipe

VICINITY MAP

NOT TO SCALE

PREPARED FOR:

INNOVATIVE ENGINEERING, INC.
3961 PERRY BLVD
WHITESTOWN, INDIANA 46075

PREPARED BY:

CENTRAL STATES CONSULTING, LLC
23-B NORTH GREEN STREET
BROWNSBURG, INDIANA 46112
PHONE: 317-858-8662 FAX: 317-858-8672

CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND TITLE SURVEY
POCK FARMS
ZIONSVILLE, INDIANA

DATE:	04-05-2018
DWN. BY:	RJM
CHKD. BY:	DRM
SCALE:	1" = 40'

PROJECT NUMBER
18-016

SHEET 2 OF 5

VERTICAL DATUM:

NGS Disk Z 79 1946 — ELEV 904.26 (NAVD 88)

A DISK STAMPED Z 79 1946 ON THE EAST END OF A CONCRETE WING WALL ON THE SOUTH SIDE OF 334, ALSO ±200 FEET EAST OF BLACKSTONE BLVD

CSC TBM #1 — ELEV 918.60

CUT SQUARE ON THE SOUTHWEST CORNER OF CONCRETE LIFT STATION PAD NEAR THE NORTHEAST CORNER OF A WHITESTOWN UTILITY OFFICE BUILDING ON THE SOUTH SIDE OF 334 JUST EAST OF MAPLE GROVE BLVD

CSC TBM #54 — ELEV 927.40

A CUT "X" ON THE WEST MOST BONNET BOLT OF FIRE HYDRANT ON THE SOUTH SIDE OF WHITESTOWN PARKWAY, ±258 FEET WEST OF CO. RD. 700 WEST (AKA OXFORD DR.).

VERTICAL DATUM:

CSC TBM #52 — ELEV 927.62

A CUT "X" FOUND ON THE EASTERN CURB LINE OF THE EXISTING LOWES PARKING LOT, ±475 FEET SOUTH OF WHITESTOWN PARKWAY, ALSO ±8 FEET WEST OF LARGE ELECTRIC TRANSFORMER.

CSC TBM #2 — ELEV 923.56

A CUT "X" SET ON THE EAST CURB LINE OF THE INTERSECTION OF ROYAL RUN BLVD AND EAST COUNTY ROAD 650 SOUTH/SOUTH COUNTY ROAD 700 EAST, ALSO ±35.5 FEET EAST FROM THE CENTER OF THE CENTERLINE OF ROYAL RUN BLVD & ±19.5 FEET SOUTH OF THE CENTER OF THE AFOREMENTIONED COUNTY ROAD(S).

CSC TBM #6 — ELEV 922.39

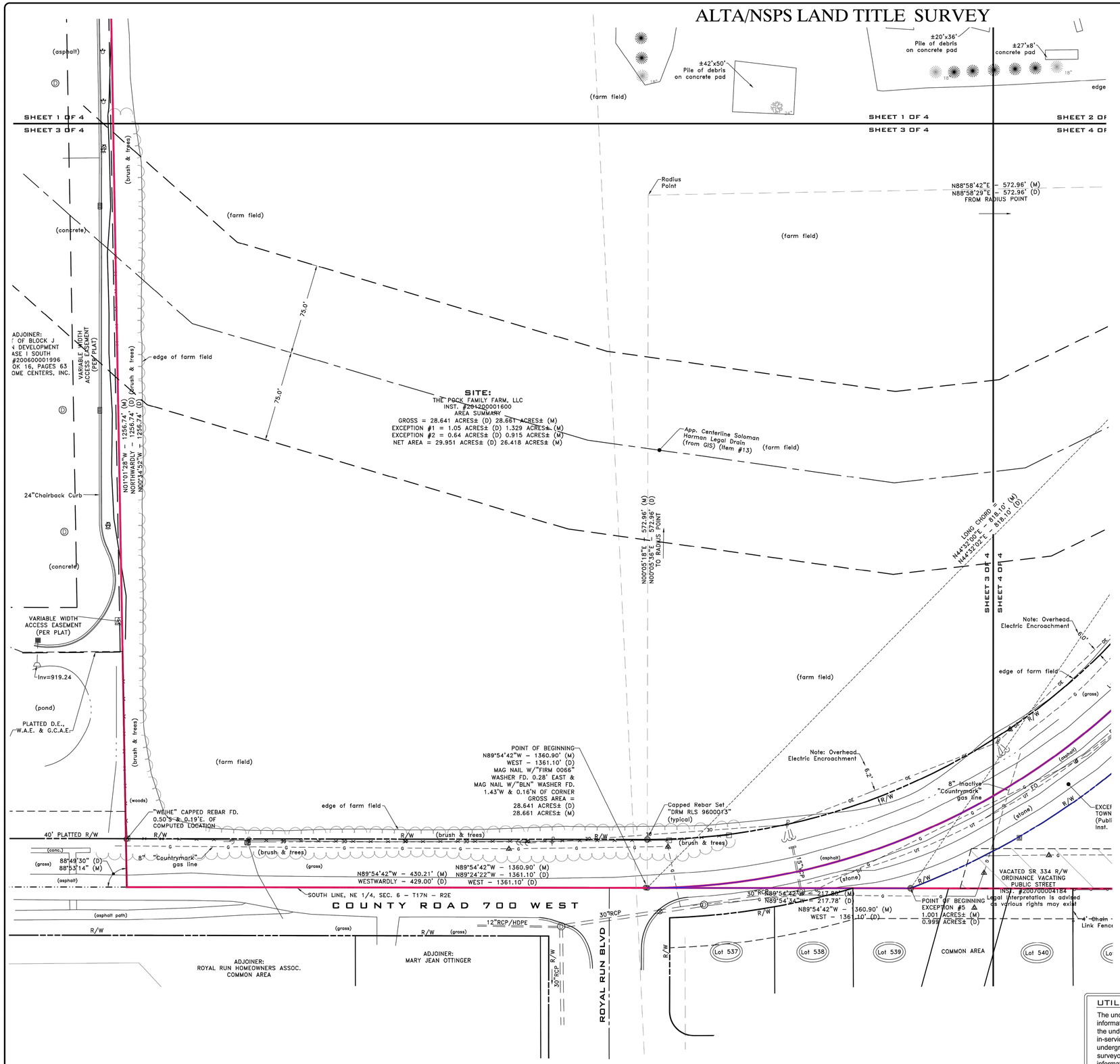
A MAG-NAIL w/NPS WASHER LOCATED NEAR THE CENTERLINE OF A CONCRETE WALK, LOCATED ±406 FEET EAST OF THE CENTERLINE OF OF COUNTY ROAD 700 WEST (AKA OXFORD DR.) AND ±27 FEET SOUTH OF THE CENTERLINE OF GROVE PASS.

40 0 20 40
(IN FEET)
1 inch = 40ft.

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.

ALTA/NSPS LAND TITLE SURVEY



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NGS Disk Z 79 1946	ELEV 904.26 (NAVD 88)
A DISK STAMPED Z 79 1946 ON THE EAST END OF A CONCRETE WING WALL ON THE SOUTH SIDE OF 334, ALSO ±200 FEET EAST OF BLACKSTONE BLVD	
CSC TBM #1	ELEV 918.60
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(IN FEET)
1 inch = 40 ft.

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	DESCRIPTION:
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	GAS METER
	GAS VALVE
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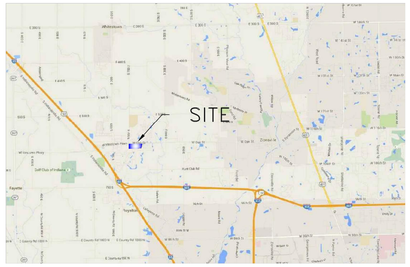

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WHITESTOWN, INDIANA 46075

PREPARED BY:
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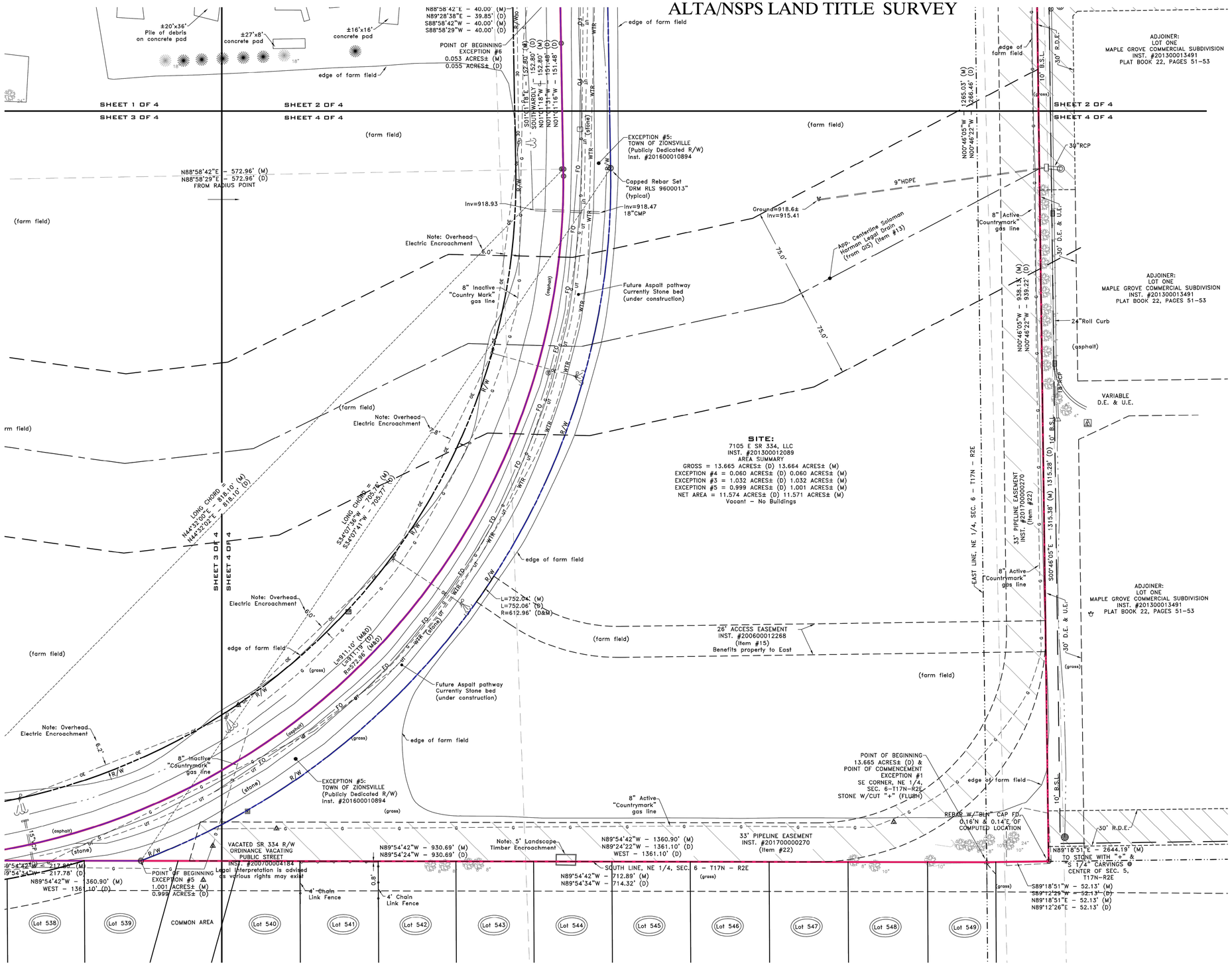
BROWNSBURG, INDIANA 46112
PHONE: 317-858-8662 FAX: 317-858-8672

CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND TITLE SURVEY
POCK FARMS
ZIONSVILLE, INDIANA

DATE:	04-05-2018	PROJECT NUMBER 18-016
DWN. BY:	RJM	
CHKD. BY:	DRM	
SCALE:	1" = 40'	SHEET 3 OF 5

ALTA/NSPS LAND TITLE SURVEY



LEGEND:

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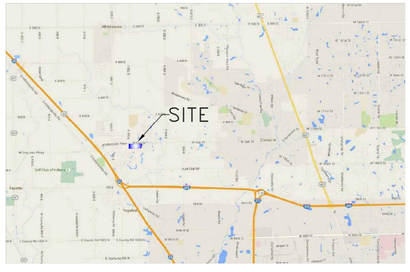

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3961 PERRY BLVD
WHITESTOWN, INDIANA 46075

PREPARED BY:
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CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND TITLE SURVEY
POCK FARMS
ZIONSVILLE, INDIANA

DATE: 04-05-2018	PROJECT NUMBER 18-016
DWN. BY: RJM	
CHKD. BY: DRM	
SCALE: 1" = 40'	SHEET 4 OF 5

ALTA/NSPS LAND TITLE SURVEY

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 (Relative Positional Accuracy)

A.) This is a retracement survey two parcels of land and six exceptions, all being a portion of the South Half of the Northeast Quarter of Section 6 and the South Half of the Northwest Quarter of Section 5, all in Township 17 North, Range 1 East of the Second Principal Meridian, Eagle Township, Boone County, Indiana. All of the located and measured section lines of said Quarters were used to control the lines of the surveyed parcels. The Center of Section 6 was a PK Nail The West, Southwest, South, Southeast and Northeast Corners of said Section 27 are Harrison Monuments at the surface. There is an unreferenced PK nail at the center of said Section 27. The uncertainty of this point, in my opinion, is 0.2 feet. There is a stone with a cut cross at the East Corner of Section 6 and another stone at the Center of Section 5. The uncertainty of the stone is negligible. There is a Harrison Monument at the Northeast Corner of the Northeast Quarter of Section 6. This monument was set by the Boone County Surveyor's Office and the uncertainty of this corner is negligible There are several located and noted centerline monuments along County Road 700 East. The western adjoining and platted property (Anson Development - Phase I South) is tied to the Southeast Corner of the Northeast Quarter of Section 6. The plat calls this corner a capped rebar, actually, a stone with a cut cross

B.) Record descriptions of the adjoining tracts were obtained from Fidelity National Title Insurance Company and the Boone County Recorder's Office (latest research date April 5, 2018) 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 are made as a result of this retracement survey:

1.) There are no gaps or overlaps in deed between this site and its adjoiners. The western adjoining property was formerly described as being "to a fence line". This fence no longer exists. The western line was set at the proportionate platted distance with the western adjoiner. This method works well with the evidence found along this line.
2.) The eastern adjoining property, Maple Grove Commercial Subdivision, ignored the stone with a cut cross at the center of Section 5. The stone calculates to be about four feet south of the platted line at the corner. This accounts for the slight differences along the eastern line of this site.
3.) The various descriptions for the tangent portion of County Road 700 East have two record distances, 152.80 feet versus 151.48 feet, a discrepancy of 1.32 feet.

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

1.) The fences around this site are as shown and dimensioned herein.
2.) There is a small garden area made from landscape timbers along the southern line of the eastern parcel encroaching upon this site by as much as five (5) feet as shown herein.
3.) The overhead electric lines along the western curved right-of-way of County Road 700 East encroach upon the western parcel by as much as 7.8 feet as shown herein.

D) The Relative Positional Accuracy (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: as much as 1.43 feet (centerline);

Due to discrepancies in the record description: as much as 1.32 feet;

Due to inconsistencies in lines of occupation: as much as 7.8 feet (electric line);

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

Mailing Address of Site: 6125 South 700 East, Zionsville, Indiana 46077 and
7105 East State Road 334, Zionsville, Indiana 46077

Basis of Bearing System: The bearing of the South Line of the Northeast Quarter of Section 6, Township 17 North, Range 1 East was assumed to be North 89 degrees 54 minutes 42 seconds West per GPS observations taken on the opposing section corners.

NOTE: This plat of an ALTA/NSPS Land Title Survey represents the conditions at the date of latest field activity.

Date of Latest Field Activity: March 30, 2018

Note Regarding Table A - Item 9: There are no marked parking stripes or spaces on this site at the time of the survey.

Note Regarding Table A - Item 10(a) and 10(b): There are no party walls on this site, therefore, this item is not addressed.

Note Regarding Table A - Item 14: County Road 700 East intersects Whitestown Parkway (State Road 334) easterly of the center of this site as shown herein.

Note Regarding Table A - Item 16: There is no ongoing construction in, on and around this site at the time of this survey.

Note Regarding Table A - Item 17: I have no intimate knowledge of any changes in street right-of-way lines either completed or proposed, and available from the controlling jurisdiction, save and except, the fact that this site is planned to be a platted commercial subdivision with platted rights-of-way.

Note Regarding Table A - Item 18: I observed no field delineation of wetlands conducted by a qualified specialist during the course of this survey.

This plat of an ALTA/NSPS Land Title Survey was performed referencing two commitments for title insurance issued by Fidelity National Title Insurance Company, Commitment Numbers 101800092 and 101800093, both with Effective Dates of February 27, 2018 at 8:00 A.M. The following items are keyed to Schedule B - Section II of said commitments for title insurance:

Commitment No. 101800093 (West Parcel)

Items 1 through 11) No comment.

Item 12) See ORDINANCE 2012-19 AS AMENDED, recorded January 3, 2014 as Instrument No. 20140000153 for non-plottable items pertinent to this site.

Commitment No. 101800092 (East Parcel)

Items 1 through 12) No comment.

Item 13) The Soloman Harman Legal Drain's approximate location is shown on the Boone County, Indiana GIS Map. The easement as shown herein is an approximation of the GIS.

Item 14) The RIGHT OF WAY GRANT recorded February 25, 1963 in Deed Record 173, page 188 is for what is now County Road 700 East. It is eight (80) feet total width, as shown herein.

Item 15) See QUITCLAIM DEED dated October 30, 2006 and recorded November 9, 2006 as Instrument No. 200600012268 for the creation of two Access Easement benefitting the eastern adjoining properties. The northern (=thirty-foot-wide easement is now completely encompassed by the existing right-of-way.

Item 16) See DEED RESTRICTIONS AND WRITTEN COMMITMENTS CONCERNING THE USE OR DEVELOPMENT OF REAL ESTATE MADE IN CONNECTION WITH A ZONE MAP CHANGE dated February 16, 2007 and recorded February 27, 2007 as Instrument No. 200700002064 for non-plottable items pertinent to this site.

Item 16) See ORDINANCE No. 2007-06 recorded April 14, 2007 as Instrument No. 200700004182 for a rezoning of part of the eastern portion of this site to GB (General Business Zoning Classification).

Item 19) See ORDINANCE No. 2009-05 recorded March 16, 2009 as Instrument No. 200900002673 for non-plottable items pertinent to this site.

Items 20 and 21) No comment.

Item 21) See RIGHT OF WAY AND EASEMENT in favor of Countrymark Refining and Logistics, LLC dated September 7, 2016 and recorded January 9, 2017 as Instrument No. 201700000270 for the creation of a 33-foot-wide easement along the southern and eastern portions of this site as shown herein.

NOTE: According to the FEDERAL EMERGENCY MANAGEMENT AGENCY, Flood Insurance Rate Map Number 18011C0329E, with the effective date of January 18, 2012 this site lies entirely within Zone "X.

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: The Pock Family Farm, LLC, an Indiana limited liability company; 7105 E SR 334, LLC, an Indiana limited liability company; and Fidelity National 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 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 7(a), 8, 9, 10, 13, 14, 16, 17, 18, and 20 of Table A thereof. The field work was completed on March 30, 2018.

Date: April 5, 2018

Donald R. Mosson

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

LAND DESCRIPTIONS (from title commitment)

A part of the Northeast quarter of Section 6, Township 17 North, Range 2 East, in Boone County, Indiana, more particularly described as follows:

Beginning at a point on the South line of aforesaid quarter section 1361.10 feet West of the Southeast corner thereof, said point being in an existing fence line projected Southwardly, run thence Northwardly deflecting right from the aforesaid South line 88 degrees 49 minutes 30 seconds along and with said existing fence line 1256.74 feet to a point; thence Eastwardly deflecting right 91 degrees 10 minutes 30 seconds a distance of 1332.05 feet to a point in the center line of North 96th Road (formerly the original State Road 334), said point being 36.55 feet West of the East line of the aforesaid Northeast quarter; run thence Southwestwardly and Southwardly on a 10 degree curve to the left along and with the centerline of said North 96th Road (formerly the original State Road 334) a distance of 636.50 feet to the p.c. of said curve; thence continue Southwardly tangent to the last above described curve at the last above described point along the center line of said road 152.80 feet; thence Southwardly and Southwestwardly along a 10 degree curve to the right along the center line of said road 911.10 feet to the p.c. of said curve, said point being also on the South line of the aforesaid quarter section; thence Westwardly along and with said South line and on the center line of aforesaid road 429.00 feet to the Place of Beginning. Containing 28.641 acres, more or less.

EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded September 5, 2006 as Instrument No. 200600009673, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof and the Point of Beginning of this description; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point, (the following 2 courses are along the East line of said R/W Exhibit drawing and the Northerly extension thereof); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet to the point on a non-tangent curve to the left, the radius point of which bears South 01 degrees 37 minutes 33 seconds East 46945.00 feet; thence along said curve to the left an arc distance of 565.57 feet to the point of tangency which bears North 02 degrees 18 minutes 58 seconds West 46945.00 feet from said radius point; thence South 87 degrees 40 minutes 59 seconds West 382.64 feet to a point on the West line of said Instrument No. 9609811; thence North 00 degrees 34 minutes 52 seconds West 54.05 feet to the Point of Beginning. Containing 1.05 acres, more or less.

AND EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded March 7, 2007 as Instrument No. 200700002428, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point and is the Point of Beginning of this description; (the following 5 courses are along the East, North and Westerly lines of said R/W Exhibit drawing); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet; 3) thence South 46 degrees 07 minutes 24 seconds East 36.54 feet; 4) thence South 00 degrees 31 minutes 22 seconds East 486.43 feet; 5) thence North 89 degrees 28 minutes 38 seconds East 39.85 feet to a point on a non-tangent curve to the right, the radius of which bears North 89 degrees 28 minutes 38 seconds East 572.963 feet; thence Northeasterly along said curve an arc distance of 252.78 feet to the Point of Beginning. Containing 0.64 acres, more or less.

ALSO:

A part of the Northeast Quarter of Section 6 and a part of the Northwest Quarter of Section 5, both in Township 17 North, Range 2 East, of the Second Principal Meridian, in Eagle Township, Boone County, Indiana, more particularly described as follows:

Beginning at the Southeast corner of said Northeast Quarter Section; thence North 89 degrees 54 minutes 24 seconds West (assumed bearing) along the South line of said quarter section 930.69 feet to a point on a non-tangent curve on the center line of Old SR 334 per Indiana State Highway Commission Project No. WPSO & MS-556 Sec. A (dated 1936), said curve having a radius of 572.96 feet, the radius point of which bears North 00 degrees 05 minutes 36 seconds East; thence Northeasterly along said curve and said centerline an arc distance of 911.19 feet to the point of tangency thereof, said point bearing North 88 degrees 58 minutes 29 seconds East from the radius point; thence continuing on said center line North 01 degree 01 minute 31 seconds West 151.48 feet to the Southeast corner of a tract of land described in Instrument No. 200700002428 in the Office of the Recorder of said County; thence South 88 degrees 58 minutes 29 seconds West along the South line of said tract of land 40.00 feet (39.85 per said description); thence North 01 degree 01 minute 31 seconds West along the West line of said tract of land 468.08 feet to the Southwest corner of a Grant of Right-of-Way described in Instrument. No. 200700010777 in said Recorder's Office; thence along the boundary of said Grant the following three (3) courses: 1) North 89 degrees 30 minutes 30 seconds East 95.00 feet; 2) thence North 00 degrees 59 minutes 54 seconds West 20.00 feet; 3) thence North 44 degrees 30 minutes 16 seconds East 33.50 feet to the South right-of-way line of SR 334 described in Instrument. No. 200600009674 in said Recorder's Office; thence North 89 degrees 58 minutes 57 seconds East along said right-of-way line 137.51 feet to the West right-of-way line at the Intersection of Old SR 334 (also known as CR 700 East) and existing SR 334; thence North 01 degree 37 minutes 20 seconds West along said line and its extension 8.53 feet to the North line extended of a tract of land described in Instrument. No. 200600013086 in said Recorder's Office; thence South 89 degrees 54 minutes 24 seconds East along said line extended and along said line 135.73 feet to a corner of said tract of land the West line of said Northwest Quarter Section; thence along the boundary of said tract of land the following four (4) courses: 1) North 00 degrees 46 minutes 05 seconds West on said West line 58.38 feet; 2) thence North 88 degrees 55 minutes 55 seconds East 52.13 feet; 3) thence parallel with the West line of said Northwest Quarter Section South 00 degrees 46 minutes 05 seconds East 1315.28 feet to the South line of said quarter section; 4) thence South 89 degrees 12 minutes 29 seconds West along said South line 52.13 feet to the point of beginning, containing 13.665 acres, more or less.

LESS AND EXCEPT, that portion of the above-described property conveyed to the Town of Zionsville by Dedication and Deed of Right-Of-Way dated September 13, 2016 and recorded September 21, 2016 as Instrument No. 201600009276, described as follows:

A part of the Northeast Quarter of Section 6 and a part of the Northwest Quarter of Section 5, both in Township 17 North, Range 2 East of the Second Principal Meridian, in Eagle Township, Boone County, Indiana, and being a part of the lands of 7105 E SR 334, LLC as described in Instrument Number 201300012089 in the Office of the Recorder of Boone County, more particularly described as follows:

Commencing at the southwest corner of the northwest quarter of said section 5, marked by a rebar, thence North 89 degrees 12 minutes 26 seconds East along the south line of said quarter 52.13 feet; thence North 00 degrees 46 minutes 22 seconds West parallel with the west line of said quarter 939.22 feet to the south right of way line for Grove Pass as shown on the plat for Maple Grove Commercial Subdivision as recorded as Instrument Number 201300013491 in the Office of the Recorder of Boone County, and also being the Point of Beginning; thence South 89 degrees 30 minutes 22 seconds West 442.67 feet along the westerly extension of said Grove Pass to the west line of a tract of land described in Instrument No. 200700002428 in said Recorders Office; thence North 01 degree 05 minutes 45 seconds West 268.95 feet along the west line of said tract to the southwest corner of a grant of Right-Of-Way described in Instrument No. 200700010777 in said Recorders Office; thence North 89 degrees 30 minutes 20 seconds East 86.96 feet along the south line of Instrument No. to the southeast corner of said Instrument No.; thence South 00 degrees 55 minutes 17 seconds East 184.32 feet; thence South 45 degrees 00 minutes 00 seconds East 34.53 feet to the westerly extension of the north Right-of-Way of said Grove Pass; thence North 89 degrees 30 minutes 22 seconds East 332.66 feet along said westerly extension; thence South 00 degrees 46 minutes 22 seconds East 60.00 feet parallel with the west line of said quarter to the Point of Beginning and containing 1.032 acres, more or less.

ALSO LESS AND EXCEPT, that portion of the above-described property conveyed to the Town of Whitestown by Dedication and Deed dated September 13, 2016 and recorded October 24, 2016 as Instrument No. 201600010688, described as follows:

A part of the Northwest Quarter of Section 5, Township 17 North, Range 2 East of the Second Principal Meridian, in Eagle Township, Boone County, Indiana, and being a part of the lands of 7105 E SR 334, LLC as described in Instrument Number 201300012089 in the Office of the Recorder of Boone County, more particularly described as follows:

Commencing at the southwest corner of said quarter, marked by a rebar; proceed thence North 00 degrees 46 minutes 22 seconds West along the west line of said quarter 1266.46 feet to a 5/8 inch diameter rebar with cap stamped "Structurepoint #0094"(hereafter referred to as Structurepoint rebar) marking the Point of Beginning; thence continue North 00 degrees 46 minutes 22 seconds West along said west line 50.00 feet to the centerline of Whitestown Parkway (State Road 334) and the beginning of a non-tangent curve to the right having a radius of 34,377.47 feet, a central angle of 00 degrees 05 minutes 13 seconds, and a radius point that bears South 01 degree 25 minutes 23 seconds East; thence along said curve 52.13 feet to a point that bears North 01 degree 20 minutes 10 seconds West from said radius point; thence South 00 degrees 46 minutes 22 seconds East parallel with the west line of said quarter 50.00 feet to a Structurepoint rebar marking the beginning of a non-tangent curve to the left having a radius of 34,327.47 feet, a central angle of 00 degrees 05 minutes 13 seconds, and a radius point that bears South 01 degree 20 minutes 13 seconds East; thence along said curve 52.13 feet to the Point of Beginning and containing 0.060 acres, more or less.

ALSO LESS AND EXCEPT, those portions of the above-described property conveyed to the Town of Zionsville by Dedication and Deed of Right-Of-Way dated October 14, 2016 and recorded October 31, 2016 as Instrument No. 201600010894, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, Boone County, Indiana, described as follows: Beginning on the south line of said quarter section North 89 degrees 54 minutes 34 seconds West 714.32 feet from the southeast corner of said quarter section; thence North 89 degrees 54 minutes 34 seconds West 217.78 feet along said south line to the center line of C.R. 650 South (Old S.R 334); thence along said center line and along the center line of C.R 700 East Northeasterly 911.10 feet along an arc to the left and having a radius of 572.96 feet and subtended by a long chord having a bearing of North 44 degrees 32 minutes 02 seconds East and a length of 818.10 feet; thence North 1 degree 01 minute 16 seconds West 151.48 feet along said center line to the southeast corner of the tract described in Instrument #200700002428; thence along an eastern line of the tract described in said Instrument #200700002428 Northeasterly 204.19 feet along an arc to the right and having a radius of 572.96 feet and subtended by a long chord having a bearing of North 9 degrees 15 minutes 00 seconds East and a length of 203.11 feet to the south line of the tract described in Instrument #201600009276; thence North 89 degrees 29 minutes 14 seconds East 3.78 feet along said south line; thence South 1 degree 01 minute 16 seconds East 351.30 feet; thence Southwesterly 752.06 feet along an arc to the right and having a radius of 612.96 feet and subtended by a long chord having a bearing of South 34 degrees 07 minutes 41 seconds West and a length of 705.77 feet to the point of beginning and containing 0.999 acres, more or less.

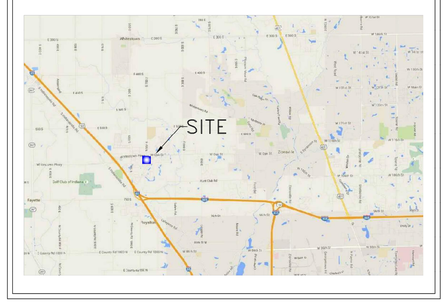
and
A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, Boone County, Indiana, described as follows:

Commencing at the southeast corner of said quarter section; thence North 89 degrees 54 minutes 34 seconds West 932.10 feet (930.69 feet by Instrument #201300012089) along the south line of said quarter section to the center line of C.R. 650 South (Old S.R. 334); thence along said center line and along the center line of C.R. 700 East Northeasterly 911.10 feet (911.19 feet by said Instrument #201300012089) along an arc to the left and having a radius of 572.96 feet and subtended by a long chord having a bearing of North 44 degrees 32 minutes 02 seconds East and a length of 818.10 feet; thence North 1 degree 01 minute 16 seconds West 151.48 feet along said center line to the southeast corner of the tract described in Instrument #20070000242 and the point of beginning of this description: thence North 1 degree 01 minute 16 seconds West 200.18 feet along said center line to a point on the south line of the tract described in Instrument#201600009276; thence North 89 degrees 29 minutes 14 seconds East 36.22 feet along the south line of the tract described in said Instrument #201600009276 to the eastern line of the tract described m said Instrument #20070000242; thence along said eastern line Southwesterly 204.19 feet along an arc to the left and having a radius of 572.96 feet and subtended by a long chord having a bearing of South 9 degrees 15 minutes 00 seconds West and a length of 203.11 feet to the point of beginning and containing 0.055 acres, more or less.

LEGEND:

	DESCRIPTION:
	SIGN / TWO POST SIGN
	WATER VALVE
	FIRE HYDRANT
	WATER METER
	GAS METER
	GAS VALVE
	CLEAN-OUT
	ELECTRIC METER BOX
	ELECTRIC TRANSFORMER
	ELECTRIC PEDESTAL
	GUARD POST
	AIR CONDITIONER UNIT
	LIGHT POLE ROUND
	REBAR SET/FOUND
	FLAT GRATE INLET
	COMBINATION POLE
	TELEPHONE PEDESTAL
	WOODEN LIGHT POLE
	LIGHT POLE SQUARE
12"	CONIFEROUS TREE & SIZE
36"	DECIDUOUS TREE & SIZE
	BUSH
	DRAINAGE MANHOLE
	SANITARY MANHOLE
	CURB INLET
	GROUND ACCENT LIGHT
	GUY WIRE
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

VICINITY MAP
NOT TO SCALE



40 0 20 40
(IN FEET)
1 inch = 40 ft.

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.

PREPARED FOR:
INNOVATIVE ENGINEERING, INC.
3961 PERRY BLVD
WHITESTOWN, INDIANA 46075

PREPARED BY:
CENTRAL STATES CONSULTING, LLC
23-B NORTH GREEN STREET
BROWNSBURG, INDIANA 46112
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CENTRAL STATES CSC CONSULTING, LLC
SURVEYING & LAND PLANNING

ALTA/NSPS LAND TITLE SURVEY
POCK FARMS
ZIONSVILLE, INDIANA

DATE: 04-05-2018	PROJECT NUMBER 18-016
DWN. BY: RJM	
CHKD. BY: DRM	
SCALE: 1" = 40'	SHEET 5 OF 5

Drawing name: K:\IND_LDEV\170194000_CollierInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C1.0-General Specifications.dwg C1.0 Oct 13, 2020 1:25pm by: Eric.Fiacable
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GENERAL NOTES

1. THE MUNICIPALITY REQUIREMENTS AND THE LATEST INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS INCLUDING CHANGES SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS OTHERWISE NOTED. WHEN CONFLICTS ARISE BETWEEN ABOVE LISTED SPECIFICATIONS, THE MORE STRINGENT SHALL TAKE PRECEDENCE.
2. STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND RECURRING SPECIAL PROVISIONS, CONSTRUCTION PLANS, AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED, BUT ARE CONSIDERED A PART OF THIS CONTRACT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL INDIANA UTILITIES PROTECTION SERVICE (811 OR 1.800.362.2764) AND THE MUNICIPALITY FOR UTILITY LOCATIONS.
4. NO CONSTRUCTION PLANS SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION" PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE SURVEYOR'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE/SHE MUST IMMEDIATELY REPORT THEM TO THE SURVEYOR OR ENGINEER BEFORE DOING ANY WORK. OTHERWISE, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS, AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THE CONTRACTOR'S OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.
5. NOTIFICATION OF COMMENCING CONSTRUCTION:
   - 5.1. THE CONTRACTOR SHALL NOTIFY AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY, AS NECESSARY, ALL TESTING AGENCIES, THE MUNICIPALITY, AND THE OWNER SUFFICIENTLY IN ADVANCE OF CONSTRUCTION.
   - 5.2. FAILURE OF THE CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN THE TESTING COMPANIES TO BE UNABLE TO VISIT THE SITE AND PERFORM TESTING WILL CAUSE THE CONTRACTOR TO SUSPEND THE OPERATION TO BE TESTED UNTIL THE TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK SHALL BE BORNE BY THE CONTRACTOR.
6. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL EMERGENCY TRAFFIC, AS DIRECTED BY THE MUNICIPALITY.
7. ALL PROPOSED GRADES SHOWN ON PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS NOTED OTHERWISE.
8. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE SURVEYOR AT THE CONTRACTOR'S EXPENSE.
9. ALL FRAMES AND LIDS FOR STORM AND SANITARY SEWERS, VALVE VAULT COVERS, FIRE HYDRANTS, AND B-BOXES ARE TO BE ADJUSTED TO MEET FINISHED GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR, AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. FINAL GRADES MAY BE DETERMINED BY THE MUNICIPALITY AND MAY VARY FROM PLAN GRADE.
10. ANY EXISTING SIGNS, LIGHT STANDARDS, AND UTILITY POLES THAT INTERFERE WITH CONSTRUCTION OPERATIONS AND ARE NOT NOTED ON THE PLANS FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.
11. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC., SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS REQUIRED FOR SUCH DISPOSAL.
12. ANY FIELD TILES ENCOUNTERED SHALL BE INSPECTED BY THE MUNICIPALITY. THE DRAIN TILE SHALL BE CONNECTED TO THE STORM SEWER SYSTEM AND A RECORD KEPT BY THE CONTRACTOR OF THE LOCATIONS AND TURNED OVER TO THE MUNICIPALITY UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
13. BEFORE ACCEPTANCE, ALL WORK SHALL BE INSPECTED BY THE MUNICIPALITY, AS NECESSARY.
14. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHT-OF-WAYS ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
15. OWNER SHALL OBTAIN EASEMENTS AND APPROVAL OF PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS AND EASEMENTS.
16. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS, AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK.
17. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB PER OSHA REGULATIONS.
18. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES, AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS, LATEST EDITION, AND IN ACCORDANCE WITH THE MUNICIPAL ORDINANCES.
19. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS, AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEANUP, AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.
20. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, AND SURFACE, AND PRIOR TO POURING ANY CONCRETE AFTER FORMS HAVE BEEN SET, AS NECESSARY.
21. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT, AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A PAY ITEM IS LISTED ON THE BID LIST.
22. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.
23. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED, AS PER MUNICIPAL STANDARDS.
24. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN APPROVED LANDSCAPE ARCHITECT, FORESTER, OR ARBORIST AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS/HER OWN EXPENSE. ALL CUTS OVER ONE (1) INCH IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.
25. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND PIPE SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE MERGED INTO THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR STORM SEWERS, WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL, AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND STORM SEWERS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS EXPENSE. NO EXTRA PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR STORM SEWERS CONSTRUCTED AS PART OF THIS PROJECT.
26. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ONTO THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM, IF AVAILABLE. DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR FLUSHING OR USING THE HYDRANT AT THE CONTRACTOR'S OWN EXPENSE. LEAKS IN THE WATER DISTRIBUTION SYSTEM SHALL BE THE RESPONSIBILITY OF THE WATER MAIN CONTRACTOR AND SHALL BE REPAIRED AT HIS EXPENSE.
27. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT LOCATIONS INDICATED BY THE ENGINEER. THE PURPOSE OF THE EROSION CONTROL WILL BE TO MINIMIZE THE AMOUNT OF SILTATION THAT NORMALLY WOULD ENTER THE STORM SEWER SYSTEM FROM ADJACENT AND/OR UPSTREAM DRAINAGE AREAS.
28. THE TRENCHES FOR PIPE INSTALLATION SHALL BE KEPT DRY AT ALL TIMES DURING PIPE PLACEMENT. APPROPRIATE FACILITIES TO MAINTAIN THE DRY TRENCH SHALL BE PROVIDED BY THE CONTRACTOR, AND THE COST OF SUCH SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE ITEM. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION UNLESS APPROVED IN WRITING BY THE OWNER.
29. EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH IDEM REGULATIONS AND STANDARDS FOR SOIL EROSION AND SEDIMENTATION CONTROL AND SHALL BE MAINTAINED BY THE CONTRACTOR AND REMAIN IN PLACE UNTIL A SUITABLE GROWTH OF GRASS, ACCEPTABLE TO THE ENGINEER, HAS DEVELOPED.

EROSION CONTROL NOTES

1. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PAVEMENT REPLACEMENT.
2. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING, DRAINAGE SYSTEM STRUCTURE, OR LANDSCAPING.
3. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
4. BMP'S HAVE BEEN LOCATED AS INDICATED IN THESE PLANS IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF

DEMOLITION NOTES

1. THE INTENT OF THE DEMOLITION PLAN IS TO DEPICT EXISTING FEATURES THAT ENCUMBER THE PROPOSED CONSTRUCTION AREA AND ARE SCHEDULED FOR REMOVAL. SOME INCIDENTAL ITEMS MAY HAVE BEEN INADVERTENTLY OMITTED FROM THE PLAN. THE CONTRACTOR IS ENCOURAGED TO THOROUGHLY INSPECT THE SITE AS WELL AS REVIEW THE PLANS AND SPECIFICATIONS PRIOR TO SUBMITTING PRICING. CONTRACTOR WILL NOT RECEIVE ADDITIONAL COMPENSATION FOR INCIDENTAL ITEMS NOT SHOWN ON THE DEMOLITION PLAN.
2. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO COMMENCING ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES AND FIELD VERIFY ALL UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO THE EXISTING BUILDING AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER.
4. CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY DEMOLITION PERMITS.
5. THE CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE TRUCKS AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
6. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC., THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
7. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES OR PRIOR TO ANY FURTHER DEMOLITION. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
8. THE CONTRACTOR SHALL USE DUE CARE IN HAULING DEBRIS FROM SITE TO ENSURE THE SAFETY OF THE PUBLIC.
9. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL LIMIT ALL DEMOLITION ACTIVITIES TO THOSE AREAS DELINEATED ON THE CONSTRUCTION DRAWINGS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
11. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AIRBORNE DUST AND POLLUTANTS BY USING WATER SPRINKLING OR OTHER SUITABLE MEANS OF CONTROL.
12. CONTRACTOR TO USE CARE IN HANDLING DEBRIS FROM SITE TO ENSURE THE SAFETY OF THE PUBLIC. HAUL ROUTE TO BE CLOSELY MONITORED FOR DEBRIS OR MATERIALS TRACKED ONTO ADJOINING ROADWAYS, ETC. ROADWAYS AND WALKWAYS TO BE CLEARED DAILY OR AS NECESSARY TO MAINTAIN PUBLIC SAFETY.
13. DEWATERING SHOULD BE ANTICIPATED AND INCLUDED. DEWATERING SHALL BE DONE IN ACCORDANCE WITH LOCAL AND REGIONAL REQUIREMENTS.

EARTHWORK NOTES

1. GENERAL
   - 1.1. ALL EARTHWORK OPERATIONS TO CONFORM TO GEOTECHNICAL RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
   - 1.2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE.
   - 1.3. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRISE HIMSELF/HERSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED.
   - 1.4. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE AND SUBGRADE ELEVATIONS (AS NOTED) AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC., MUST BE ACCOUNTED FOR.
   - 1.5. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
   - 1.6. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED AND APPROVED PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION.
   - 1.7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC., TO PROTECT ADJACENT PROPERTY, ETC., SHALL OCCUR BEFORE GRADING BEGINS.
   - 1.8. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A CONSTRUCTION FENCE AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.
2. TOPSOIL EXCAVATION INCLUDES:
   - 2.1. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.
   - 2.2. PLACEMENT OF EXCAVATED MATERIAL IN OWNER-DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.
   - 2.3. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.
   - 2.4. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPREADING OF TOPSOIL DIRECTLY OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER.
3. EARTH EXCAVATION INCLUDES:
   - 3.1. EXCAVATION OF SUBSURFACE MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.
   - 3.2. PLACEMENT OF SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.
   - 3.3. STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION. IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.
   - 3.4. COMPACTION OF SUITABLE MATERIALS SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS OR AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
4. UNSUITABLE MATERIAL: UNSUITABLE MATERIALS SHALL BE CONSIDERED MATERIAL THAT IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL AND TO WHAT EXTENT SHALL BE MADE BY THE GEOTECHNICAL ENGINEER OR SOILS TESTING AGENCY WITH THE CONCURRENCE OF THE OWNER.
5. MISCELLANEOUS. THE CONTRACTOR SHALL:
   - 5.1. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.
   - 5.2. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.
   - 5.3. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.
   - 5.4. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL.
6. TESTING AND FINAL ACCEPTANCE
   - 6.1. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY THE GEOTECHNICAL ENGINEER OR SOILS TESTING AGENCY AND THE OWNER. (SEE PAVING SPECIFICATION.)
   - 6.2. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE CORRECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR SOILS TESTING AGENCY.

PAVING NOTES

1. GENERAL
   - 1.1. PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION, AND COMPACTION; PLACEMENT OF SUBBASE OR BASE COURSE MATERIALS; BITUMINOUS INTERMEDIATE AND/OR SURFACE COURSES; FORMING, FINISHING, AND CURING CONCRETE PAVEMENT, CURBS, AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.
2. SUBGRADE PREPARATION
   - 2.1. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL SATISFY HIMSELF THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISH TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS, UNLESS THE CONTRACTOR ADVISES THE ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION. IT IS UNDERSTOOD THAT HE/SHE HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.
   - 2.2. AFTER STRIPPING TO THE PROPOSED SUBGRADE LEVEL, THE BUILDING AND PARKING AREA SHOULD BE PROOF-ROLLED WITH A TANDEM AXLE DUMP TRUCK OR SIMILAR HEAVY RUBBER TIRED VEHICLE TYPICALLY WITH AN AXIAL LOAD GREATER THAN NINE (9) TONS OR MEETING SPECIFICATIONS OUTLINED IN INDOT CMS ITEM 204 FOR ROADWAY SUBGRADE COMPACTION AND PROOF-ROLLING.
   - 2.3. MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE ONE (1) INCH IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.
   - 2.4. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINE-GRADED TO WITHIN 0.04 FEET (1/2 INCH) OF FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF THE CURB, SO AS TO ENSURE THE PROPER THICKNESS OF PAVEMENT COURSES. NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE HONORED.
   - 2.5. PRIOR TO PLACEMENT OF THE BASE COURSE, THE SUBGRADE SHALL BE APPROVED BY THE TESTING ENGINEER.
3. CONCRETE WORK
   - 3.1. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS S1 OR PV. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT TWENTY-EIGHT (28) DAYS. ALL CONCRETE SHALL BE BROOM-FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
   - 3.2. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS SECTION TO DETERMINE THE GUTTER FLAG THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PRE-MOLDED FIBER EXPANSION JOINTS, WITH TWO 3/4-INCH BY 18-INCH EPOXY-COATED STEEL DOWEL BARS, SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. SAWED OR FORMED CONTRACTION JOINTS SHALL BE PROVIDED AT NO GREATER THAN TEN TO TWENTY-FIVE FOOT INTERVALS BETWEEN EXPANSION JOINTS. NO HONEY-COMBING OF THE CURB AND GUTTER WILL BE ACCEPTED.
   - 3.3. CURBS SHALL BE DEPRESSED AT LOCATIONS WHERE PUBLIC WALKS INTERSECT CURB LINES AND OTHER LOCATIONS, AS DIRECTED, FOR THE PURPOSE OF PROVIDING ACCESSIBILITY.
   - 3.4. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE.
   - 3.5. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT MAXIMUM 6-FOOT INTERVALS AND 1/2-INCH PRE-MOLDED FIBER EXPANSION JOINTS AT 20-FOOT MAXIMUM INTERVALS AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, AND OTHER STRUCTURES.
   - 3.6. CONCRETE DRIVEWAY APRONS SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE 6-INCH BY 6-INCH NO. 6 WELDED WIRE MESH IN ALL DRIVEWAYS. PROVIDE 1/2-INCH PRE-MOLDED FIBER EXPANSION JOINT ADJACENT TO CURBS AND CONCRETE SIDEWALKS. PROVIDE SAWED OR FORMED CONTRACTIONS JOINT AT MID-POINT AND 15-FOOT MAXIMUM.
   - 3.7. STANDARD REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. SAWED OR FORMED CONTRACTION EXPANSION JOINTS SHALL BE AS SHOWN ON THE PLANS.
   - 3.8. CONCRETE CURING AND PROTECTION SHALL BE PER INDOT STANDARDS. TWO (2) COATS OF INDOT APPROVED CURING AGENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.
   - 3.9. THE COST OF AGGREGATE BASE OR SUBBASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.
4. FLEXIBLE PAVEMENT
   - 4.1. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, AND DRIVE AISLES SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE, ASPHALT INTERMEDIATE COURSE TYPE 2, AND ASPHALT SURFACE COURSE TYPE 1, OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS.
   - 4.2. ALL TRAFFIC SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE INTERMEDIATE COURSE IS LAID.
   - 4.3. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE INTERMEDIATE COURSE SHALL BE CLEANED AND TACK-COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE INTERMEDIATE COURSE, BASE, OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND STAFF NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS PER INDOT STANDARDS.
   - 4.4. SEAMS IN SURFACE AND BASE COURSES SHALL BE STAGGERED A MINIMUM OF 6 INCHES.
5. TESTING AND FINAL ACCEPTANCE.
   - 5.1. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE ENGINEER.
   - 5.2. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE CITY OF ZIONSVILLE, SHALL OBTAIN SPECIMENS OF THE INTERMEDIATE COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS VERIFICATION.
   - 5.3. WHEN REQUIRED BY THE CITY OF ZIONSVILLE, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD REQUIRED BY INDOT STANDARDS.
   - 5.4. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.
   - 5.5. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE ZIONSVILLE CODE. WHEN CONFLICTS ARISE BETWEEN ZIONSVILLE CODE, AND GENERAL NOTES, THE MORE STRINGENT SHALL TAKE PRECEDENCE.

SIGNING AND PAVEMENT MARKING NOTES

1. ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARDS.
2. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080-INCH THICK FLAT ALUMINUM PANELS WITH REFLECTORIZED LEGEND ON THE FACE. LEGEND SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. POSTS: SIGN POSTS SHALL BE NEW GALVANIZED STEEL PIPE IN ACCORDANCE WITH ASTM A 53 OR ASTM F 1083. USE STANDARD WEIGHT, SCHEDULE 40 PIPE PER THE INDOT STANDARDS.
4. SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH INDOT STANDARDS.
5. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE ROADWAY LIMITS, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS, AND DIRECTIONAL ARROWS, SHALL BE REFLECTORIZED THERMOPLASTIC HOT ROLLED INTO PAVEMENT OR PAINT PER INDOT STANDARDS.
6. PAVEMENT MARKINGS ON BIKE PATHS, PARKING LOT STALLS, AND SIMILAR "LOW-WEAR" APPLICATIONS, SHALL BE PAINT IN ACCORDANCE WITH INDOT STANDARDS.
7. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND ZIONSVILLE CODE.
8. THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 55 DEGREES FAHRENHEIT AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 50 DEGREES FAHRENHEIT AND RISING.

SANITARY SEWER NOTES

1. ALL UNSUITABLE MATERIALS SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CRUSHED GRAVEL OR STONE, AS PER INDOT STANDARDS.
2. ALL TRENCHES BENEATH PROPOSED OR EXISTING UTILITIES, PAVEMENTS, ROADWAYS, SIDEWALKS, AND FOR A DISTANCE OF THREE (3) FEET ON EITHER SIDE OF SAME, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKFILLED WITH MATERIAL THAT HAS BEEN TREATED AND COMPACTED TO 95% OF STD. PROCTOR MAXIMUM DAY DENSITY.
3. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.
4. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE TOWN OF WHITESTOWN.
5. WATERMAINS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT REQUIREMENTS, AS SPECIFIED IN THE STANDARDS FOR WATER AND SEWER CONSTRUCTION IN INDIANA.
6. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE, EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:
   - 6.1. IF NECESSARY PERMISSION SHALL BE OBTAINED FROM THE TOWN OF WHITESTOWN IN WRITING PRIOR TO BEGINNING CONSTRUCTION.
   - 6.2. THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18 INCHES ABOVE THE TOP OF THE SEWER AND 18 INCHES HORIZONTALLY AWAY FROM THE EDGE OF THE SEWER.
7. ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER-TIGHT SLEEVES. THE BOTTOM OF THE MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE SMOOTH FLOWS.
8. FRAMES AND LIDS: ALL SANITARY SEWER MANHOLE FRAMES AND LIDS SHALL BE PER DETAIL SHEET, UNLESS OTHERWISE NOTED ON THE PLANS AND DETAILS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK HOLE AND BE SELF-SEALING WITH AN "O" RING GASKET. THE JOINTS BETWEEN THE FRAME AND CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE.
9. A MAXIMUM OF TWELVE (12) INCHES OF CONCRETE-ADJUSTING RINGS SHALL BE USED TO ADJUST FRAME ELEVATIONS. RINGS SHALL BE SEALED TOGETHER WITH BUTYL ROPE.
10. CLEANING: ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE.
11. TESTING: DEFLECTION, AIR, AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND ALLOWABLE TESTING LIMITS SHALL BE IN ACCORDANCE WITH THE TEN STATE STANDARDS.
12. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH MUNICIPAL STANDARDS.
13. TELEVISING: IF REQUIRED BY THE TOWN OF WHITESTOWN, ALL SANITARY SEWERS SHALL BE TELEVISED, AND A COPY OF THE TAPE AND A WRITTEN REPORT SHALL BE SUBMITTED AND REVIEWED BY THE TOWN OF WHITESTOWN BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS, AND LENGTHS. IDENTIFY MANHOLE TO MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS. ORDER OF WRITTEN REPORT SHALL BE THE SAME AS THE VIDEOTAPES.
14. TEST RESULTS: IF THE SANITARY SEWER INSTALLATION FAILS TO MEET THE TEST REQUIREMENTS SPECIFIED, THE CONTRACTOR SHALL DETERMINE THE CAUSE OR CAUSES OF THE DEFECT AND REPAIR, OR REPLACE ALL MATERIALS AND WORKMANSHIP, AS MAY BE NECESSARY TO COMPLY WITH THE TEST REQUIREMENTS.
15. CERTIFICATION: CONTRACTOR SHALL SUBMIT CERTIFIED COPIES OF ALL REPORTS OF TESTS CONDUCTED BY AN INDEPENDENT LABORATORY BEFORE INSTALLATION OF PVC PLASTIC PIPE. TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD METHOD OF TEST FOR "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATE LOADING." ASTM STANDARDS D-2241, AS APPROPRIATE FOR THE PIPE, TO BE USED. TESTS SHALL ALSO BE CONDUCTED TO DEMONSTRATE JOINT PERFORMANCE AT FIVE (5) PERCENT MAXIMUM DIAMETRIC DEFLECTION OF THE SPIGOT.
16. IF CONFLICT ARISES BETWEEN WHITESTOWN STANDARDS AND SANITARY SEWER NOTES, THE MORE STRINGENT SHALL APPLY.
17. ALL SANITARY SEWER LINES SHALL BE PVC MEETING ASTM D-3034 STANDARDS AND JOINTS MEETING ASTM D-3212. ALL SANITARY MANHOLES TO BE CONCRETE AND MEET MANHOLE DESIGN SPECIFICATION OF ASTM C-478 AND JOINT SPECIFICATIONS OF ASTM C-443. SANITARY SEWER LINES THAT ARE PROPOSED AT A DEPTH 15 FEET OR GREATER SHALL BE DUCTILE IRON CLASS 51 PIPE.

STORM SEWER NOTES

1. STORM SEWER PIPE: ALL STORM SEWER PIPE SHALL BE RCP, UNLESS OTHERWISE NOTED ON THE PLANS, IN ACCORDANCE WITH THE FOLLOWING:

PLAN CODE	MATERIAL
12"-66"	RCP REINFORCED CONCRETE PIPE (ASTM C-76)
< 12"	PVC SDR-35, ASTM D-3034

   REFER TO PLANS FOR PIPE SIZES.

   FOR PIPE SIZES 12" TO 54" WITH COVER BETWEEN 1'-3', USE SEWER CLASS III CONCRETE PIPE. FOR COVER GREATER THAN 3' BUT LESS THAN 9', USE CLASS II CONCRETE PIPE. FOR COVER BETWEEN 9'-13', USE CLASS III CONCRETE PIPE. FOR PIPE SIZES GREATER THAN 54" WITH COVER BETWEEN 1'-9', USE CLASS II CONCRETE PIPE. FOR COVER GREATER THAN 9' BUT LESS THAN 13', USE CLASS III CONCRETE PIPE.
2. BAND-SEAL OR SIMILAR COUPLING SHALL BE USED WHEN JOINING STORM SEWER PIPES OF DISSIMILAR MATERIALS.
3. ALL FOOTING DRAIN DISCHARGE PIPES AND DOWN SPOUTS SHALL DISCHARGE TO THE GROUND/STORM SEWER SYSTEM.
4. CONSTRUCTION: ALL STORM SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.
5. COVER: THE CONTRACTOR SHALL MAINTAIN AT LEAST TWO (2) FEET OF COVER OVER THE TOP OF SHALLOW PIPES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MOUND OVER ANY PIPES THAT HAVE LESS THAN TWO (2) FEET OF COVER DURING CONSTRUCTION UNTIL THE AREA IS FINAL GRADED OR PAVED.
6. STRUCTURES: MANHOLE, CATCH BASIN, AND INLET BOTTOMS SHALL BE PRECAST CONCRETE SECTIONAL UNITS OR MONOLITHIC CONCRETE. MANHOLES AND CATCH BASINS SHALL BE A MINIMUM OF FOUR (4) FEET IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS. STRUCTURE JOINTS SHALL BE SEALED WITH "O" RING OR BUTYL ROPE. A MAXIMUM OF TWELVE (12) INCHES OF ADJUSTING RINGS SHALL BE USED.
7. A CONCRETE BENCH TO DIRECT FLOWS SHALL BE CONSTRUCTED IN THE BOTTOM OF ALL INLETS AND MANHOLES.
8. THE FRAME, GRATE, AND/OR CLOSED LID SHALL BE CAST IRON OF THE STYLE SHOWN ON THE PLANS.
9. CLEANING: THE STORM SEWER SYSTEM SHALL BE THOROUGHLY CLEANED PRIOR TO FINAL INSPECTION AND TESTING.
10. MANHOLES, CATCH BASINS, INLETS, FRAMES, GRATES, AND OTHER STRUCTURES SHALL BE CONSTRUCTED OF THE TYPE, STYLE, AND SIZE AS SET FORTH WITH THE ORDINANCES AND STANDARDS OF THE CITY OF ZIONSVILLE.
11. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE BOONE COUNTY AND ZIONSVILLE CODES. WHEN CONFLICTS ARISE BETWEEN MUNICIPAL CODE AND GENERAL NOTES, THE MORE STRINGENT SHALL TAKE PRECEDENCE.
12. WHEN NOTED ON PLANS OR APPROVED BY ENGINEER, HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IN GENERAL CONFORMANCE WITH ASTM F2648 / F2648M MAY BE UTILIZED.

WATERMAIN NOTES

1. ALL WATER LINE MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE TOWN OF WHITESTOWN UTILITIES DEPARTMENT.

   PIPE MATERIALS: WATERMAINS SHALL BE CONSTRUCTED OF AWWA C900 OR AWWA C905 PLASTIC PIPE AND SHALL BE CLASS 150 UNLESS OTHERWISE INDICATED ON THE PLANS. ONE COUPLING WITH TWO RUBBER GASKETS SHALL BE FURNISHED WITH EACH LENGTH OF PIPE. IT SHALL BE THE SAME MATERIAL AND BY THE SAME MANUFACTURER AS THE PIPE AND CONFORM TO ASTM D3139. RUBBER GASKETS SHALL CONFORM TO ASTM F477.

   TESTING OF THE PIPE AND COUPLINGS SHALL BE MADE IN ACCORDANCE WITH AWWA C900. REGARDLESS OF THE PLACE OF MANUFACTURE, ALL PIPE SHALL BE TESTED WITHIN THE CONTINENTAL UNITED STATES.
2. PRESSURE RATING: THE PIPE SHALL BE DR 14 FOR FIRE PROTECTION MAINS AND DR 18 FOR WATER MAINS.
3. JOINTS: JOINTS SHALL BE BELL END OR COUPLING PUSH-ON TYPE. THE PUSH-ON JOINT AND JOINT COMPONENTS SHALL MEET THE REQUIREMENTS FOR ASTM D-3139, JOINT FOR PLASTIC PRESSURE PIPE, USING FLEXIBLE ELASTOMERIC SEALS. THE JOINT SHALL BE DESIGNED SO AS TO PROVIDE FOR THE THERMAL EXPANSION AND CONTRACTION EXPERIENCED WITH A TOTAL TEMPERATURE CHANGE OF 75 DEGREES F IN EACH JOINT OF PIPE. THE LUBRICANT SHALL HAVE NO DETERIORATING EFFECTS ON THE GASKET OR THE PIPE. GASKETS SHALL MEET ALL APPLICABLE REQUIREMENTS OF ANSI STANDARD A21.11.
4. FITTINGS: ALL FITTINGS SHALL BE OF DUCTILE IRON WITH GASKETS, GLANDS AND T-HEAD BOLTS WITH NUTS. DUCTILE IRON FITTINGS SHALL CONFORM TO ANSI/AWWA C110/A21.10, 350 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING REQUIREMENTS. ALL FITTINGS SHALL BE CEMENT MORTAR LINED CONFORMING TO ANSI/AWWA C104/A21.4 AND SHALL BE COATED OUTSIDE WITH A BITUMINOUS COATING OR FUSION-BONDED EPOXY. FITTINGS SHALL HAVE DISTINCTLY CAST INTO THE PIPE EXTERIOR THE PRESSURE RATING AND LETTERS "DI" OR "DUCTILE". ALL DUCTILE IRON FITTINGS ACCEPTABLE TO THE UTILITY SHALL BE RATED AT A MINIMUM OF 70-50-05 (KSI TENSILE STRENCHT-KSI YIELD STRENGTH-PERCENT ELONGATION), IN ACCORDANCE WITH ANSI/AWWA C110 STANDARDS REGARDING STRENGTH OF MATERIALS.
5. FITTING JOINTS SHALL BE OF THE STANDARD MECHANICAL JOINT TYPE CONFORMING TO ANSI/AWW C111/A21.11 OR PUSH JOINT TYPE CONFORMING TO ANSI/AWWA C111/A21.11. ALL GASKETS, GLANDS AND T-HEAD BOLTS SHALL BE IN ACCORDANCE WITH AWWA C111/A21.11.
6. POLYETHYLENE ENCASEMENT: HIGH DENSITY CROSS-LAMINATED POLYETHYLENE ENCASEMENT MATERIALS SHALL BE USED FOR DUCTILE IRON PIPE AND FITTINGS. THE HIGH DENSITY CROSS-LAMINATED POLYETHYLENE TUBE MATERIAL SHALL CONFORM TO ANSI/AWWA C105 WITH A MINIMUM THICKNESS OF 4 MILS.
7. VALVES: GATE VALVES SHALL BE USED ON ALL WATERMAINS. ALL VALVES SHALL TURN COUNTER-CLOCKWISE TO OPEN. VALVES SHALL BE IRON BODY RESILIENT WEDGE GATE VALVES WITH BRONZE-MOUNTED SEATS AND NON-RISING STEMS CONFORMING TO AWWA C-509. THE VALVES SHALL HAVE MECHANICAL JOINTS.
8. WHERE WATERMAINS AND SERVICES CROSS PROPOSED OR EXISTING STREETS, BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL EXTENDING AT LEAST 5 FEET BEYOND THE BACK OF CURB OR EDGE OF PAVEMENT.
9. PROVIDE AND INSTALL FOUR MEGALUG JOINT RESTRAINTS AT EACH JOINT FROM THE MAINLINE TEE TO THE AUXILIARY VALVE AND BETWEEN THE AUXILIARY VALVE AND THE HYDRANT BARREL.
10. THE BREAK FLANGE AND ALL BELOW-GRADE FITTING SHALL HAVE STAINLESS STEEL NUTS AND BOLTS.
11. CORPORATION STOPS: CORPORATION STOPS SHALL BE BRONZE BODY KEY STOPS CONFORMING TO AWWA C-800 AND SHALL INCLUDE "J" BEND, TAILPIECE, AND COMPRESSION FITTINGS. SIZE AND LOCATION AS SHOWN ON THE PLANS.
12. MAXIMUM DEFLECTION AT PIPE JOINTS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S CURRENT RECOMMENDATIONS AND AWWA SPECIFICATIONS.
13. BEDDING: ALL WATERMAINS SHALL BE BEDDED ON FIRM GROUND, WITH BELLHOLES EXCAVATED SO THAT THE PIPE HAS AN EVEN BEDDING FOR ITS ENTIRE LENGTH.
14. GRANULAR BEDDING MATERIAL OR GRANULAR BACKFILL MATERIAL SHALL BE CAREFULLY PLACED TO TWELVE (12) INCHES OVER THE TOP OF THE PIPE BEFORE FINAL BACKFILLING AND COMPACTION.
15. A MINIMUM DEPTH OF COVER OF FIFTY-FOUR (54) INCHES SHALL BE MAINTAINED OVER THE WATER LINES. THE MAXIMUM COVER SHALL BE SEVENTY-TWO (72) INCHES, EXCEPT AT SPECIAL CROSSINGS.
16. "MEGA-LUG" RETAINER GLANDS AND THRUST BLOCKING SHALL BE INSTALLED ON WATERMAINS AT ALL BENDS, FITTINGS, TEES, ELBOWS, ETC. "MEGA-LUG" RESTRAINED JOINTS ARE REQUIRED ON ALL VALVES AND ALL FITTINGS.
17. <u>HORIZONTAL SEPARATION</u>
   - 17.1. WATERMAINS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER, OR SEWER SERVICES CONNECTION.
   - 17.2. WATERMAINS MAY BE LAID CLOSER THAN TEN (10) FEET TO A SEWER LINE WHEN:
     - 17.2.1. LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10) FEET;
     - 17.2.2. THE WATERMAIN INVERT IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE SEWER;
     - 17.2.3. THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.
   - 17.3. BOTH THE WATERMAIN AND DRAIN OR SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN IT IS IMPOSSIBLE TO MEET (1) OR (2) ABOVE. THE DRAIN OR SEWER SHALL BE PRESSURE-TESTED TO THE MAXIMUM EXPECTED SURCHARGE HEAD BEFORE BACKFILLING.
18. <u>VERTICAL SEPARATION</u>
   - 18.1. ALL SERVICE PIPES SHALL BE BURIED AT LEAST FIFTY-FOUR (54) INCHES DEEP IN THE GROUND.
   - 18.2. A WATERMAIN SHALL BE LAID SO THAT ITS INVERT IS EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATERMAINS CROSS STORM SEWERS, SANITARY SEWERS, OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAIN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATERMAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN.
   - 18.3. BOTH THE WATERMAINS AND SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN:
     - 18.3.1. IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION, AS DESCRIBED IN (1) ABOVE;
     - 18.3.2. OR THE WATERMAIN PASSES UNDER A SEWER OR DRAIN.
   - 18.4. A VERTICAL SEPARATION OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAIN SHALL BE MAINTAINED WHERE A WATERMAIN CROSSES UNDER A SEWER. SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLING AND BREAKING THE WATERMAIN.
   - 18.5. CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATERMAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN (10) FEET.
19. ALL WATERMAINS SHALL BE PRESSURE-TESTED FOR A MIN. OF 2 HOURS AT 150 PSI, FLUSHED, AND DISINFECTED IN ACCORDANCE WITH AWWA AND TOWN OF WHITESTOWN SPECIFICATIONS. EACH VALVE SECTION SHALL BE PRESSURE-TESTED FOR A MINIMUM OF ONE (1) HOUR. AT NO TIME IS THERE TO BE ANY VISIBLE LEAKAGE FROM THE WATERMAIN.
20. IDEM WATERMAIN NOTES
   - 20.1. ALL WATERLINES SHALL BE AWWA APPROVED.
   - 20.2. THE NORMAL WORKING PRESSURE IN THE WATERLINES WILL NOT BE LESS THAN 35 PSI.
   - 20.3. INDIVIDUAL BOOSTER PUMPS WILL NOT BE ALLOWED FOR ANY INDIVIDUAL SERVICE.
   - 20.4. ALL FIRE HYDRANTS SHALL BE AWWA APPROVED.

WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

No.	REVISIONS	DATE	BY

Kimley»Horn

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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHA... REGISTERED ... STATE OF INDIANA ... PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

GENERAL SPECIFICATIONS

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020

KHA PROJECT NO. 170194000

SHEET NUMBER

C1.0

Drawing name: K:\IND_LDEV\170194000_CollIersInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C1.1-General Notes.dwg C1.1 Oct 13, 2020 1:25pm by: Eric.Fiacable
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DEMOLITION NOTES

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
5. IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING INDOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
6. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
7. QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
8. PRIOR TO BIDDING AND CONSTRUCTION, CONTRACTOR TO REFER TO OWNER PROVIDED PHASE I ENVIRONMENTAL SITE ASSESSMENT AND ASBESTOS REPORT FOR SITE SPECIFIC CONDITIONS AND CONSIDERATIONS.
9. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS
10. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION. REFER TO THE EROSION CONTROL SHEET.
11. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.

DEMOLITION NOTES

THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN. SEE ARCHITECTURAL DRAWINGS FOR LIMITS AND PROPER DEMOLITION OF EXISTING BUILDING. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICE NECESSARY TO COMPLETE THE WORK. DEMOLITION INCLUDES, BUT IS NOT LIMITED TO, REMOVAL AND DISPOSAL OFFSITE OF THE FOLLOWING ITEMS:

- SIDEWALK AND ON-SITE PAVEMENT
- BUILDINGS, FOUNDATIONS, AND SUPPORTING WALLS AND SLABS
- DEBRIS AND FOUNDATIONS FROM ALL DEMOLISHED STRUCTURES
- ALL PAVEMENT TO BE REMOVED ADJACENT TO PAVEMENT THAT IS TO REMAIN SHALL BE SAWCUT FULL DEPTH AT THE EDGES PRIOR TO REMVAL TO OBTAIN A "CLEAN" JOINT WHERE IT ABUTS NEW CURB OR PAVEMENT.

CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.

DISPOSAL OF DEMOLISHED MATERIALS

REMOVE FROM SITE DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. BURNING OF REMOVED MATERIALS FROM DEMOLISHED STRUCTURES WILL NOT BE PERMITTED ON SITE. TRANSPORT MATERIALS REMOVED FROM DEMOLISHED STRUCTURES AND DISPOSE OF OFF SITE IN A LEGAL MANNER.

LANDSCAPE PROTECTION AND REMOVAL

SEE LANDSCAPE PLANS FOR INFORMATION ON LANDSCAPE AND TREE PROTECTION, PRESERVATION AND REMOVAL.

UTILITY SERVICES

EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FLOWABLE FILL OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.

UTILITY PROTECTION

UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL INDIANA 811 (811 OR 800-382-5544) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.

POLLUTION CONTROLS

USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.

FILLING BASEMENTS AND VOIDS

COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE INDOT APPROVED CRUSHED LIMESTONE OR APPROVED EQUAL. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
6. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES UNLESS OTHERWISE NOTED.
7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.
9. ALL STOOPS OR PEDESTRIAN EGRESS POINTS FROM THE BUILDING(S) SHALL BE NO GREATER THAN 2% FOR THE FIRST 5'.

UTILITY NOTES

GENERAL UTILITY NOTES

1. ALL WATER LINES SHALL BE PVC C900 DR-14 OR DUCTILE IRON CL 350.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE AWWA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 24" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
6. CONTRACTOR TO CALL INDIANA 811 (811 OR 800-382-5544) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
7. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/ DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE MUNICIPALITY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
8. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
9. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
11. SEE ARCHITECTURAL AND MEP PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
12. LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.
13. SEE DETAILS FOR LOCATING STORM STRUCTURES WITHIN THE CURB LINE.
14. STORMWATER FACILITIES MUST BE FUNCTIONAL BEFORE BUILDING CONSTRUCTION BEGINS.

SITE NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS, DOOR LOCATIONS, PRIOR TO ORDERING MATERIALS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

EROSION CONTROL NOTES

TEMPORARY EROSION CONTROL NOTES

1. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
2. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
3. CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN SB150 OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES GREATER THAN 4:1, AND IN THE BOTTOM AND SIDE SLOPES OF ALL SWALES.
4. PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
5. PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE.
6. ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
7. ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
8. ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
9. SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.
10. PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
11. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.
12. STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.
13. ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
14. WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.

Indiana Utilities Protection Service
Call 811
before you dig

EXISTING LEGEND

SIGN / TWO POST SIGN	TELEPHONE PEDESTAL
WATER VALVE	WOODEN LIGHT POLE
FIRE HYDRANT	LIGHT POLE SQUARE
WATER METER	CONIFEROUS TREE & SIZE (12")
GAS METER	DECIDUOUS TREE & SIZE (36")
GAS VALVE	BUSH
CLEAN-OUT	DRAINAGE MANHOLE
ELECTRIC METER BOX	SANITARY MANHOLE
ELECTRIC TRANSFORMER	CURB INLET
ELECTRIC PEDESTAL	GROUND ACCENT LIGHT
GUARD POST	GUY WIRE
AIR CONDITIONER UNIT	
LIGHT POLE ROUND	
REBAR SET/FOUND	
FLAT GRATE INLET	
COMBINATION POLE	
— WTR — UNDG. WATER LINE	
— G — UNDG. GAS LINE	
— UT — UNDG. TELEPHONE LINE	

BENCHMARKS

NGS BM Z 79 1946 ELEV 904.26 (NAVD 88)

A DISK STAMPED Z 79 1946 ON THE EAST END OF A CONCRETE WING WALL ON THE SOUTH SIDE OF STATE ROAD 334, ALSO ±200 FEET EAST OF BLACKSTONE BOULEVARD.

CSC TBM #1 ELEV 918.60

CUT SQUARE ON THE SOUTHWEST CORNER OF CONCRETE LIFT STATION PAD NEAR THE NORTHEAST CORNER OF A WHITESTOWN UTILITY OFFICE BUILDING ON THE SOUTH SIDE OF 334 JUST EAST OF MAPLE GROVE BLVD

CSC TBM #54 ELEV 927.40

A CUT "X" ON THE WEST MOST BONNET BOLT OF FIRE HYDRANT ON THE SOUTH SIDE OF WHITESTOWN PARKWAY, ±258 FEET WEST OF CO. RD. 700 WEST (AKA OXFORD DR.).

CSC TBM #52 ELEV 927.62

A CUT "X" FOUND ON THE EASTERN CURB LINE OF THE EXISTING LOWES PARKING LOT, ±475 FEET SOUTH OF WHITESTOWN PARKWAY, ALSO ±8 FEET WEST OF LARGE ELECTRIC TRANSFORMER.

CSC TBM #2 ELEV 923.56

A CUT "X" SET ON THE EAST CURB LINE OF THE INTERSECTION OF ROYAL RUN BLVD AND EAST COUNTY ROAD 650 SOUTH/SOUTH COUNTY ROAD 700 EAST, ALSO ±35.5 FEET EAST FROM THE CENTER OF THE CENTERLINE OF ROYAL RUN BLVD & ±19.5 FEET SOUTH OF THE CENTER OF THE AFOREMENTIONED COUNTY ROAD(S).

CSC TBM #6 ELEV 922.39

A MAG-NAIL w/NPS WASHER LOCATED NEAR THE CENTERLINE OF A CONCRETE WALK, LOCATED ±406 FEET EAST OF THE CENTERLINE OF OF COUNTY ROAD 700 WEST (AKA OXFORD DR.) AND ±27 FEET SOUTH OF THE CENTERLINE OF GROVE PASS.

No.	REVISIONS	DATE	BY

Kimley»Horn
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250 EAST 96TH STREET, SUITE 580,
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

NOT APPROVED FOR CONSTRUCTION

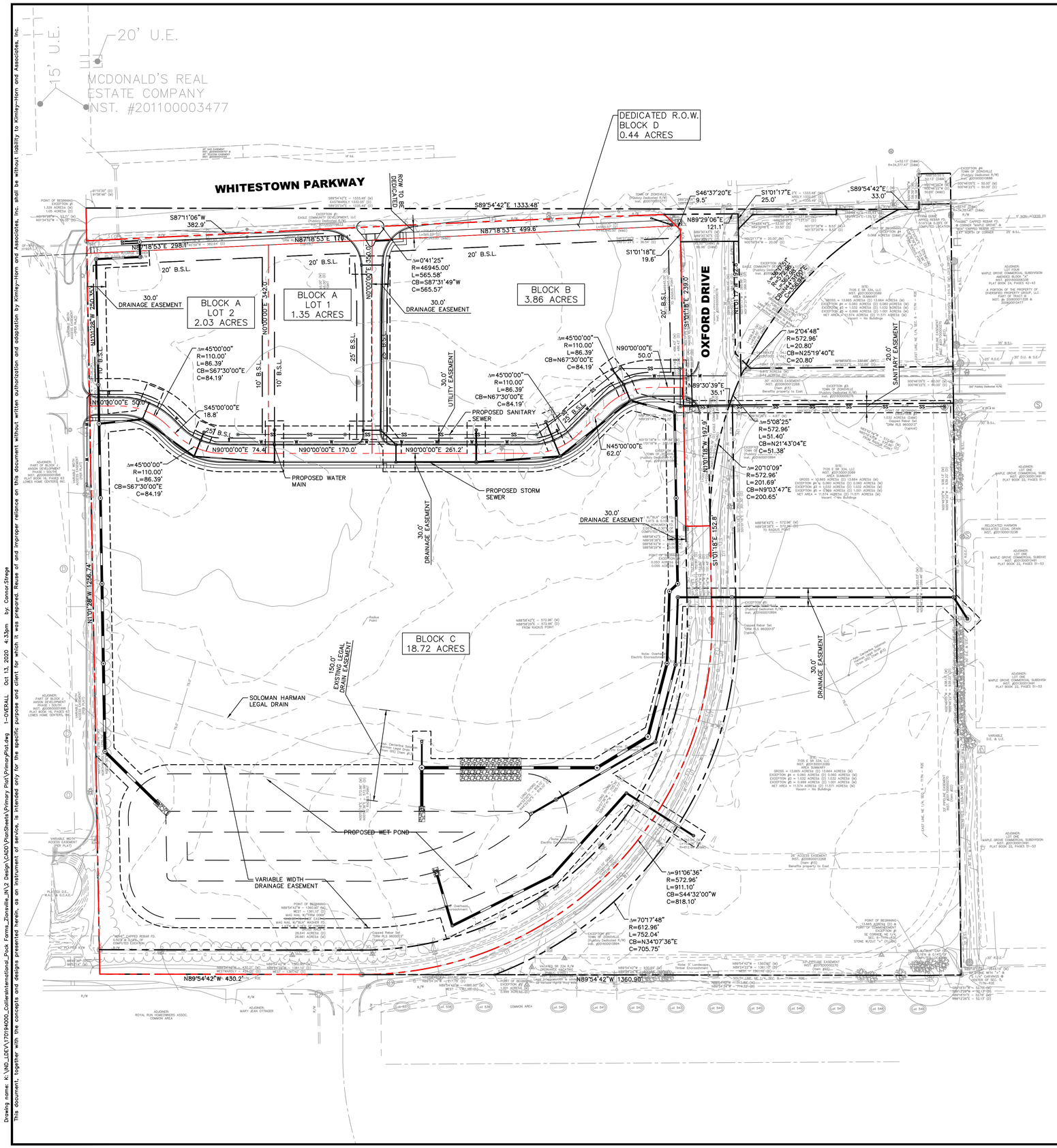
POCK FAMILY FARMS, LLC

GENERAL NOTES

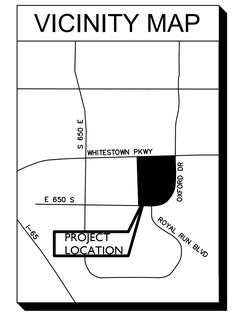
POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C1.1

PRIMARY PLAT
POCK FARMS



VICINITY MAP



OWNER/DEVELOPER:
POCK FAMILY FARMS, LLC.
2025 N WABASH AVE.
KOKOMO, IN 46901
317-213-6708

CIVIL ENGINEER:
GREG RIPPLE, PE
KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 580
INDIANAPOLIS, IN 46240
317-218-9560

SURVEYOR:
BRIAN RISMILLER, PS
V3, INC.
454 GRADLE DR,
CARMEL, IN 46032
317-844-3333

PROPOSED LEGEND

D.&U.E.	DRAINAGE & UTILITY EASEMENT
V.W.	VARIABLE WIDTH
B.S.L.	BUILDING SETBACK LINE
	BUILDING SETBACK LINE
	PROPERTY BOUNDARY
	PROPOSED EASEMENT

LEGAL DESCRIPTION

LAND DESCRIPTIONS (from title commitment)

A part of the Northeast quarter of Section 6, Township 17 North, Range 2 East, in Boone County, Indiana, more particularly described as follows:

Beginning at a point on the South line of aforesaid quarter section 1361.10 feet West of the Southeast corner thereof, said point being in an existing fence line projected Southwardly, run thence Northwardly deflecting right from the aforesaid South line 88 degrees 49 minutes 30 seconds along and with said existing fence line 1256.74 feet to a point; thence Eastwardly deflecting right 91 degrees 10 minutes 30 seconds a distance of 1332.05 feet to a point in the center line of North 96th Road (formerly the original State Road 334), said point being 36.55 feet West of the East line of the aforesaid Northeast quarter; run thence Southwestwardly and Southwardly on a 10 degree curve to the left along and with the centerline of said North 96th Road (formerly the original State Road 334) a distance of 636.50 feet to the p.c. of said curve; thence continue Southwardly tangent to the last above described curve at the last above described point along the center line of said road 152.80 feet; thence Southwardly and Southwestwardly along a 10 degree curve to the right along the center line of said road 911.10 feet to the p.c. of said curve, said point being also on the South line of the aforesaid quarter section; thence Westwardly along and with said South line and on the center line of aforesaid road 429.00 feet to the Place of Beginning. Containing 28.641 acres, more or less.

EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded September 5, 2006 as Instrument No. 200600009673, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof and the Point of Beginning of this description; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point, (the following 2 courses are along the East line of said R/W Exhibit drawing and the Northerly extension thereof); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet to the point on a non-tangent curve to the left, the radius point of which bears South 01 degrees 37 minutes 33 seconds East 46945.00 feet; thence along said curve to the left an arc distance of 565.57 feet to the point of tangency which bears North 02 degrees 18 minutes 58 seconds West 46945.00 feet from said radius point; thence South 87 degrees 40 minutes 59 seconds West 382.64 feet to a point on the West line of said Instrument No. 9609811; thence North 00 degrees 34 minutes 52 seconds West 54.05 feet to the Point of Beginning. Containing 1.05 acres, more or less.

AND EXCEPT therefrom that part conveyed to Eagle Community Development, LLC, an Indiana limited liability company by Warranty Deed recorded March 7, 2007 as Instrument No. 200700002428, described as follows:

A part of the Northeast Quarter of Section 6, Township 17 North, Range 2 East, located in Eagle Township, Boone County, Indiana, being described as follows:

Commencing at the Southeast corner of said Northeast Quarter of Section 6, Township 17 North, Range 2 East; thence North 89 degrees 24 minutes 22 seconds West 1361.10 feet along the South line of said Northeast Quarter to the Southwest corner of a 28.6640 acre tract of real estate described in Instrument No. 96-09811 (as recorded in the Office of the Recorder of Boone County, Indiana); thence North 00 degrees 34 minutes 52 seconds West 1256.74 feet along the West line of said 28.6640 acre tract to the Northwest corner thereof; thence South 89 degrees 25 minutes 04 seconds East 1335.49 feet along the North line of said 28.6640 acre tract to the Northeast corner of said 28.6640 acre tract, which is a point on a non-tangent curve to the left, the radius point of which bears South 26 degrees 39 minutes 39 seconds East 572.96 feet; thence along said curve an arc distance of 385.18 feet to the East right of way line of the Southerly extension of County Road 700 East (as per R/W exhibit drawing by American Consulting Inc. "Job No. 03-493, dated 02-16-06"), which said point bears North 65 degrees 19 minutes 43 seconds West 572.96 feet from said radius point and is the Point of Beginning of this description; (the following 5 courses are along the East, North and Westerly lines of said R/W Exhibit drawing); 1) thence North 00 degrees 31 minutes 21 seconds West 266.33 feet; 2) thence South 89 degrees 59 minutes 02 seconds West 121.11 feet; 3) thence South 46 degrees 07 minutes 24 seconds East 36.54 feet; 4) thence South 00 degrees 31 minutes 22 seconds East 486.43 feet; 5) thence North 89 degrees 28 minutes 38 seconds East 39.85 feet to a point on a non-tangent curve to the right, the radius of which bears North 89 degrees 28 minutes 38 seconds East 572.963 feet; thence Northeasterly along said curve an arc distance of 252.78 feet to the Point of Beginning. Containing 0.64 acres, more or less.

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RIPPLE — REGISTERED — 10100066 — STATE OF INDIANA — PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

OVERALL PRIMARY PLAT

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020

KHA PROJECT NO. 170194000

SHEET NUMBER

C1.20

Drawing name: K:\IND_LDEV\170194000_Collerettenational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\Primary Plat\PrimaryPlat.dwg 1-OVERALL Oct 13, 2020 4:33pm by: Connor.Strage
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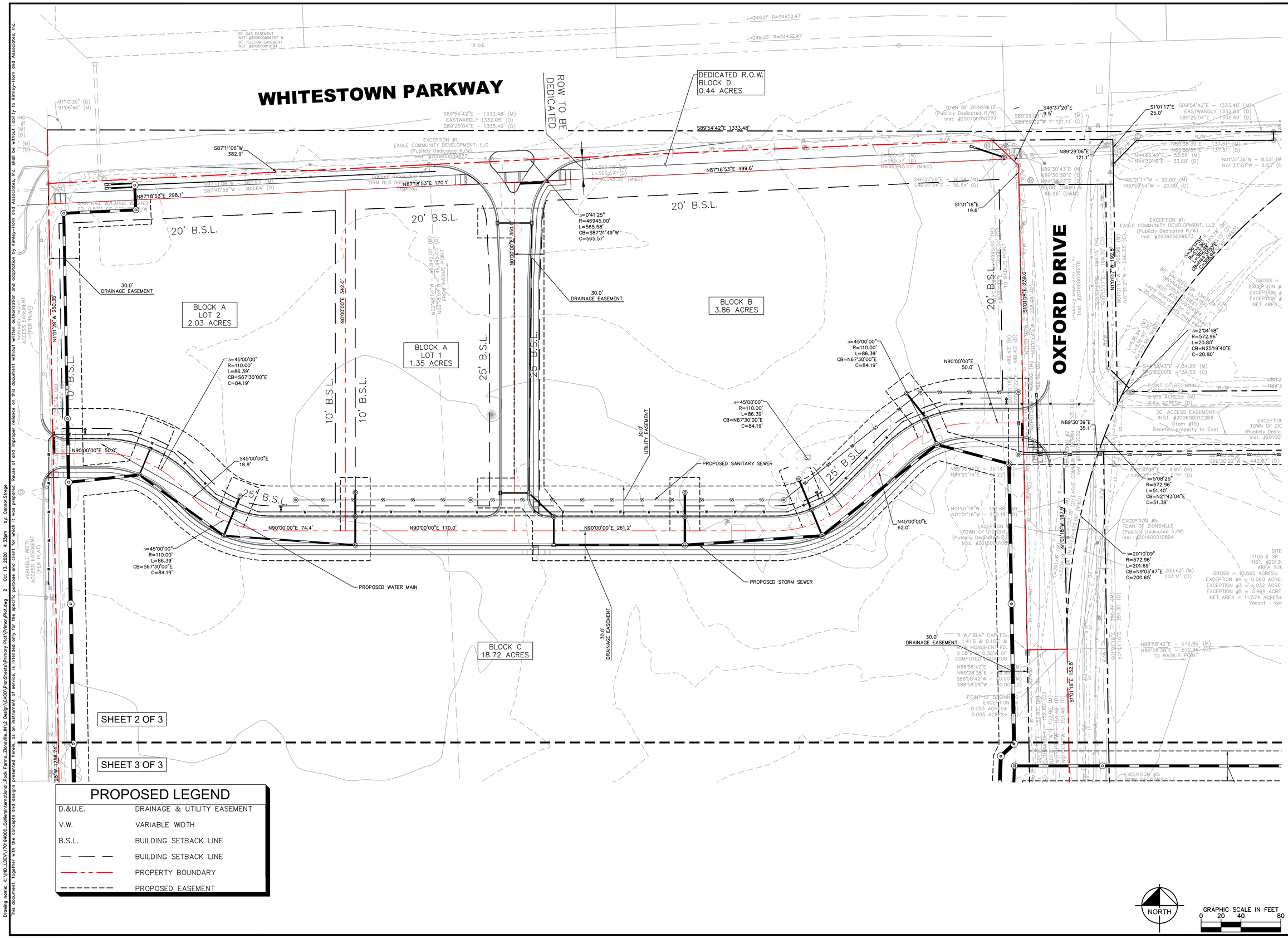

PROPOSED LEGEND

D.&U.E.	DRAINAGE & UTILITY EASEMENT
V.W.	VARIABLE WIDTH
B.S.L.	BUILDING SETBACK LINE
— — —	BUILDING SETBACK LINE
— — —	PROPERTY BOUNDARY
- - - -	PROPOSED EASEMENT

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

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GREGORY RICHARD RUSH REGISTERED 10800066 INDIANA PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

PRIMARY PLAT (1 OF 2)

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C1.21

Drawing name: K:\IND_LDEV\170194000_Callieratentional_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\Primary Plat\PrimaryPlat.dwg 2 Oct 13, 2020 4:33pm by: Connor.Strege
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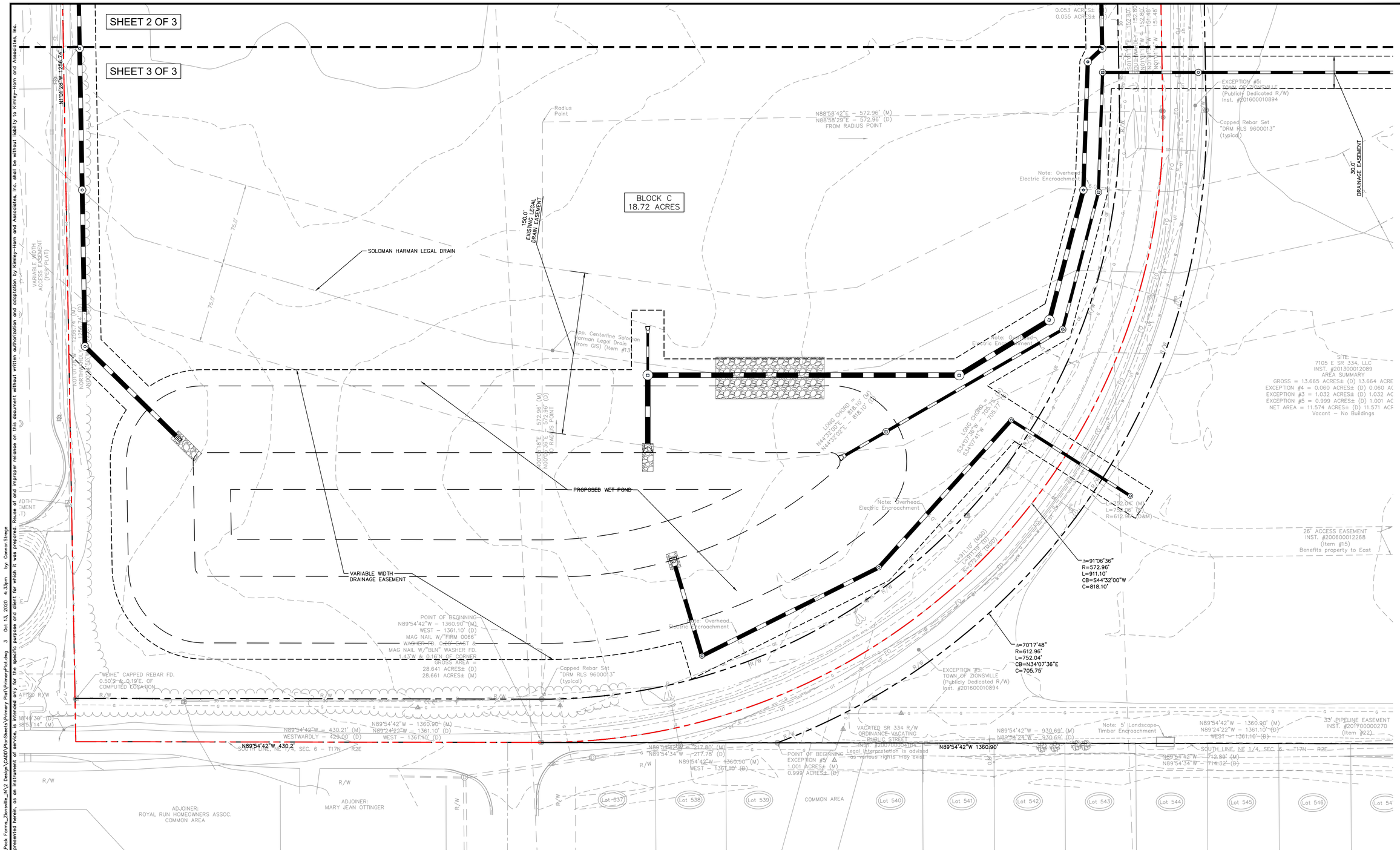

PROPOSED LEGEND

D.&U.E.	DRAINAGE & UTILITY EASEMENT
V.W.	VARIABLE WIDTH
B.S.L.	BUILDING SETBACK LINE
— — —	BUILDING SETBACK LINE
— — —	PROPERTY BOUNDARY
— — —	PROPOSED EASEMENT

No.	REVISIONS	DATE	BY

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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUSH
REGISTERED
NOT APPROVED FOR CONSTRUCTION
INDIANA
PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

PRIMARY PLAT (2 OF 2)

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C1.22

Drawing name: K:\IND_LDEV\170194000_CollerettInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\Primary Plat\PrimaryPlat.dwg 3 Oct 13, 2020 4:33pm by: Connor.Strege
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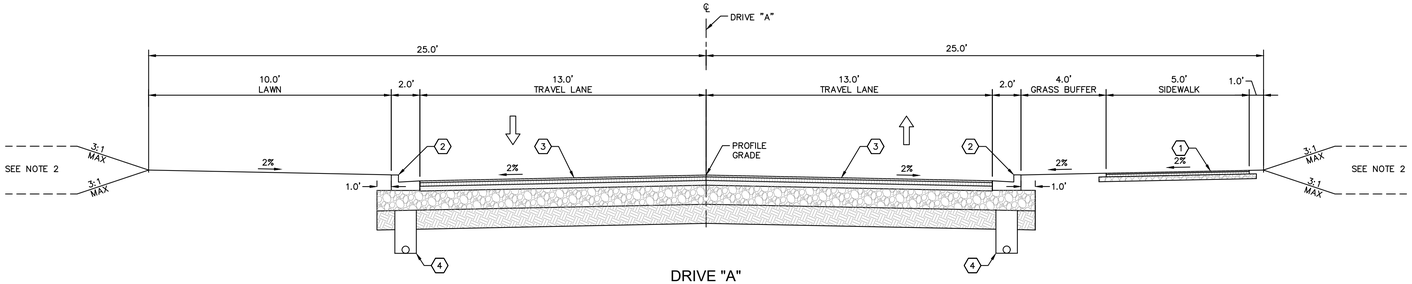
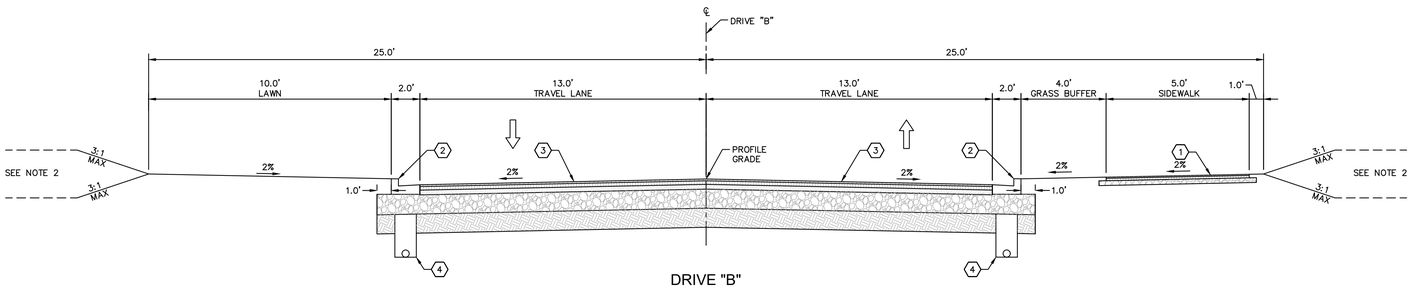


DRIVE "A"
TYPICAL CROSS SECTION
STA:00+33.33 TO STA:10+51.83
NTS



DRIVE "B"
TYPICAL CROSS SECTION
STA:00+34.33 TO STA:02+49.01
NTS

Indiana Utilities Protection Service
Call 811
before you dig

LEGEND

1. 5' SIDEWALK (REFER TO ZIONSVILLE STANDARD DETAILS)
2. TYPE II CONCRETE CURB & GUTTER (REFER TO ZIONSVILLE STANDARD DETAILS)
3. ASPHALT PAVEMENT (LOCAL – ASPHALT, d = 12")
   110#/SYD (1.0"), QC/QA–HMA, 3, 70, SURFACE, #11 ON
   220#/SYD (2.0"), QC/QA–HMA, 3, 64, BINDER, #9 ON
   330#/SYD (3.0"), QC/QA–HMA, 3, 64, BASE, #50 ON
   6" COMPACTED AGGREGATE SUBGRADE , No. 53 (PER ZIONSVILLE STANDARD DETAILS)
4. 6" UNDERDRAIN (PER ZIONSVILLE STANDARD DETAILS)

GENERAL NOTES:

1. CONTRACTOR SHALL CONFIRM TIE–IN POINT LOCATIONS PRIOR TO CONSTRUCTION.
2. REFER TO SHEET C5.0 FOR CONTINUATION OF GRADING BEYOND TYPICAL SECTION.

No.	REVISIONS	DATE	BY

Kimley»Horn
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250 E. 96TH STREET, SUITE 580,
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DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD HAMMER
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INDIANA

POCK FAMILY FARMS, LLC

TYPICAL CROSS SECTIONS

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C2.0

Drawing name: K:\IND_LDEV\170194000_CollierInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C2.0 TYPICAL CROSS SECTIONS.dwg C2.0 TYPICAL CROSS SECTIONS Oct 13, 2020 1:26pm by: Eric.Fiscable
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Indiana Utilities Protection Service

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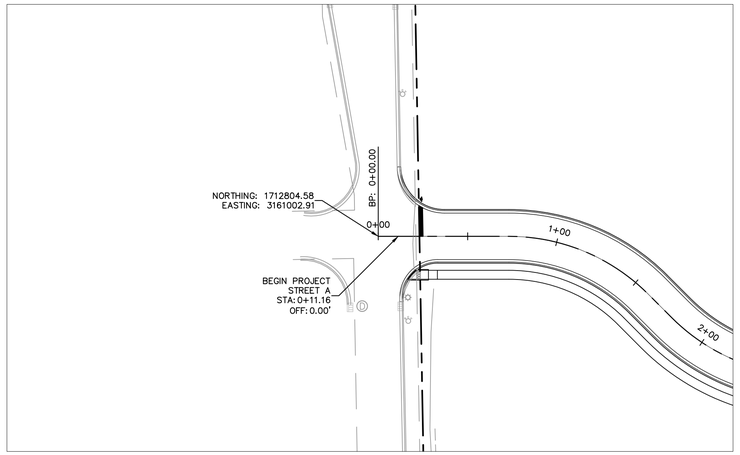
before you dig

NORTH

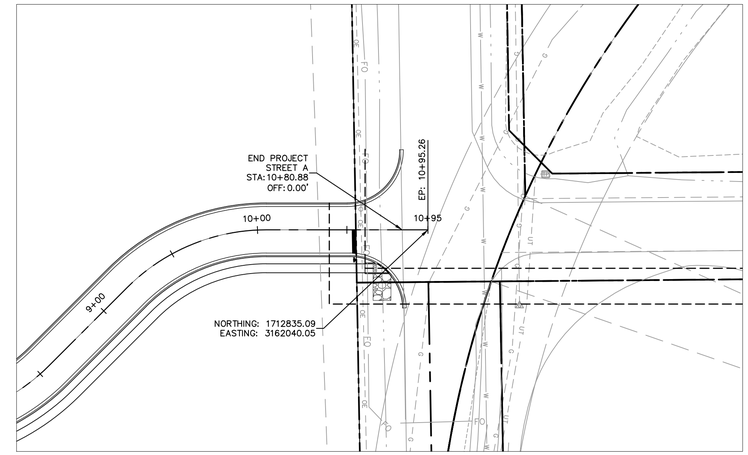
GRAPHIC SCALE IN FEET

0 20 40 80



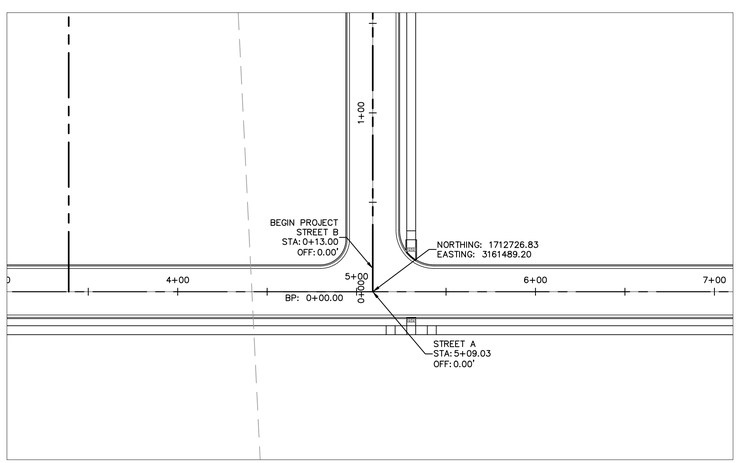
BEGIN LINE - DRIVE A

SCALE 1"=40'



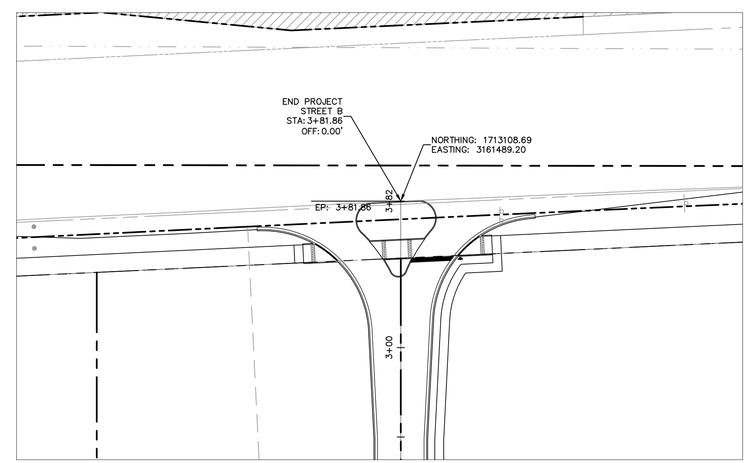
END LINE - DRIVE A

SCALE 1"=40'



BEGIN LINE - DRIVE B

SCALE 1"=40'



END LINE - DRIVE B

SCALE 1"=40'

No.	REVISIONS	DATE	BY

Kimley»Horn

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SCALE: AS NOTED

DESIGNED BY: CVS

DRAWN BY: CVS

CHECKED BY: GRR

GREGORY RICHARD RUSTER
REGISTERED
INDIANA
NOT APPROVED FOR CONSTRUCTION
PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

GEOMETRIC TIE-UP PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020

KHA PROJECT NO. 170194000

SHEET NUMBER

C2.1

Drawing name: K:\IND_LDEV\170194000_Callera\International_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C2.1 GEOMETRIC TIE-UP PLAN.dwg C2.1 GEOMETRIC TIE-UP PLAN Oct 13, 2020 1:26pm by: Eric.Flacable
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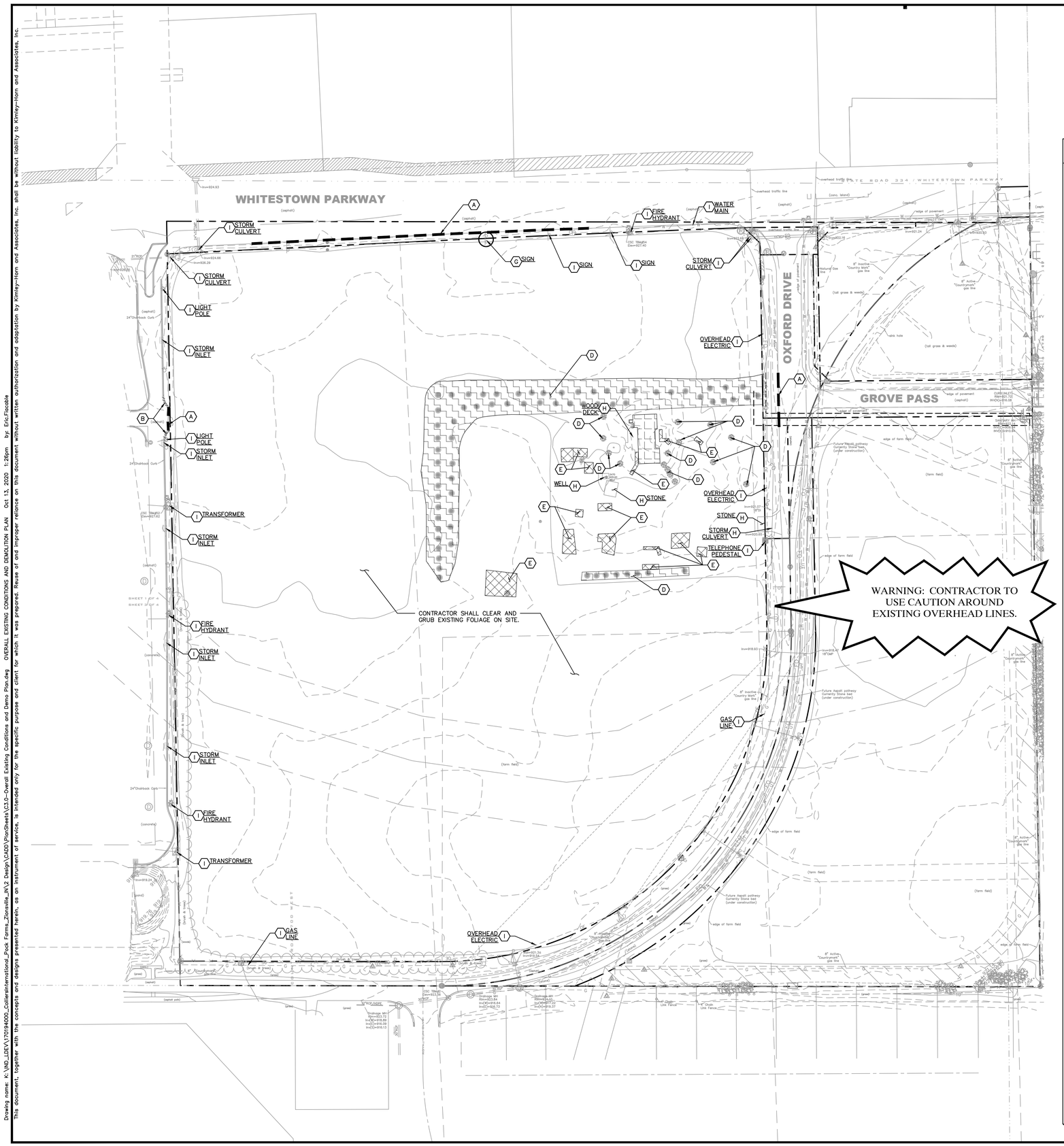

Indiana Utilities Protection Service

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NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

DEMOLITION NOTES

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
5. IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING INDOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
6. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
7. QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
8. PRIOR TO BIDDING AND CONSTRUCTION, CONTRACTOR TO REFER TO OWNER PROVIDED PHASE I ENVIRONMENTAL SITE ASSESSMENT AND ASBESTOS REPORT FOR SITE SPECIFIC CONDITIONS AND CONSIDERATIONS.
9. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS
10. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION. REFER TO THE EROSION CONTROL SHEET.
11. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.

DEMOLITION NOTES

THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN. SEE ARCHITECTURAL DRAWINGS FOR LIMITS AND PROPER DEMOLITION OF EXISTING BUILDING. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICE NECESSARY TO COMPLETE THE WORK. DEMOLITION INCLUDES, BUT IS NOT LIMITED TO, REMOVAL AND DISPOSAL OFFSITE OF THE FOLLOWING ITEMS:

- SIDEWALK AND ON-SITE PAVEMENT
- BUILDINGS, FOUNDATIONS, AND SUPPORTING WALLS AND SLABS
- DEBRIS AND FOUNDATIONS FROM ALL DEMOLISHED STRUCTURES
- ALL PAVEMENT TO BE REMOVED ADJACENT TO PAVEMENT THAT IS TO REMAIN SHALL BE SAWCUT FULL DEPTH AT THE EDGES PRIOR TO REMVAL TO OBTAIN A "CLEAN" JOINT WHERE IT ABUTS NEW CURB OR PAVEMENT.

CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.

DISPOSAL OF DEMOLISHED MATERIALS

REMOVE FROM SITE DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. BURNING OF REMOVED MATERIALS FROM DEMOLISHED STRUCTURES WILL NOT BE PERMITTED ON SITE. TRANSPORT MATERIALS REMOVED FROM DEMOLISHED STRUCTURES AND DISPOSE OF OFF SITE IN A LEGAL MANNER.

LANDSCAPE PROTECTION AND REMOVAL

SEE LANDSCAPE PLANS FOR INFORMATION ON LANDSCAPE AND TREE PROTECTION, PRESERVATION AND REMOVAL.

UTILITY SERVICES

EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FLOWABLE FILL OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.

UTILITY PROTECTION

UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL INDIANA 811 (811 OR 800-382-5544) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.

POLLUTION CONTROLS

USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.

FILLING BASEMENTS AND VOIDS

COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE INDOT APPROVED CRUSHED LIMESTONE OR APPROVED EQUAL. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

DEMOLITION LEGEND

A	SAWCUT LINE
B	CURB REMOVAL
C	UTILITY REMOVAL
D	TREE REMOVAL
E	CONCRETE REMOVAL
F	BUILDING REMOVAL
G	ITEM TO BE RELOCATED
H	ITEM TO BE REMOVED
I	ITEM TO BE PROTECTED

EXISTING LEGEND

SIGN / TWO POST SIGN	TELEPHONE PEDESTAL
WATER VALVE	WOODEN LIGHT POLE
FIRE HYDRANT	LIGHT POLE SQUARE
WATER METER	CONIFEROUS TREE & SIZE
GAS METER	DECIDUOUS TREE & SIZE
GAS VALVE	BUSH
CLEAN-OUT	DRAINAGE MANHOLE
ELECTRIC METER BOX	SANITARY MANHOLE
ELECTRIC TRANSFORMER	CURB INLET
ELECTRIC PEDESTAL	GROUND ACCENT LIGHT
GUARD POST	GUY WIRE
AIR CONDITIONER UNIT	
LIGHT POLE ROUND	
REBAR SET/FOUND	
FLAT GRATE INLET	
COMBINATION POLE	
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	

No.	REVISIONS	DATE	BY

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GREGORY RICHARD RUSTMANN, REGISTERED PROFESSIONAL ENGINEER, STATE OF INDIANA, 10900066
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

EXISTING CONDITIONS AND DEMO PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C3.0

Drawing name: K:\IND_LDEV\170194000_Collierlnternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C3.0-Overall Existing Conditions and Demo Plan.dwg OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN Oct 13, 2020 1:26pm by: Eric.Flaodle
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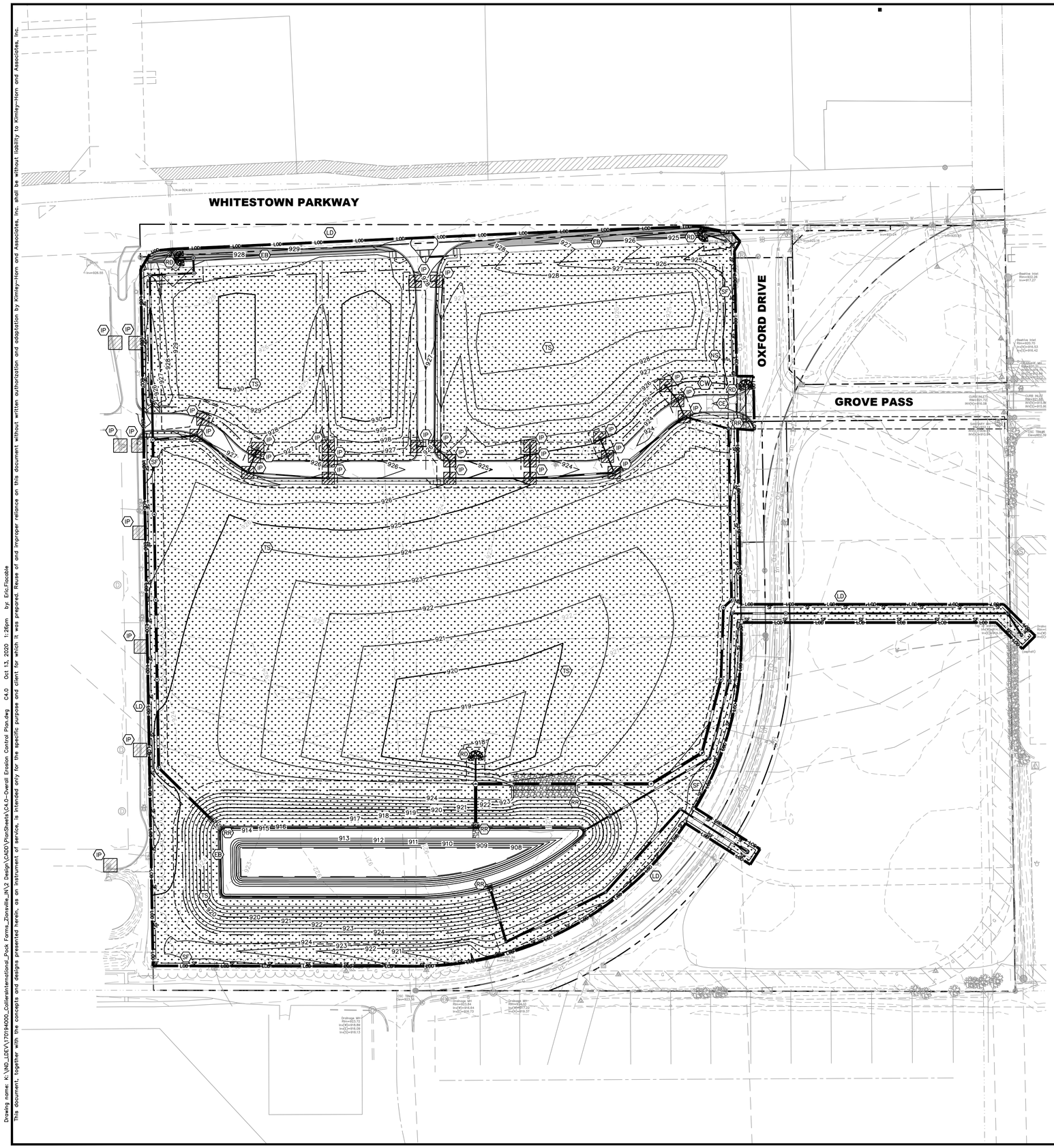

Indiana Utilities Protection Service

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GRAPHIC SCALE IN FEET
0 40 80 160

EXISTING LEGEND

- SIGN / TWO POST SIGN
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- GAS METER
- GAS VALVE
- CLEAN-OUT
- ELECTRIC METER BOX
- ELECTRIC TRANSFORMER
- ELECTRIC PEDESTAL
- GUARD POST
- AIR CONDITIONER UNIT
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- OE — OVERHEAD ELECTRIC
- VCP — vitrified clay pipe
- RCP — reinforced concrete pipe
- PVC — polyethylene coated pipe

EROSION CONTROL LEGEND

- TS — TEMPORARY SEEDING (SEE EROSION CONTROL DETAILS)
- EB — TEMPORARY EROSION CONTROL BLANKET (SEE TEMPORARY EROSION CONTROL NOTE #3)
- CE — CONSTRUCTION ENTRANCE (SEE EROSION CONTROL DETAILS)
- SF — SILT FENCE (SEE EROSION CONTROL DETAILS)
- IP — AREA INLET PROTECTION (SEE EROSION CONTROL DETAILS)
- CW — CONCRETE WASHOUT (SEE EROSION CONTROL DETAILS) (TO BE DETERMINED BY CONTRACTOR)
- RR — RIP RAP (SEE EROSION CONTROL DETAILS)
- RD — ROCK DONUT (SEE EROSION CONTROL DETAILS)
- SS — TEMPORARY SOIL STOCKPILE
- LD — LIMITS OF DISTURBANCE
- CD — CHECK DAM
- 620 — EXISTING CONTOURS
- 620 — PROPOSED CONTOURS
- NS — N.O.I. SIGN
- SA — STAGING AREA
- DD — DEBRIS DUMPSTER
- PL — PORT-O-LET

EROSION CONTROL NOTES

TEMPORARY EROSION CONTROL NOTES

1. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
2. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
3. CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN SB150 OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES GREATER THAN 4:1, AND IN THE BOTTOM AND SIDE SLOPES OF ALL SWALES.
4. PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
5. PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE.
6. ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
7. ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
8. ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
9. SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.
10. PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
11. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.
12. STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.
13. ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
14. WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.

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GREGORY RICHARD RUPLE
REGISTERED
NOT APPROVED FOR CONSTRUCTION
INDIANA PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

OVERALL EROSION CONTROL PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C4.0

Drawing name: K:\IND_LDEV\170194000_Collierset\ensitional_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C4.0-Overall Erosion Control Plan.dwg C4.0 Oct 13, 2020 1:26pm by: Eric.Fiscelle
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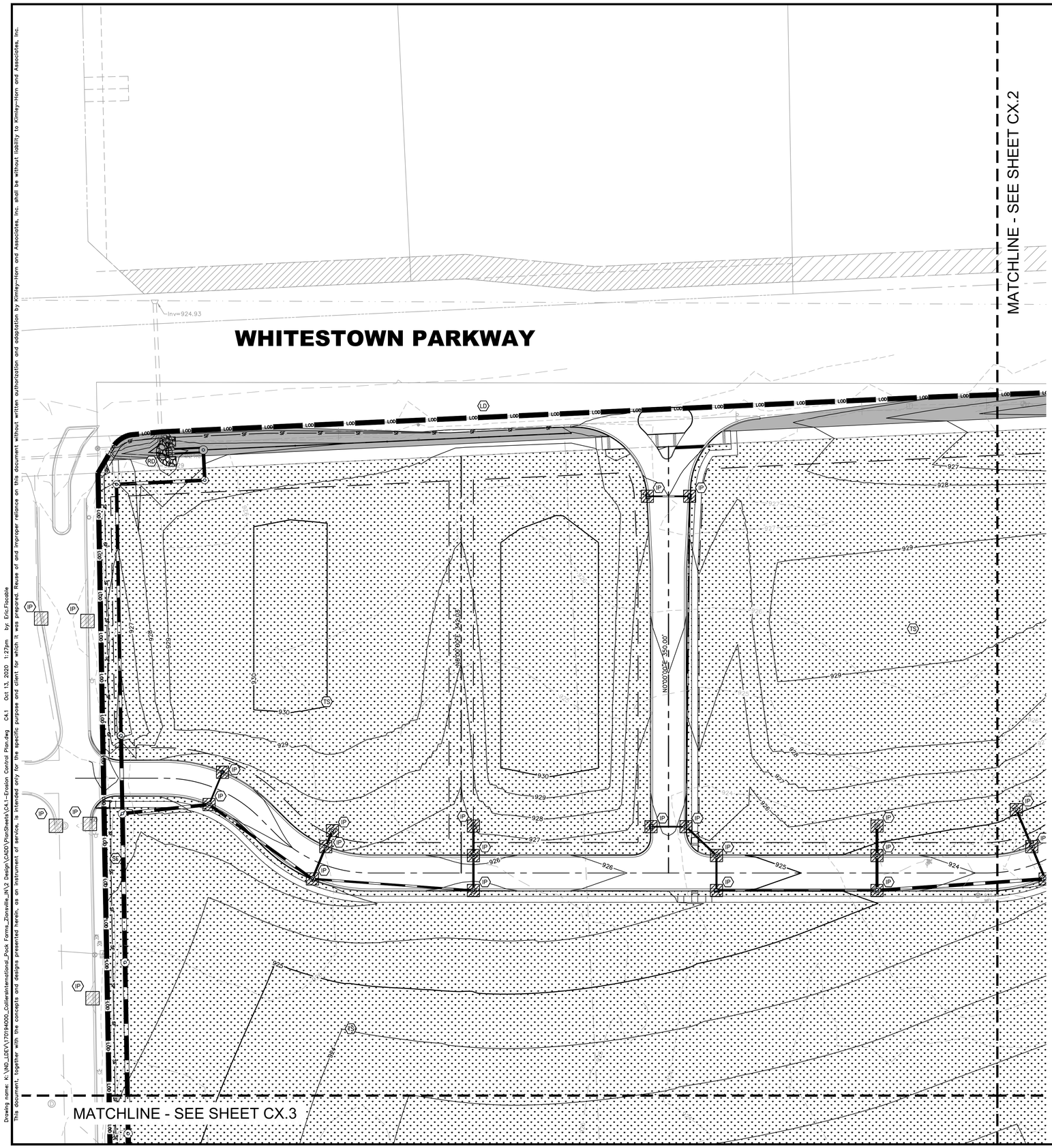

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GRAPHIC SCALE IN FEET
0 20 40 80

EROSION CONTROL LEGEND

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GENERAL PLAN NOTES

REFER TO GENERAL NOTES SHEET FOR MORE INFORMATION INCLUDING THE FOLLOWING: (EXISTING LEGEND, BENCHMARK INFORMATION, AND SPECIFIC GENERAL PLAN NOTES.)

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POCK FAMILY FARMS, LLC

EROSION CONTROL PLAN

POCK FARM INFRASTRUCTURE PHASE 1

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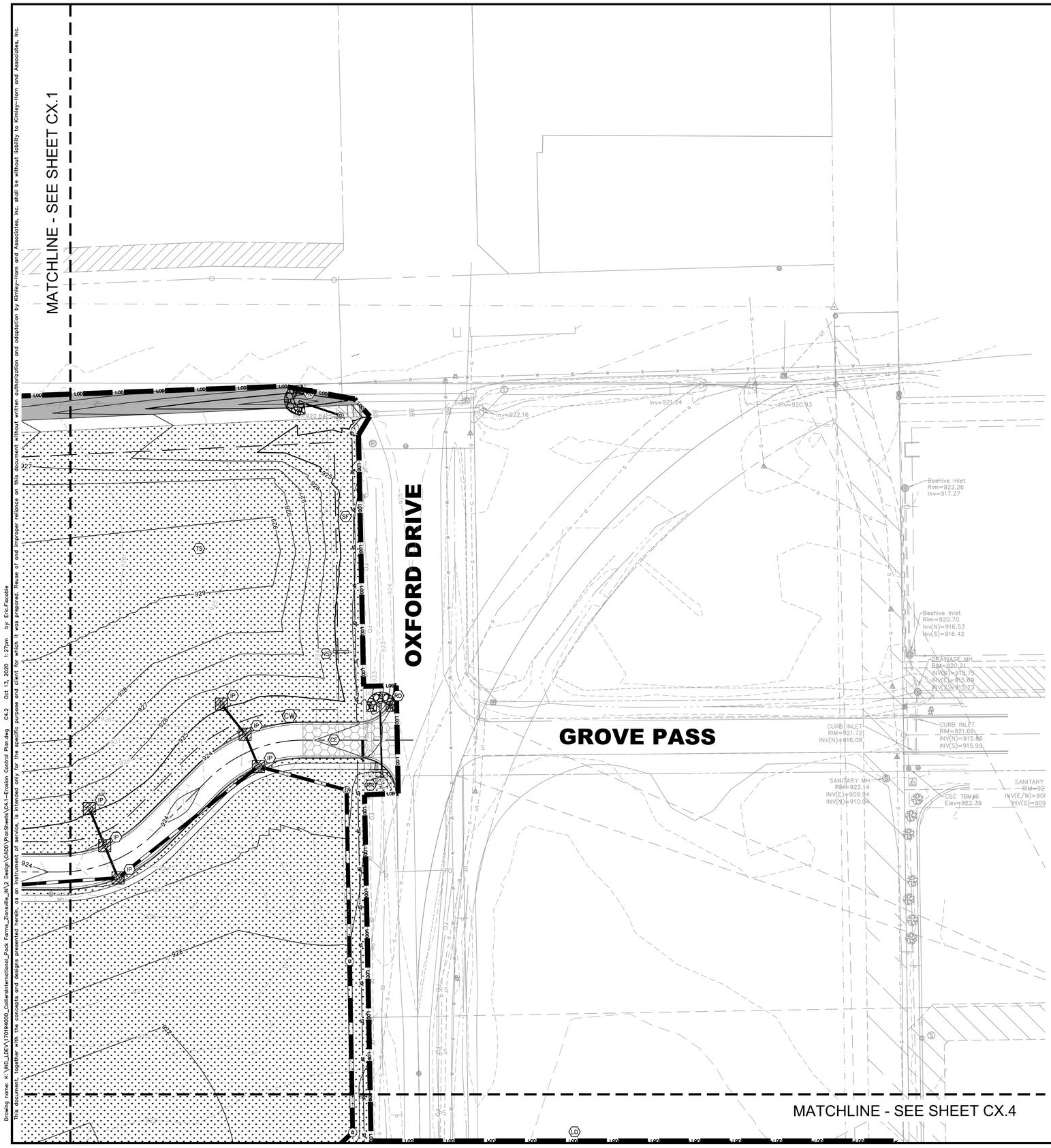

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EROSION CONTROL LEGEND

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VCP vitrified clay pipe
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GENERAL PLAN NOTES

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POCK FAMILY FARMS, LLC

EROSION CONTROL PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020

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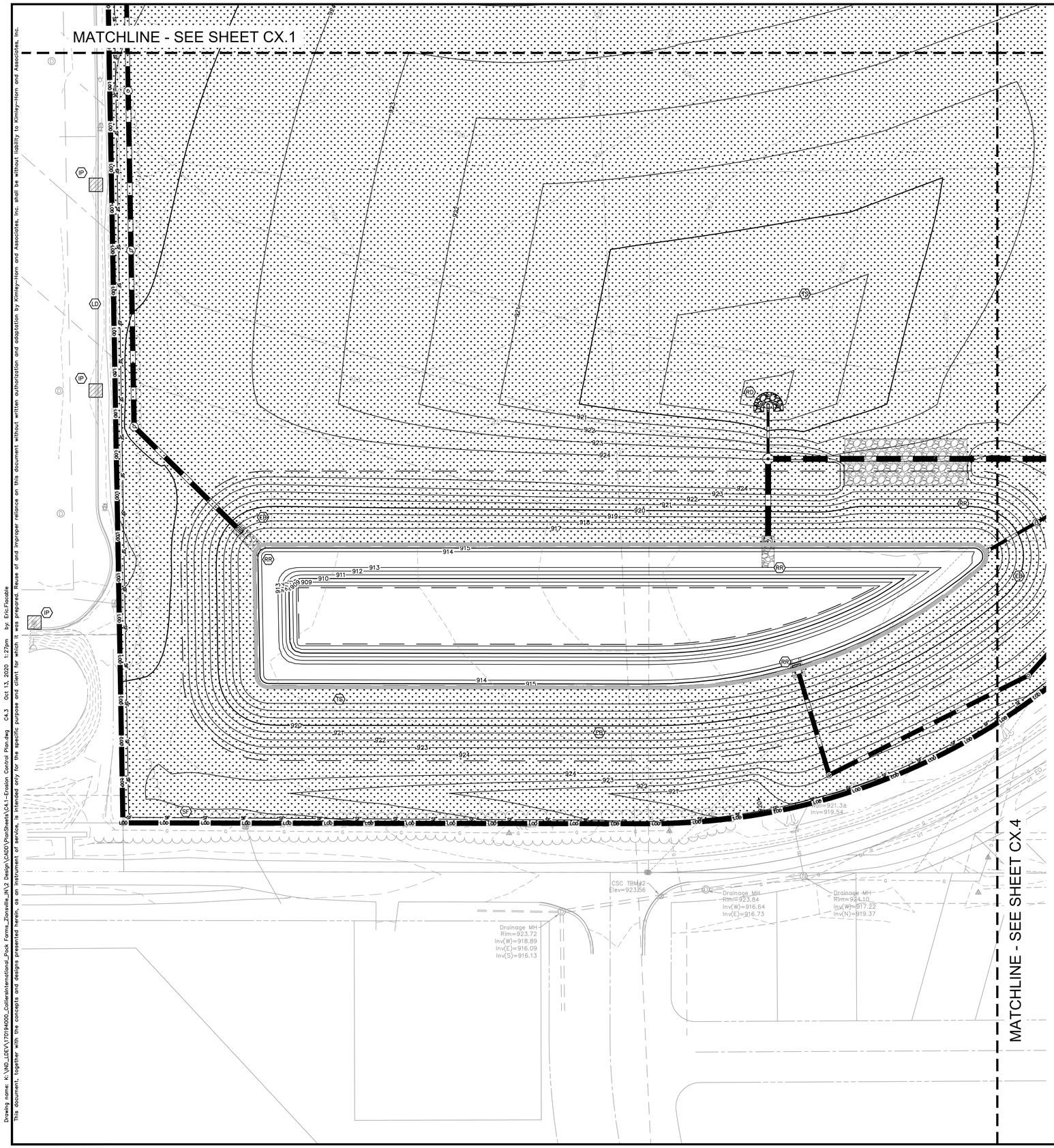

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POCK FAMILY FARMS, LLC

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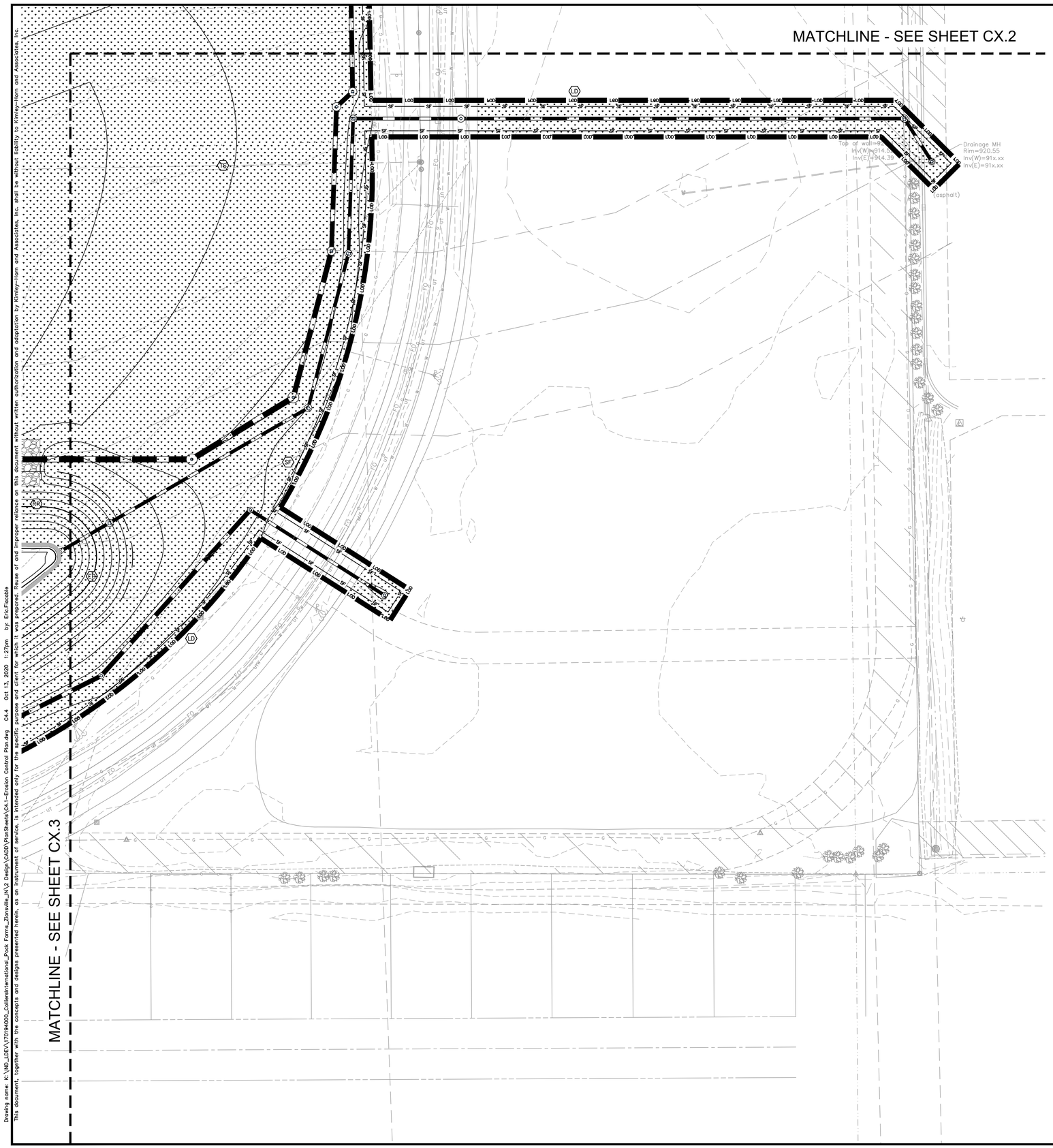
SHEET NUMBER

C4.3



Drawing name: K:\IND_LDEV\170194000_CollierInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C4.1-Erosion Control Plan.dwg C4.4 Oct 13, 2020 1:27pm by: Eric.Fiscable

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Indiana Utilities Protection Service

Call 811 before you dig

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

EROSION CONTROL LEGEND

TS	TEMPORARY SEEDING (SEE EROSION CONTROL DETAILS)
EB	TEMPORARY EROSION CONTROL BLANKET (SEE TEMPORARY EROSION CONTROL NOTE #3)
CE	CONSTRUCTION ENTRANCE (SEE EROSION CONTROL DETAILS)
SF	SILT FENCE (SEE EROSION CONTROL DETAILS)
IP	AREA INLET PROTECTION (SEE EROSION CONTROL DETAILS)
CW	CONCRETE WASHOUT (SEE EROSION CONTROL DETAILS) (TO BE DETERMINED BY CONTRACTOR)
RR	RIP RAP (SEE EROSION CONTROL DETAILS)
RD	ROCK DONUT (SEE EROSION CONTROL DETAILS)
SS	TEMPORARY SOIL STOCKPILE
LD	LIMITS OF DISTURBANCE
CD	CHECK DAM
	EXISTING CONTOURS
	PROPOSED CONTOURS
NS	N.O.I. SIGN
SA	STAGING AREA
DD	DEBRIS DUMPSTER
PL	PORT-O-LET

EXISTING LEGEND

SIGN / TWO POST SIGN
WATER VALVE
FIRE HYDRANT
WATER METER
GAS METER
GAS VALVE
CLEAN-OUT
ELECTRIC METER BOX
ELECTRIC TRANSFORMER
ELECTRIC PEDESTAL
GUARD POST
AIR CONDITIONER UNIT
LIGHT POLE ROUND
REBAR SET/FOUND
FLAT GRATE INLET
COMBINATION POLE
TELEPHONE PEDESTAL
WOODEN LIGHT POLE
LIGHT POLE SQUARE
CONIFEROUS TREE & SIZE
DECIDUOUS TREE & SIZE
BUSH
DRAINAGE MANHOLE
SANITARY MANHOLE
CURB INLET
GROUND ACCENT LIGHT
GUY WIRE

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

GENERAL PLAN NOTES

REFER TO GENERAL NOTES SHEET FOR MORE INFORMATION INCLUDING THE FOLLOWING: (EXISTING LEGEND, BENCHMARK INFORMATION, AND SPECIFIC GENERAL PLAN NOTES.)

No.	REVISIONS	DATE	BY

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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

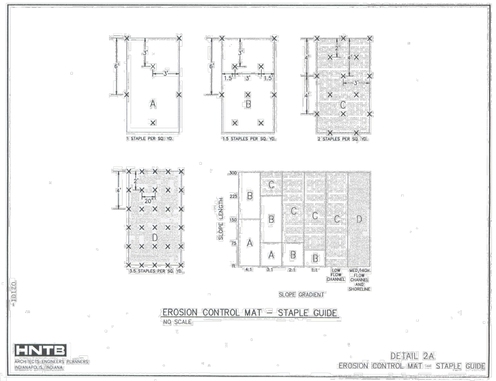
GREGORY RICHARD RUSTEMEYER REGISTERED 20100066 STATE OF INDIANA PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

EROSION CONTROL PLAN

POCK FARM INFRASTRUCTURE PHASE 1

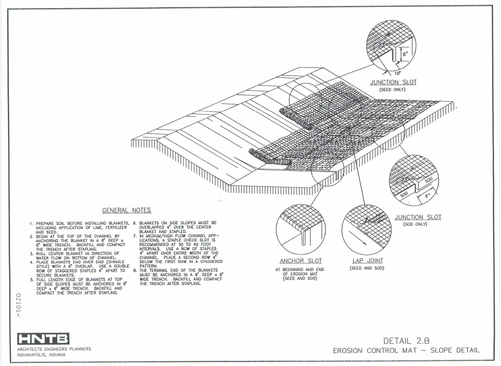
ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C4.4



EROSION CONTROL MAT – STAPLE GUIDE
NO SCALE

DETAIL 2A
EROSION CONTROL MAT – STAPLE GUIDE

Zionsville Standard (05/00) 02101 - 6

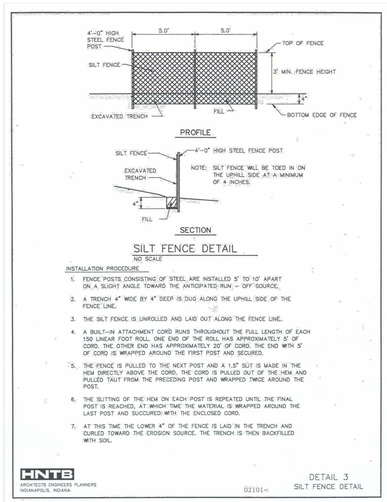


GENERAL NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 4" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL. WATER FLOW MUST NOT RUN UNDER BLANKET. STYLE WITH A 4" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
4. ON SIDE SLOPES, LAY BLANKETS AT TOP OF SLOPE SECTION MUST BE ANCHORED IN A 4" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
5. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED.
6. AT THE BEGINNING OF THE CHANNEL APRON, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 50 FOOT INTERVALS. DIG A TRENCH 4" DEEP x 4" APART OVER ENTIRE WIDTH OF TOP CHANNEL. PLACE A SECOND ROW OF STAPLES 4" APART IN THE STAGGERED PATTERN.
7. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 4" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

DETAIL 2B
EROSION CONTROL MAT – SLOPE DETAIL

Zionsville Standard (05/00) 02101 - 7



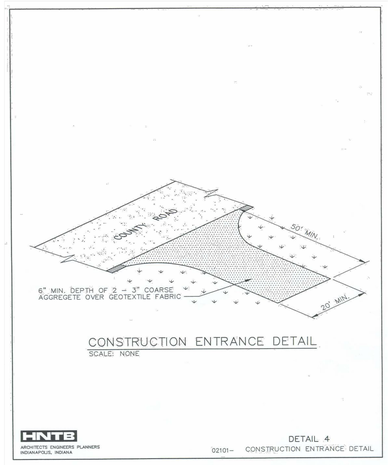
SILT FENCE DETAIL
NO SCALE

INSTALLATION PROCEDURE

1. FENCE POSTS CONSISTING OF STEEL ARE INSTALLED 5' TO 10' APART ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUN-OFF SOURCE.
2. A TRENCH 4" WIDE BY 4" DEEP IS DUG ALONG THE UPHILL SIDE OF THE FENCE LINE.
3. THE SILT FENCE IS UNROLLED AND LAID OUT ALONG THE FENCE LINE.
4. A BUILT-IN ATTACHMENT CORD RUNS THROUGHOUT THE FULL LENGTH OF EACH 150 LINEAR FOOT ROLL. ONE END OF THE ROLL HAS APPROXIMATELY 5' OF CORD. THE OTHER END HAS APPROXIMATELY 20' OF CORD. THE END WITH 5' OF CORD IS WRAPPED AROUND THE FIRST POST AND SECURED.
5. THE FENCE IS PULLED TO THE NEXT POST AND A 1.5" SLIT IS MADE IN THE HEM DIRECTLY ABOVE THE CORD. THE CORD IS PULLED OUT OF THE HEM AND PULLED TAUT FROM THE PRECEDING POST AND WRAPPED TWICE AROUND THE POST.
6. THE SLITTING OF THE HEM ON EACH POST IS REPEATED UNTIL THE FINAL POST IS REACHED, AT WHICH TIME THE MATERIAL IS WRAPPED AROUND THE LAST POST AND SECURED WITH THE ENCLOSED CORD.
7. AT THIS TIME THE LOWER 4" OF THE FENCE IS LAID IN THE TRENCH AND DURIED TOWARD THE EROSION SOURCE. THE TRENCH IS THEN BACKFILLED WITH SOIL.

DETAIL 3
SILT FENCE DETAIL

Zionsville Standard (05/00) 02101 - 8

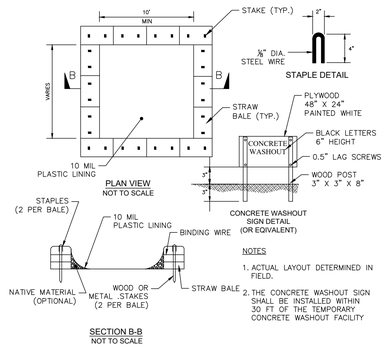


CONSTRUCTION ENTRANCE DETAIL
SCALE: NONE

DETAIL 4
02101– CONSTRUCTION ENTRANCE DETAIL

END OF SECTION 02101

Zionsville Standard (05/00) 02101 - 9



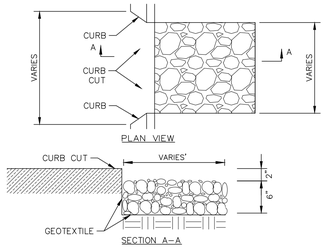
SECTION B-B
NOT TO SCALE

NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY

CONCRETE WASHOUT

N.T.S.

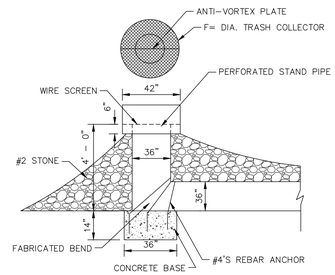


NOTES:

2. GEOTEXTILE (NON-WOVEN) MINIMUM CRITERIA:
   WEIGHT OF GEOTEXTILE (OZ/SQ.YD.)_____6
   TENSILE STRENGTH (LB) ASTM D 4632_____180
   ELONGATION AT FAILURE (%) ASTM D 4632_____≥ 50
   PUNCTURE (LB) ASTM D 4833_____80
   ULTRAVIOLET LIGHT (% RESIDUAL TENSILE STRENGTH)
   ASTM D 4355_____MIN 70
   APPARENT OPENING SIZE (AOS) ASTM D 4751_____MAX 40 SIEVE
   PERMITTIVITY SEC^{-1} ASTM D 4491_____MIN 0.70
2. THE RIPRAP SHALL BE PLACED PER INDOT STANDARDS.

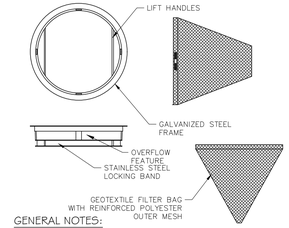
RIP RAP (AT CURB CUT)

N.T.S.



TEMPORARY STANDPIPE DETAIL

N.T.S.



GENERAL NOTES:

ALL PRODUCTS MANUFACTURED BY INLET AND PIPE PROTECTION, INC OR APPROVED EQUAL.

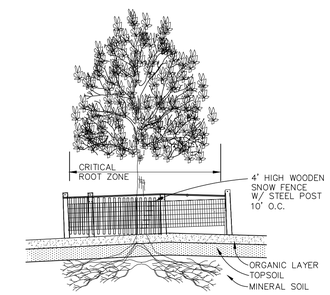
NOTE: INLET FILTERS ARE SLIGHTLY SMALLER THAN THE INLET GRATE SIZES. WHEN IDENTIFYING OR SPECIFYING FILTERS/CASTINGS PLEASE REFER TO THE DIAMETER "D" OR WIDTH "W" AND HEIGHT "H" OF FILTER FRAMES OR CASTING GRATES. YOU MAY ALSO REFER TO OUR CASTING CROSS REFERENCE GUIDE FOR INDOT STANDARDS

NOTE: ROUND AND SQUARE INLET FILTERS AVAILABLE FOR MOST NEENAH AND EAST JORDAN BEEHIVE, ROLL CURB AND CURB BOX FRAME TYPES

ALL IPP INLET FILTERS TO CONFORM TO INDOT SPECIFICATIONS.

INLET PROTECTION

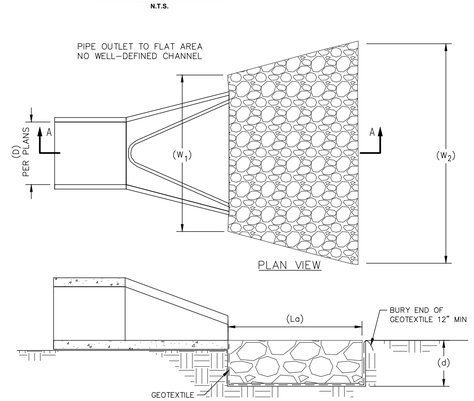
N.T.S.



PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE. FENCE SHALL BE PLACED IN A CIRCLE WITH A RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND FOR INDIVIDUAL TREES OR STANDS OF TREES.

TREE PROTECTION

N.T.S.

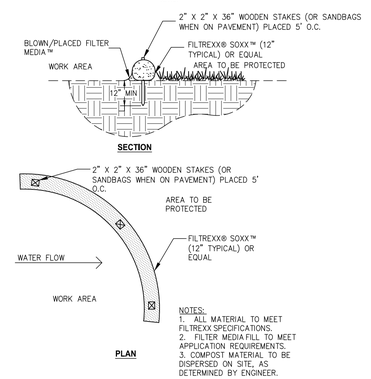


RIP RAP DETAIL OUTLET PROTECTION

N.T.S.

NOTES:

1. STONE SHALL BE HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT RIPRAP STONE AT A THICKNESS OF 12 IN. MINIMUM OR TWO TIMES THE STONE DIAMETER, WHICHEVER IS GREATER.
2. GEOTEXTILE (NON-WOVEN) MINIMUM CRITERIA:
   WEIGHT OF GEOTEXTILE (OZ/SQ.YD.)_____6
   TENSILE STRENGTH (LB) ASTM D 4632_____180
   ELONGATION AT FAILURE (%) ASTM D 4632_____≥ 50
   PUNCTURE (LB) ASTM D 4833_____80
   ULTRAVIOLET LIGHT (% RESIDUAL TENSILE STRENGTH)
   ASTM D 4355_____MIN 70
   APPARENT OPENING SIZE (AOS) ASTM D 4751_____MAX 40 SIEVE
   PERMITTIVITY SEC^{-1} ASTM D 4491_____MIN 0.70
3. ANY GEOTEXTILE SPLICES SHALL OVERLAP A MINIMUM OF 18 INCHES, WITH UPSTREAM OR UPSLOPE GEOTEXTILE OVERLAPPING THE ABUTTING DOWNSLOPE GEOTEXTILE.
4. APRON WIDTH W_1 SHALL BE 3 TIMES THE CULVERT PIPE DIAMETER. APRON WIDTH W_2 SHALL BE 4 TIMES THE CULVERT PIPE DIAMETER.
5. LA SHALL BE LENGTH SHOWN ON PLAN (10' MINIMUM)
6. CONTRACTOR SHALL PLACE RIP RAP PER MINIMUM LA OR EXTEND RIP RAP OUT TO RECEIVING FLOWLINE, WHICHEVER IS GREATER.



NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTER SOCK SEDIMENT CONTROL

N.T.S.

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A			*		A *				
DORMANT SEEDING	B											B
TEMPORARY SEEDING			C					D				
SODDING				E **								
MULCHING	F											

A KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE

B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE

C SPRING OATS 100 LBS/ACRE

D WHEAT OR CEREAL RYE 150 LBS/ACRE

E SOD

F STRAW MULCH 2 TONS/ACRE

* IRRIGATION NEEDED DURING JUNE AND AUGUST

** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD DURING ANY PART OF THE YEAR

SEEDING CHART

No.	REVISIONS	DATE	BY

Kimley»Horn
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INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUSH, REGISTERED PROFESSIONAL ENGINEER, STATE OF INDIANA, 10100066
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

EROSION CONTROL DETAILS

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C4.5

Drawing name: K:\IND_LDEV\170194000_Calliereinternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C4.2-Erosion Control Details.dwg EROSION CONTROL DETAILS Oct 13, 2020 1:27pm by: Eric.Flaodle
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GENERAL PROJECT INFORMATION

SITE NAME

THE AREA SCHEDULED FOR CONSTRUCTION IS KNOWN AS "POCK FARM" (HEREINAFTER REFERRED TO AS THE "PROJECT").

PROJECT LOCATION

THE PROJECT IS LOCATED IN EAGLE TOWNSHIP, ZIONSVILLE, BOONE COUNTY, INDIANA.

ADDRESS:
LATITUDE: 39°56'53.58"N
LONGITUDE: 86°20'18.58"W

OWNER'S INFORMATION

NAME: POCK FAMILY FARMS, LLC
ADDRESS: 2025 N WABASH AVENUE, KOKOMO, IN 46901
REPRESENTATIVE: JOHN DEMAREE
TELEPHONE: 317-213-6708

DEVELOPER'S INFORMATION

NAME: SAME AS ABOVE
ADDRESS:
REPRESENTATIVE:
TELEPHONE:

ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS - SECTION A

A1 INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS

REFER TO THE FOLLOWING LIST FOR LOCATIONS OF REQUIRED PLAN ELEMENTS
- C0.0 (TITLE SHEET): A4, A5, A18
- C1.21-C1.22 (PRIMARY PLAT): A2
- C3.0 (EXISTING CONDITIONS AND DEMOLITION): A10, A17, A22
- C5.2-5.4 (PLAN AND PROFILE): A2, A6
- C4.0-C4.4 (EROSION CONTROL PLAN): A6, A16, A21
- C5.0-C5.1 (GRADING PLAN): A6, A23
- C6.0-C6.4 (UTILITY PLAN): A6, A9, A19

A2 11"x17" PLAT

REFER TO SHEETS C1.20-C1.22 (PRIMARY PLAT).

A3 PROJECT DESCRIPTION

PROJECT CONSISTS OF THE DEMOLITION OF EXISTING RESIDENCES AND CONSTRUCTION OF A ±1,070 LF & A ±370 LF PRIVATE DRIVE AND MASS GRADING OF A ±25.07 ACRE PROJECT IN SECTION 6 OF T17N, R2E IN THE TOWN OF ZIONSVILLE, BOONE COUNTY, INDIANA.

A4 VICINITY MAP

REFER TO SHEET C0.0-COVER SHEET.

A5 LEGAL DESCRIPTION OF THE PROJECT SITE

REFER TO SHEET C0.0-COVER SHEET.

A6 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS

REFER TO SHEETS C1.20-C1.22 (PRIMARY PLAT).

A7 HYDROLOGIC UNIT CODE (14-DIGIT)

05120201120090

A8 STATE / FEDERAL WATER QUALITY PERMITS

NO SUCH PERMITS ARE REQUIRED.

A9 SPECIFIC POINTS WHERE STORMWATER DISCHARGE WILL LEAVE THE PROJECT SITE

EXISTING STORMWATER DISCHARGE
- THE EXISTING SITE IS COMPOSED OF 2 DRAINAGE BASINS. THE EXISTING NORTHEAST BASIN (13.40 ACRES) DISCHARGES THROUGH A CULVERT RUNNING UNDER OXFORD DRIVE APPROXIMATELY 750 LF SOUTH OF THE INTERSECTION OF WHITESTOWN PARKWAY AND OXFORD DRIVE. RUNOFF ULTIMATELY DISCHARGES INTO THE VILLAS BY WATERMARK DEVELOPMENT. THE EXISTING SOUTHWEST BASIN (11.68 ACRES) DISCHARGES THROUGH A CULVERT RUNNING UNDER OXFORD DRIVE APPROXIMATELY 155 LF FROM THE INTERSECTION OF OXFORD DRIVE AND ROYAL RUN BOULEVARD. RUNOFF ULTIMATELY DISCHARGES INTO THE EXISTING STORM INFRASTRUCTURE WITHIN THE ROYAL RUN SUBDIVISION. THE EXISTING SOLOMON HARMAN LEGAL DRAIN RUNS WEST TO EAST THROUGH THE SITE, COLLECTING INFILTRATION AND DISCHARGING INTO THE EXISTING VILLAS BY WATERMARK DEVELOPMENT TO THE EAST.

POST CONSTRUCTION STORMWATER DISCHARGE

- STORMWATER RUNOFF FOR THE PROPOSED, MASTER PLANNED 25.07 ACRE DEVELOPMENT WILL DISCHARGE INTO THE PROPOSED WET DETENTION PONDS AT THE SOUTH END OF THE PROJECT. STORMWATER RUNOFF FOR PROPOSED PAVING AND IMPROVEMENTS WILL SHEET FLOW AND PIPE FLOW INTO THE PROPOSED WET DETENTION POND. THE WET DETENTION POND IS TO DISCHARGE TO THE EAST BE CONVEYED THROUGH A REROUTED SOLOMON HARMAN LEGAL DRAIN THAT TIES INTO THE VILLAS BY WATERMARK DEVELOPMENT. REFER TO UTILITY PLAN AND UTILITY PROFILE SHEETS C6.0-C6.10.

A10 LOCATION AND NAME OF ALL WETLANDS, LAKES AND WATER COURSES ON AND ADJACENT TO THE PROJECT SITE

THE EXISTING SOLOMON HARMAN LEGAL DRAIN RUNS WEST TO EAST THROUGH THE SITE.

A11 IDENTIFICATION OF RECEIVING WATERS

THE PROJECT SITE DISCHARGE ULTIMATELY DISCHARGES TO FISHBACK CREEK (EAGLE CREEK RESERVOIR).

A12 IDENTIFICATION OF POTENTIAL DISCHARGES TO GROUND WATER

RUNOFF WILL NOT BE DISCHARGED TO GROUND WATER.

A13 100-YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGES

THE PROJECT SITE IS OR NOT LOCATED ENTIRELY IN ZONE "X" WHICH IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN. FIRM MAP PANEL 18011C0329E, DATED JANUARY 18, 2012.

A14 PRE-CONSTRUCTION AND POST CONSTRUCTION ESTIMATE OF PEAK DISCHARGE (10-YEAR STORM EVENT)

EXISTING CONDITIONS PEAK Q = ±39.25 CFS
PROPOSED CONDITIONS PEAK Q = ±3.41 CFS

A15 ADJACENT LANDUSE, INCLUDING UPSTREAM WATERSHED

NORTH: COMMERCIAL
SOUTH: RESIDENTIAL
EAST: COMMERCIAL
WEST: COMMERCIAL

A16 LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS

REFER TO EROSION CONTROL PLAN SHEETS FOR APPROXIMATE LIMITS OF DISTURBANCE.

A17 IDENTIFICATION OF EXISTING VEGETATIVE COVER

THE MAJORITY OF THE GROUND COVER IS CURRENTLY ROW CROPS.

A18 SOILS MAP INCLUDING SOIL DESCRIPTIONS AND LIMITATIONS

THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY OF BOONE COUNTY, INDIANA, INDICATES THAT CROSBY SILT LOAM, FINE-LOAMY SUBSOIL-URBAN LAND COMPLEX (YclA) AND CYCLONE SILTY CLAY LOAM-URBAN LAND COMPLEX (YCyA) ARE THE PREDOMINANT SOILS WITHIN THE PROJECT SITE. REFER TO SHEET C1.0 - COVER SHEET FOR SOILS MAP.

A19 LOCATIONS, SIZE AND DIMENSIONS OF PROPOSED STORMWATER SYSTEMS

REFER TO THE UTILITY PLAN FOR INFORMATION ON THE PROPOSED STORM SEWER SYSTEM.

A20 PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT

THE EXISTING SOLOMON HARMAN LEGAL DRAIN TO THE EAST OF THE PROJECT SHALL BE REROUTED WITHIN A PROPOSED REGULATED DRAIN EASEMENT.

A21 LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL AREAS

PROPOSED STOCKPILE LOCATIONS WILL BE SHOWN ON THE EROSION CONTROL PLAN SHEETS C4.0-C4.4.

A22 EXISTING SITE TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS

THE EXISTING TOPOGRAPHY WITHIN THE PROJECT SITE IS SHOWN ON SHEET C3.0 - EXISTING CONDITIONS AND DEMOLITION PLAN SHEET.

A23 PROPOSED FINAL TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS

THE PROPOSED TOPOGRAPHY WITHIN THE PROJECT SITE IS SHOWN ON SHEET C5.0 - GRADING AND DRAINAGE PLAN.

SWPPP - CONSTRUCTION - SECTION B

B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

THE FOLLOWING POTENTIAL POLLUTANT SOURCES MAY BE ASSOCIATED WITH CONSTRUCTION ACTIVITIES AT THE PROJECT SITE:

1. SIGNIFICANT MATERIAL INVENTORY
   - 1.1. THE VEHICLES USED BY THE FACILITY POSE A THREAT TO STORMWATER RUNOFF. STORMWATER IN THE AREA COULD BE CONTAMINATED BY AUTOMOBILE FLUIDS CONTAINING HEAVY METALS, OIL, GREASE, AND ALCOHOLS. FUELING OF VEHICLES SHOULD OCCUR ONLY IN MAINTENANCE GARAGES, OR OTHER APPROVED LOCATIONS. CONCRETE PAVEMENT SHOULD BE LAID IN FUELING AREAS, AND APPROPRIATE DRAIN COLLECTION SYSTEMS (INDEPENDENT OF STORM SEWER SYSTEMS) SHALL BE INSTALLED. THE VEHICLES SHOULD BE MAINTAINED REGULARLY TO AVOID LEAKAGE.
   - 1.2. THE BITUMINOUS ASPHALT THAT IS BEING LAID ALSO POSES A POTENTIAL POLLUTION RISK. WHEN THE ASPHALT COMES IN CONTACT WITH RAINWATER, PETROLEUM SURFACTANTS CAN BE LIFTED FROM THE ASPHALT AND TRANSPORTED INTO THE STORM SEWER. THESE POLLUTANTS CAN BE HARMFUL TO ANIMALS.
2. POTENTIAL POLLUTANTS
   - 2.1. SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS ARE ALLOWED TO BE DISCHARGED FROM THE SITE VIA STORMWATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. ALL CONTAINERS (DUMPSTERS) MUST BE COVERED. INDIANA'S SOLID WASTE REGULATIONS REQUIRE THAT CONSTRUCTION AND DEMOLITION WASTE BE TAKEN TO A PERMITTED SANITARY LANDFILL. NO LIQUIDS OR HAZARDOUS WASTE WILL BE ACCEPTED. THE CONTRACTOR SHALL CONTACT THE NEAREST IDEM FIELD OFFICE TO DETERMINE THE NEAREST PERMITTED SANITARY LANDFILL. NO RUBBLE MAY BE PLACED WITHIN WATERWAYS, FLOODPLAINS, OR WETLANDS WITHOUT IDEM OR JURISDICTION APPROVAL.
   - 2.2. SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND WILL BE SERVICED BY A COMMERCIAL OPERATOR.
   - 2.3. HAUL MATERIALS - ALL MATERIALS HAULED TO OR FROM THE SITE SHOULD BE SECURED TO PREVENT LITTERING AND ANY SPILLS MUST BE CLEANED UP IMMEDIATELY.
   - 2.4. CONCRETE/MASONRY - A CONCRETE/MASONRY WASHOUT SHALL BE PRESENT ONSITE. CONTRACTOR SHALL NOT USE UNLINED EARTHEN PITS BUT SHALL ENSURE THAT THE WASHOUT IS AN APPROPRIATE SIZE AND INCLUDES A LINING AND SOMETHING TO PREVENT THE POLLUTANTS FROM REACHING THE STORM SEWER SYSTEM AND THE SOILS ONSITE. A PREFABRICATED WASHOUT IS RECOMMENDED. TO PROLONG THE LIFE OF THE PREFABRICATED WASHOUTS, SCRAPINGS MAY BE STOCKPILED NEXT TO THE WASHOUT, PROVIDED THE WASHOUT AND STOCKPILE ARE REGULARLY MAINTAINED, LEGIBLY SIGNED WITH USE INSTRUCTIONS, AND THE AREA RESTORED TO PREVIOUS CONDITIONS WHEN FINISHED.
   - 2.5. LITTER - THE CONSTRUCTION SITE SHALL BE KEPT CLEAN AT ALL TIMES. MISCELLANEOUS LITTER POSES A THREAT TO SURROUNDING WATERWAYS AND IS AN AESTHETIC NUISANCE.
   - 2.6. SEDIMENT/ EXPOSED SOIL - ALL EXPOSED SOILS ARE TO BE TEMPORARILY SEEDED OR MULCHED SO AS TO NOT BE LEFT UNEXPOSED FOR MORE THAN 7 DAYS. PROJECT SITE IS TO HAVE SILT FENCE AND INLET PROTECTION FOR SEDIMENT CONTROL.

B2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES

1. CONDUCT AN EROSION SEDIMENT CONTROL PRE-CONSTRUCTION MEETING PRIOR TO ANY EARTHWORK MATERIALS.
2. CONTACT IDEM AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
3. POST NOI AT ENTRANCE.
4. DESIGNATE A PERSON TO BE RESPONSIBLE FOR SITE INSPECTIONS AFTER EACH RAINFALL AND A MINIMUM OF 1 TIME PER WEEK.
5. INSTALL CONSTRUCTION ENTRANCE.
6. INSTALL SILT FENCE AROUND PERIMETER OF THE PROJECT SITE AND INLET PROTECTION AT EXISTING INLETS.
7. INSTALL STAGING AREA, FUELING STATION, MATERIAL STORAGE AREA, CONCRETE WASHOUT, AND PORT-O-LET.
8. CONTACT CITY MS4 TO CONDUCT AN INITIAL EROSION INSPECTION PRIOR TO MASS EARTHWORK.
9. INSTALL SEDIMENT BASINS, OFFSITE DISCHARGE PIPE, AND DIVERSION SWALES/ROCK CHECK DAMS.
10. STRIP TOPSOIL AND STOCKPILE.
11. REMOVE PAVEMENT AND OTHER ITEMS SHOWN TO BE DEMOLISHED.
12. ROUGH GRADE PROPOSED PONDS.
13. ROUGH GRADE THE PROJECT SITE, SEED DISTURBED AREAS IMMEDIATELY FOLLOWING ROUGH GRADING. AREAS THAT WILL NOT BE DISTURBED AGAIN SHOULD BE PERMANENTLY SEEDED. NO UN-VEGETATED AREAS SHALL BE LEFT EXPOSED FOR MORE THAN 7 DAYS.
14. BEGIN ROAD AND BUILDING CONSTRUCTION.
15. INSTALL UNDERGROUND UTILITIES. EROSION CONTROL MEASURES SHALL BE INSTALLED AT NEW DRAIN INLET LOCATIONS IMMEDIATELY UPON INSTALLATION.
16. FINAL GRADE THE SITE.
17. PAVING OPERATIONS. EROSION CONTROL MEASURES SHALL BE LEFT IN-PLACE UNTIL THE SITE VEGETATION HAS BEEN ESTABLISHED.
18. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AT THE CONCLUSION OF THE PROJECT.

B3 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS (AT ALL POINTS OF INGRESS AND EGRESS)

REFER TO SHEETS C4.0-C4.4 - EROSION CONTROL PLAN FOR THE PROPOSED LOCATION OF THE CONSTRUCTION ENTRANCE. ENTRANCE SHALL BE INSTALLED PRIOR TO ANY SITE WORK.

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS

REFER TO SHEETS C4.0-C4.4 - EROSION CONTROL PLAN FOR SHEET FLOW AREAS TO BE PROTECTED BY SEEDING, MULCHING, OR HYDROSEEDING. IF CONCENTRATED FLOW IS EXPERIENCED DUE TO INTERIM GRADING DURING CONSTRUCTION, CONTRACTOR SHALL UTILIZE EROSION CONTROL BLANKETS AND ROCK DONUTS AT INLET LOCATIONS TO SLOW RUNOFF AND REDUCE THE POTENTIAL FOR EROSION AND SEDIMENTATION. SILT FENCES AND STRAW BALES ARE NOT AN ACCEPTABLE MEASURES FOR CONCENTRATED FLOW PROTECTION.

B5 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS

DIVERSION SWALES, EROSION CONTROL BLANKET, ROCK DONUTS AND CHECK DAMS, AND TEMPORARY SEDIMENT BASINS WILL BE USED TO CONTROL SEDIMENT IN CONCENTRATED FLOW AREAS. SEE EROSION CONTROL PLANS SHEETS C4.0-C4.4 FOR LOCATIONS OF THESE MEASURES. EROSION CONTROL MEASURES ARE TO BE INSPECTED AFTER EVERY MAJOR RAINFALL AND A MINIMUM OF ONCE A WEEK.

WATER REMOVED FROM TRAPS, BASINS, AND OTHER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.

B6 STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS

REFER TO SHEETS C4.0-C4.4 - EROSION CONTROL PLAN FOR INLET PROTECTION MEASURES AT EXISTING/ PROPOSED STORM SEWER INLETS. STRAW BALES WILL NOT BE ALLOWED AS INLET PROTECTION MEASURES.

B7 RUNOFF CONTROL MEASURES

REFER TO SHEETS C4.0-C4.4 - EROSION CONTROL PLAN FOR RUNOFF CONTROL MEASURES.

AREAS OF CONCENTRATED FLOW WILL BE PROTECTED WITH PERMANENT RIP RAP AT PIPE OUTLETS AND EROSION CONTROL BLANKET IN SWALES.

B8 STORM WATER OUTLET PROTECTION SPECIFICATIONS

PERMANENT RIP RAP WILL BE PROVIDED AT THE PROPOSED STORM WATER OUTLETS AS SHOWN ON SHEETS C4.0-C4.4 - EROSION CONTROL PLAN SHEETS.

B9 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS

RIP RAP AND TEMPORARY EROSION CONTROL BLANKET WILL BE UTILIZED TO PREVENT GRADE DESTABILIZATION. REFER TO SHEETS C4.0-C4.4 - EROSION CONTROL PLAN FOR LOCATIONS AND SHEET C4.5 - EROSION CONTROL DETAILS SHEET FOR DETAILS.

B10 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE

REFER TO SHEETS C4.1-C4.4 - EROSION CONTROL PLAN SHEETS FOR LOCATIONS AND SHEET C4.5 - EROSION CONTROL DETAILS SHEET FOR DETAILS OF CONSTRUCTION PHASE STORMWATER QUALITY MEASURES.

B11 TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON

1. TEMPORARY SEEDING
   - 1.1. TEMPORARY SEEDING IS THE PLANTING OF FAST-GROWING GRASSES TO HOLD DOWN THE SOILS IN DISTURBED AREAS SO THAT THEY ARE LESS LIKELY TO BE CARRIED OFFSITE BY STORMWATER RUNOFF OR WIND. WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY CEASES ON ANY PARTICULAR AREA, ALL DISTURBED GROUND WHERE THERE WILL NOT BE CONSTRUCTION FOR LONGER THAN 14 DAYS MUST BE SEEDED WITH FAST-GERMINATING TEMPORARY SEED AND PROTECT WITH MULCH. IN THE EVENT OF SNOW COVER, STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE THEREAFTER. REFER TO PLANTING PLAN OR SEED CHART FOR RECOMMENDED SEED MIXTURE.
   - 1.2. ANNUAL RYEGRASS SHALL BE USED FROM MARCH THROUGH NOVEMBER. MIXTURE SHALL BE APPLIED AT THE RATE OF 40 LB/ACRE.
   - 1.3. SPRING MIX SHALL BE USED FROM MARCH THROUGH MAY. THIS MIXTURE SHALL BE APPLIED AT THE RATE OF 150 LB/ACRE. THIS MIX SHALL CONSIST OF OATS.
   - 1.4. FALL MIX SHALL BE USED FROM SEPTEMBER THROUGH NOVEMBER. THIS MIXTURE SHALL BE APPLIED AT A RATE OF 150 LB/ACRE. THIS MIX SHALL CONSIST OF WINTER WHEAT.

B12 PERMANENT SURFACE STABILIZATION SPECIFICATIONS

THE PURPOSE OF SOIL STABILIZATION IS TO PREVENT SOIL FROM LEAVING THE SITE. IN THE NATURAL CONDITION, SOIL IS STABILIZED BY NATIVE VEGETATION. THE PRIMARY TECHNIQUE TO BE USED AT THIS SITE FOR STABILIZING SITE SOIL WILL BE TO PROVIDE A PROTECTIVE COVER OF TURF GRASS, PAVEMENT, OR BUILDING.

1. STEPS IN INSTALLING AND MAINTAINING PERMANENT SURFACE STABILIZATION MEASURES.
   - 1.1. SOIL PREPARATION - LOOSEN SOIL TO A DEPTH OF 6 INCHES. IF SOIL AMENDMENTS / FERTILIZERS ARE REQUIRED, APPLY AT MANUFACTURER'S RECOMMENDED APPLICATION RATE.
   - 1.2. FERTILIZER FOR LAWNS - PROVIDE A FAST-RELEASE FERTILIZER FOR LAWN APPLICATIONS.
   - 1.3. FERTILIZER FOR TREES / SHRUBS - PROVIDE A SLOW-RELEASE GRANULAR FERTILIZER FOR TREE / SHRUB APPLICATIONS.
   - 1.4. REMOVE TRASH, DEBRIS, STONES LARGER THAN 1 INCH IN DIAMETER, AND OTHER OBJECTS THAT MAY INTERFERE WITH PLANT ESTABLISHMENT. FINE GRADE SOIL SURFACE TO A SMOOTH FINISH. APPLY SEED USING A SPREADER OR SEEDING MACHINE AND DO NOT SEED WHEN WIND VELOCITIES ARE IN EXCESS OF 5 MPH. WHEN SOWING, APPLY IN TWO DIRECTIONS THAT ARE PERPENDICULAR TO EACH OTHER.
   - 1.5. RAKE SEED LIGHTLY INTO THE TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH A FINE SPRAY.
   - 1.6. PROTECT FRESHLY SOWED SEED BY INSTALLING A LAYER OF CLEAN, SEED-FREE STRAW MULCH UNIFORMLY TO PROVIDE A BLANKET NOT LESS THAN 1½ INCHES THICK.
   - 1.7. GENTLY WATER AREA TO KEEP STRAW MOIST UNTIL THE SEEDS HAVE ESTABLISHED.

B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN

1. SOIL TRACKING
   - 1.1. CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION ENTRANCE AND UTILIZE THE WHEEL WASH PRIOR TO LEAVING THE SITE. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION TRAFFIC. ALL DIRT TRACKED ONTO PUBLIC AND PRIVATE STREETS SHALL BE CLEANED.
2. DUST CONTROL
   - 2.1. WATER TRUCKS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE GENERAL CONTRACTOR TO A DEGREE THAT IS IN COMPLIANCE WITH APPLICABLE LOCAL AND STATE DUST CONTROL REGULATIONS. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED (AS DESCRIBED ELSEWHERE), WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.
3. WATER SOURCE
   - 3.1. NON-STORMWATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION, WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE. IT CAN BE RETAINED IN THE PONDS UNTIL IT INFILTRATES AND EVAPORATES.
4. CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS
   - 4.1. DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS THAT HAVE BEEN PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORMWATER THAT WILL BE DISCHARGED FROM THE SITE OR IN LOCATIONS WHERE WASTE CONCRETE CAN BE PLACED INTO FORMS TO MAKE RIPRAP OR OTHER USEFUL CONCRETE PRODUCTS. THE CURED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS SHALL BE DISPOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS. THE JOBSITE SUPERINTENDENT IS RESPONSIBLE FOR ASSURING THAT THESE PROCEDURES ARE FOLLOWED.
5. FUEL TANKS
   - 5.1. TEMPORARY ON-SITE FUEL TANKS FOR CONSTRUCTION VEHICLES SHALL MEET ALL STATE AND FEDERAL REGULATIONS. TANKS SHALL HAVE APPROVED SPILL CONTAINMENT WITH THE CAPACITY REQUIRED BY THE APPLICABLE REGULATIONS. THE TANK SHALL BE IN SOUND CONDITION FREE OF RUST OR OTHER DAMAGE WHICH MIGHT COMPROMISE CONTAINMENT. HOSES, VALVES, FITTINGS, CAPS, FILLER NOZZLES, AND ASSOCIATED HARDWARE SHALL BE MAINTAINED IN PROPER WORKING CONDITION AT ALL TIMES.
6. MASONRY WASTES
   - 6.1. CLEANING MASONRY TOOLS AND EQUIPMENT GENERATE A VARIETY OF WASTES. EXCESS CEMENT AND RINSE WATER ARE TWO EXAMPLES. SWEEP STREETS, GUTTERS, ALLEYS, AND SIDEWALKS RATHER THAN HOSING, REUSE AND RECYCLE MATERIALS IF POSSIBLE AND COLLECT AND PROPERLY DISPOSE OF WASTE.
7. SANITARY FACILITIES
   - 7.1. ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND WILL BE SERVICED BY A COMMERCIAL OPERATOR.
8. DUMPSTERS (LIDS AND LEAKS)
   - 8.1. WHEN WATER ENTERS THE DUMPSTER, IT CAN PICK UP POLLUTANTS FROM THE WASTE AND LEAK OUT AND EVENTUALLY ENTER THE STORM SEWER SYSTEM. TO PREVENT THIS, DUMPSTER LIDS MUST REMAIN CLOSED AT ALL TIMES AND DUMPSTERS MUST BE INSPECTED FOR LEAKS. NEVER PLACE HAZARDOUS WASTES IN A DUMPSTER OR TRASH BIN. DO NOT HOSE OUT THE DUMPSTER INTERIOR OR LOADING DOCKS. APPLY ABSORBENT OVER ANY FLUIDS SPILLED IN THE DUMPSTER. CHECK LOADING AND UNLOADING EQUIPMENT REGULARLY FOR LEAKS.
9. VEHICLE AND EQUIPMENT LEAKS
   - 9.1. VEHICLES AND CONSTRUCTION EQUIPMENT CONTAIN VARIOUS LIQUID POLLUTANTS THAT MAY LEAK AND ENTER THE STORM SEWER SYSTEM. TO PREVENT THIS, LOOK FOR AND REPORT LEAKS ON VEHICLES WHEN ADDING FUEL. USE SECONDARY CONTAINMENT WHEN TRANSFERRING FUEL FROM THE TANK TRUCK TO THE FUEL TANK. COVER STORM DRAINS IN THE VICINITY DURING THE TRANSFER. CLEAN UP SMALL SPILLS WITH ABSORBENT MATERIALS RATHER THAN HOSING DOWN THE AREA. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF IN TRASH.
10. EQUIPMENT MAINTENANCE
    - 10.1. EQUIPMENT REQUIRES MAINTENANCE METHODS THAT CAN PRODUCE POLLUTANTS THAT WILL ENTER THE STORM SEWER SYSTEM IF NOT PROPERLY CLEANED. KEEP ACCURATE MAINTENANCE LOGS AND UP TO DATE INVENTORY OF MATERIALS. PERFORM MAINTENANCE IN COVERED, DESIGNATED SERVICE BAYS WHERE SPILLS AND LEAKS CAN BE PROPERTY CONTAINED. RECYCLE SPENT FLUIDS - DO NOT DUMP DOWN THE DRAIN OR IN THE TRASH. AVOID HOSING DOWN WORK AREAS - USE RAGS FOR SMALL SPILLS, A DAMP MOP FOR GENERAL CLEANUP, AND DRY ABSORBENT FOR LARGER SPILLS.
11. CHEMICALS USED IN CONSTRUCTION
    - 11.1. THE CONSTRUCTION PROCESS REQUIRES THE USE OF MANY CHEMICALS INCLUDING PAINT, SOLVENTS, AND FERTILIZERS. IT IS IMPORTANT TO HANDLE THESE CHEMICALS APPROPRIATELY TO PREVENT CONTAMINATION OF THE STORM SEWER SYSTEM. FIT OIL AND CHEMICAL STORAGE CONTAINERS WITH SECONDARY CONTAINMENT STRUCTURES TO CONTAIN SPILLED MATERIALS. IT IS PREFERABLE TO STORE MATERIALS INDOORS BUT IF THERE IS ONLY AN OUTDOOR STORAGE AREA AVAILABLE, KEEP MATERIALS COVERED TO PREVENT RAIN FROM CONTACTING THE MATERIAL. COVER AND/OR CONTAIN STOCKPILES OR RAW MATERIALS (I.E. SALT, SOIL) TO PREVENT POLLUTED STORMWATER RUNOFF.
12. SPILL CLEANUP PROCEDURES
    - 12.1. IF A SPILL OCCURS, NOTIFY THE KEY SPILL RESPONSE PERSONNEL. IF THE MATERIAL IS HAZARDOUS, CONTACT THE LOCAL FIRE DEPARTMENT. NEVER WASH A SPILL INTO THE STORM DRAIN OR LEAVE IT WITHOUT CLEANING IT UP. CONTAIN SPILLS AND BLOCK THE NEARBY STORM DRAIN. CLEAN UP NON-HAZARDOUS SPILLS BY USING A RAG, DAMP CLOTH, OR ABSORBENT MATERIALS.
    - 12.2. IN CASE OF HAZARDOUS MATERIAL SPILLS, CONTACT THE CORRESPONDING AGENCY. THE INDIANA DEPARTMENT OF ENVIRONMENTAL SPILL RESPONSE LINE CAN BE CONTACTED 24 HOURS-A-DAY, 7 DAYS-A-WEEK AT (317) 233-7745, OR CALL 911.

B14 MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE

INSPECTION SCHEDULE / REPORTING

1. ALL DISTURBED AREAS WITHIN THE PROJECT SITE, INCLUDING ALL EROSION AND SEDIMENT CONTROL DEVICES, SHALL BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT TOTALING ½ " OF RAIN OR MORE.
2. INSPECTIONS AND WRITTEN REPORTS SHALL BE PREPARED BY A QUALIFIED PERSON WHO IS FAMILIAR WITH THIS SWPPP, THE PROJECT, AND THE EPA NPDES STORM WATER GENERAL PERMIT. PAPER COPIES OF INSPECTIONS SHALL BE KEPT ON-SITE FOR INSPECTION BY LOCAL AND STATE OFFICIALS.
3. INSPECTION REPORTS SHALL INCLUDE:
   - 3.1. TYPE OF INSPECTION
   - 3.2. FIELD OBSERVATIONS
   - 3.3. ACTIONS TAKEN AS A RESULT OF INSPECTION RESULTS
   - 3.4. OVERALL ASSESSMENT OF SWPPP COMPLIANCE
   - 3.5. THE CONTRACTOR SHALL KEEP A COPY OF THE REPORTS ONSITE AND PERMANENTLY FOR A PERIOD OF 2 YEARS FOLLOWING CONSTRUCTION.
4. CONSTRUCTION ENTRANCE
   - 4.1. VERIFY ADEQUATE STONE COVERAGE
   - 4.2. VERIFY CONSTRUCTION ACTIVITIES ARE NOT TRACKING SITE SOIL OUT ONTO ADJACENT ROADWAYS
5. MATERIAL STORAGE
   - 5.1. VERIFY MATERIAL STORAGE AREAS ARE PROTECTED FROM RAINFALL
   - 5.2. VERIFY FLUID IS NOT LEAKING FROM THE AREA
   - 5.3. OFFSITE STORAGE AREAS ARE TO BE CONSIDERED PART OF THE PROJECT
6. SOIL STABILIZATION
   - 6.1. VERIFY THAT SEEDED AREAS EXHIBIT HEALTHY PLANT ESTABLISHMENT
   - 6.2. THE SITE HAS ACHIEVED FINAL STABILIZATION ONCE ALL AREAS ARE EITHER COVERED BY PAVEMENT OR HAVE REACHED 70% OF THE VEGETATION DENSITY. THIS VEGETATION DENSITY MUST BE MAINTAINED IN ORDER TO REMAIN CATEGORIZED AS FINAL STABILIZATION. MEASURES MUST BE TAKEN TO REACH THIS LEVEL IF STANDARD PROCEDURES DO NOT YIELD ADEQUATE PLANT ESTABLISHMENT.
7. EROSION AND SEDIMENT CONTROL INSPECTIONS - THE FOLLOWING IS A LIST OF INSPECTION / MAINTENANCE PRACTICES THAT SHOULD BE CONDUCTED FOR EACH CONTROL MEASURE:
8. GEOTEXTILES/EROSION CONTROL MATS - MISSING / LOOSE MATS SHALL BE REPLACED AND REINSTALLED PER MANUFACTURER'S RECOMMENDATION.
   - 8.1. INLET PROTECTION - INLET PROTECTION MEASURES SHALL BE ROUTINELY INSPECTED AND ACCUMULATED SEDIMENT SHALL BE REMOVED TO ENSURE PROPER OPERATION.
   - 8.2. DIVERSION SWALES - REMOVE ACCUMULATED DEBRIS THAT REDUCES THE HYDRAULIC CAPACITY OF THE SWALE.
   - 8.3. MULCHING - APPLY ADDITIONAL MULCH TO SPARSE OR BARE SPOTS.
   - 8.4. SEDIMENT TRAP - REMOVE ACCUMULATED SEDIMENT TO ENSURE PROPER OPERATION.
   - 8.5. SEDIMENT BASIN - REMOVE ACCUMULATED SEDIMENT TO ENSURE PROPER OPERATION.
   - 8.6. SILT FENCE - REMOVE ACCUMULATED SEDIMENT THAT POSES A THREAT TO THE STABILITY OF THE FENCE (⅓ HEIGHT OF FENCE).
   - 8.7. CONSTRUCTION ENTRANCE - REDRESS ENTRANCE WITH ADDITIONAL STONE PERIODICALLY TO MAINTAIN FUNCTIONALITY.
   - 8.8. VEGETATION - ENSURE NEWLY SEEDED AREAS ARE PROTECTED FROM EROSION.
   - 8.9. GOOD HOUSEKEEPING - VERIFY THAT LITTER, MISCELLANEOUS CONSTRUCTION DEBRIS, CONSTRUCTION RELATED CHEMICALS, AND OTHER POTENTIALLY HARMFUL MATERIALS ARE PROPERLY STORED, COVERED, AND/OR DO NOT HAVE THE POTENTIAL TO ENTER THE STORM SEWER SYSTEM.
9. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, DOWNSTREAM SEDIMENT MUST BE REMOVED IMMEDIATELY TO REDUCE THE RISK OF ADVERSE IMPACTS.
10. BASED ON THE ACTUAL CONDITIONS OBSERVED ONSITE, ANY NECESSARY MODIFICATIONS TO THE PROJECT SWPPP SHALL BE IMPLEMENTED WITHIN 7 CALENDAR DAYS OF THE INSPECTION. ALL MODIFICATIONS TO THE SWPPP SHALL BE RECORDED BY THE CONTRACTOR AND SHALL BE PROVIDED UPON REQUEST.
11. IT IS THE OPERATOR'S SOLE RESPONSIBILITY TO ENSURE THE EROSION AND SEDIMENT CONTROL MEASURES ONSITE ARE SUFFICIENT TO MEET THE REQUIREMENTS OF THE EPA NPDES STORM WATER DISCHARGE PERMIT. IF ADDITIONAL MEASURES ARE REQUIRED, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING SUCH MEASURES.

NOTICE OF TERMINATION (NOT)

12. COMPLIANCE WITH THE GENERAL CONSTRUCTION PERMIT IS THE RESPONSIBILITY OF THE OPERATOR / PERMITTEE WHO SUBMITTED THE NOI UNTIL A NOTICE OF TERMINATION (NOT) HAS BEEN PROCESSED. THE PERMITTEE'S AUTHORIZATION TO DISCHARGE UNDER THE GENERAL CONSTRUCTION PERMIT TERMINATES AT MIDNIGHT OF THE DAY THE NOT IS SIGNED.
13. ALL PERMITTEES MUST SUBMIT AN NOT WITHIN 30 DAYS AFTER ONE OR MORE OF THE FOLLOWING CONDITIONS HAVE BEEN MET:
    - 13.1. FINAL STABILIZATION HAS BEEN ACHIEVED ONSITE
    - 13.2. ANOTHER OPERATOR / PERMITTEE HAS ASSUMED CONTROL OVER THE AREAS OF THE SITE THAT HAVE YET TO ACHIEVE FINAL STABILIZATION
    - 13.3. IN RESIDENTIAL CONSTRUCTION OPERATIONS, TEMPORARY STABILIZATION HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN TRANSFERRED TO THE HOMEOWNER.

B15 EROSION & SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS

SINCE THE ENTIRE PROJECT SITE IS UNDER THE SAME OWNER, THERE ARE NOT ANY INDIVIDUAL BUILDING LOTS.

SWPPP - POST CONSTRUCTION - SECTION C

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE

POTENTIAL POLLUTANTS GENERATED DUE TO THIS PROJECT INCLUDE:
1. LITTER FROM USERS.
2. AUTOMOBILE FLUIDS FROM VEHICLES.

C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION

THE PROPOSED WET DETENTION POND WILL BE INSTALLED INITIALLY IN CONJUNCTION WITH STORM INFRASTRUCTURE, WHICH WILL BE INSTALLED IN ACCORDANCE WITH LATER UTILITY INSTALLATION AND GRADING.

C3 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES

PROPOSED WET DETENTION POND:
- WET DETENTION PONDS DETAIN STORM WATER RUNOFF LONG ENOUGH FOR CONTAMINATED SEDIMENTS TO SETTLE AND REMAIN IN THE POND AND ALLOW THE WATER IN THE POND TO BE DISPLACED BY THE NEXT RAIN EVENT. THE SEDIMENTATION PROCESS REMOVES PARTICULATE, ORGANIC MATTER, AND METALS FROM THE WATER WHILE NUTRIENTS ARE REMOVED THROUGH BIOLOGICAL UPTAKE. BY CAPTURING AND RETAINING RUNOFF, WET PONDS CONTROL BOTH STORM WATER QUALITY AND QUANTITY.

GOOD HOUSEKEEPING MEASURES:
- GOOD HOUSEKEEPING MEASURES SUCH AS REGULAR STREET SWEEPING AND, INSTALLATION OF TRASH RECEPTACLES, AND REDUCTION IN FERTILIZER OVERSPRAY CAN BE INCORPORATED BY THE OWNER AND/OR OCCUPANT.

C4 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE

THE FOLLOWING ITEMS ARE STORMWATER QUALITY MEASURES THAT WILL BE INSTALLED DURING CONSTRUCTION. THESE ITEMS WILL REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETED AND ARE CONSIDERED TO SERVE ON INCIDENTAL FUNCTION AS POST-CONSTRUCTION STORMWATER QUALITY BMPS.

WET DETENTION POND:
- THE PROPOSED WET DETENTION PONDS WILL BE VARYING LENGTHS AND SIZES. ALL POND LOCATIONS CAN BE FOUND ON SHEETS C4.1-C4.9.

C5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER QUALITY MEASURES

MAINTENANCE REQUIREMENTS FOR THE STORMWATER QUALITY MEASURES WHICH REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETE, ARE DESCRIBED BELOW. REFER TO THE BMP OPERATIONS AND MAINTENANCE MANUAL FOR MORE DETAILED MAINTENANCE REQUIREMENTS.

DETENTION PONDS (WET)
- INSPECT PERIODICALLY AS NEEDED OR AT LEAST EVERY SIX MONTHS. SEDIMENT SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH ALL APPLICABLE LAWS. AREAS THAT SHOW SIGN OF EROSION SHALL BE STABILIZED WITH EROSION CONTROL BLANKET AND/OR SEED AS NECESSARY.

No.	REVISIONS	DATE	BY

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POCK FAMILY FARMS, LLC

SWPPP

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER

C4.6

Drawing name: K:\IND_LDEV\170194000_CollierslnternationaI_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C4.3-SWPPP.dwg SWPPP Oct 13, 2020 1:27pm by: Eric.Fiacable
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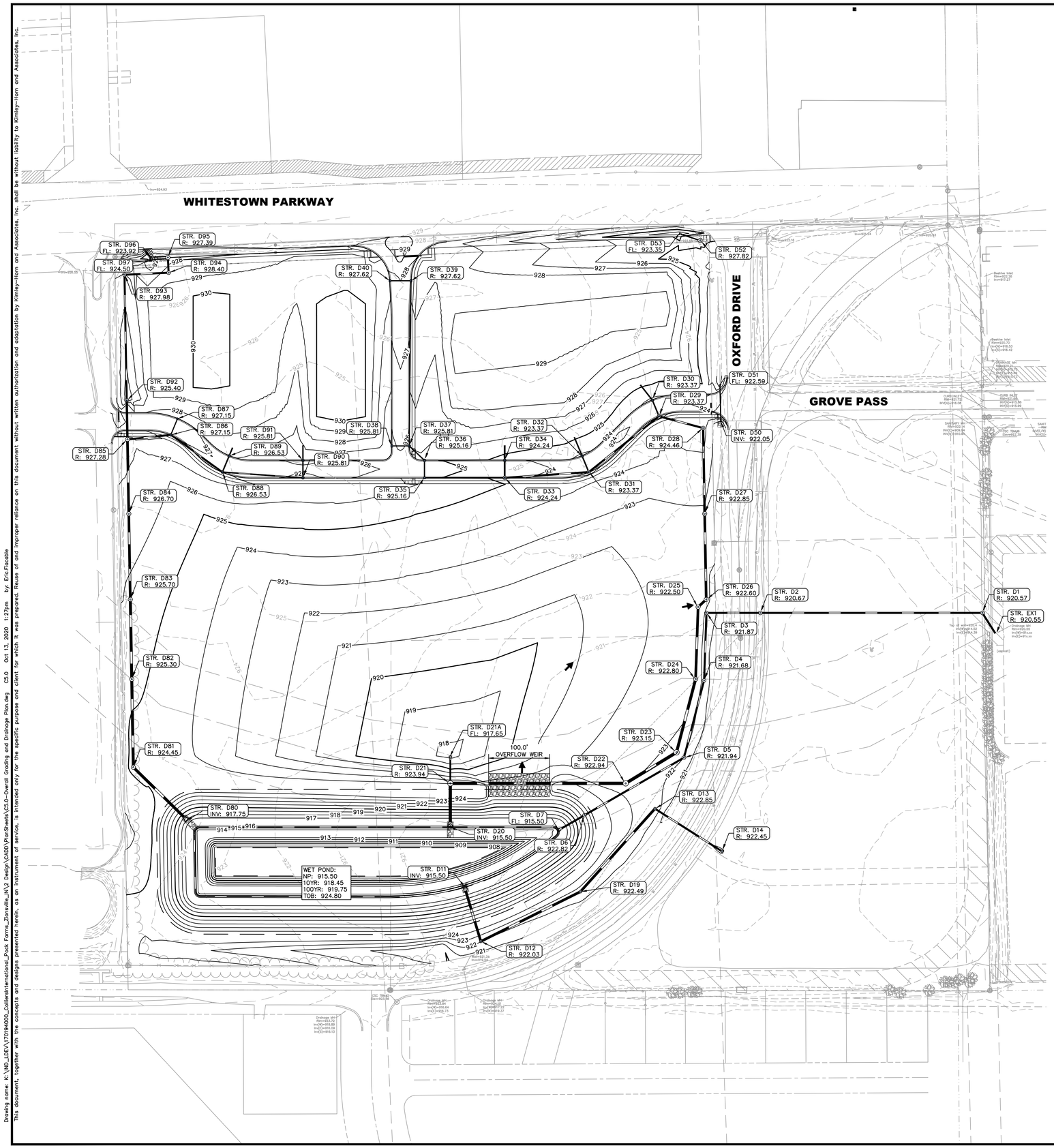

Indiana Utilities Protection Service
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NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

EXISTING LEGEND

- SIGN / TWO POST SIGN
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- GAS METER
- GAS VALVE
- CLEAN-OUT
- ELECTRIC METER BOX
- ELECTRIC TRANSFORMER
- ELECTRIC PEDESTAL
- GUARD POST
- AIR CONDITIONER UNIT
- LIGHT POLE ROUND
- REBAR SET/FOUND
- FLAT GRATE INLET
- COMBINATION POLE
- TELEPHONE PEDESTAL
- WOODEN LIGHT POLE
- LIGHT POLE SQUARE
- CONIFEROUS TREE & SIZE
- DECIDUOUS TREE & SIZE
- BUSH
- DRAINAGE MANHOLE
- SANITARY MANHOLE
- CURB INLET
- GROUND ACCENT LIGHT
- GUY WIRE

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

GRADING LEGEND

XXX.XX	FINISHED GRADE SPOT ELEVATION
TC XXX.XX / BC XXX.XX	TOP OF CURB / BOTTOM OF CURB SPOT ELEVATION
FL XXX.XX	FLOW LINE SPOT ELEVATION
ME XXX.XX	MATCH EXISTING SPOT ELEVATION
FF XXX.XX	FINISHED FLOOR SPOT ELEVATION
FG XXX.XX	FINISHED GRADE NEAR BUILDING SPOT ELEVATION
TW XXX.XX	TOP OF WALL SPOT ELEVATION
BW XXX.XX	BOTTOM OF WALL SPOT ELEVATION
R XXX.XX	RIM ELEVATION
DXX R XXX.XX	STRUCTURE ID & RIM ELEVATION
620	PROPOSED CONTOUR
RIDGE	RIDGE LINE
X.XX%	SLOPE AND FLOW DIRECTION
	100-YEAR OVERLAND OVERFLOW ROUTE
	DETENTION BASIN 100-YEAR EMERGENCY
	PROPOSED SWALE
	PROPOSED RETAINING WALL
	PROPOSED STORM SEWER
	PROPOSED STORM STRUCTURES
	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY CLEANOUT
	PROPOSED WATER STRUCTURES
	PROPOSED LIGHT POLES

GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
6. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES UNLESS OTHERWISE NOTED.
7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.
9. ALL STOOPS OR PEDESTRIAN EGRESS POINTS FROM THE BUILDING(S) SHALL BE NO GREATER THAN 2% FOR THE FIRST 5'.

BENCHMARKS

NGS BM Z 79 1946 ELEV 904.26 (NAVD 88)

A DISK STAMPED Z 79 1946 ON THE EAST END OF A CONCRETE WING WALL ON THE SOUTH SIDE OF STATE ROAD 334, ALSO ±200 FEET EAST OF BLACKSTONE BOULEVARD.

CSC TBM #1 ELEV 918.60

CUT SQUARE ON THE SOUTHWEST CORNER OF CONCRETE LIFT STATION PAD NEAR THE NORTHEAST CORNER OF A WHITESTOWN UTILITY OFFICE BUILDING ON THE SOUTH SIDE OF 334 JUST EAST OF MAPLE GROVE BLVD

CSC TBM #54 ELEV 927.40

A CUT "X" ON THE WEST MOST BONNET BOLT OF FIRE HYDRANT ON THE SOUTH SIDE OF WHITESTOWN PARKWAY, ±258 FEET WEST OF CO. RD. 700 WEST (AKA OXFORD DR.).

CSC TBM #52 ELEV 927.62

A CUT "X" FOUND ON THE EASTERN CURB LINE OF THE EXISTING LOWES PARKING LOT, ±475 FEET SOUTH OF WHITESTOWN PARKWAY, ALSO ±8 FEET WEST OF LARGE ELECTRIC TRANSFORMER.

CSC TBM #2 ELEV 923.56

A CUT "X" SET ON THE EAST CURB LINE OF THE INTERSECTION OF ROYAL RUN BLVD AND EAST COUNTY ROAD 650 SOUTH/SOUTH COUNTY ROAD 700 EAST, ALSO ±35.5 FEET EAST FROM THE CENTER OF THE CENTERLINE OF ROYAL RUN BLVD & ±19.5 FEET SOUTH OF THE CENTER OF THE AFOREMENTIONED COUNTY ROAD(S).

CSC TBM #6 ELEV 922.39

A MAG-NAIL w/NPS WASHER LOCATED NEAR THE CENTERLINE OF A CONCRETE WALK, LOCATED ±406 FEET EAST OF THE CENTERLINE OF OF COUNTY ROAD 700 WEST (AKA OXFORD DR.) AND ±27 FEET SOUTH OF THE CENTERLINE OF GROVE PASS.

No.	REVISIONS	DATE	BY

Kimley»Horn
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250 EAST 96TH STREET, SUITE 580,
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PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

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DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUDD REGISTERED NOT APPROVED FOR CONSTRUCTION 10800066 STATE OF INDIANA PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

OVERALL GRADING AND DRAINAGE PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C5.0

Drawing name: K:\IND_LDEV\170194000_Dollarinternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C5.0-Overall Grading and Drainage Plan.dwg C5.0 Oct 13, 2020 1:27pm by: Eric.Flacable
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GRAPHIC SCALE IN FEET
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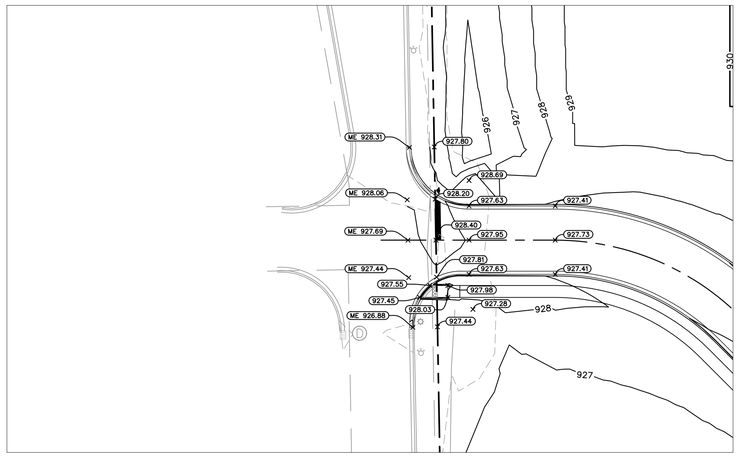
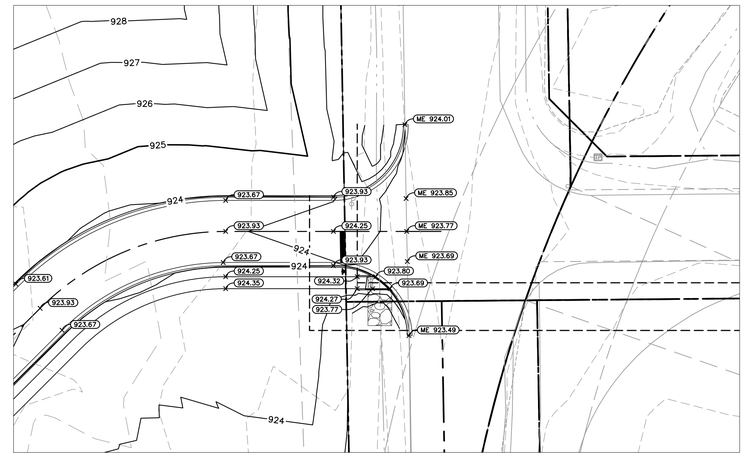


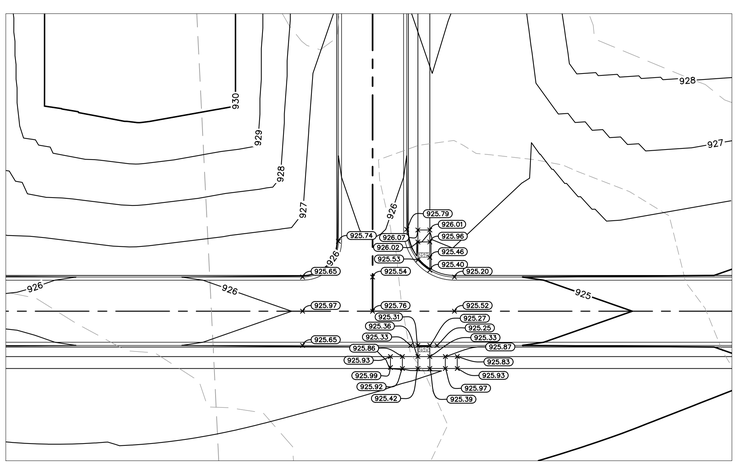
BEGIN LINE - DRIVE A

SCALE 1"=30'



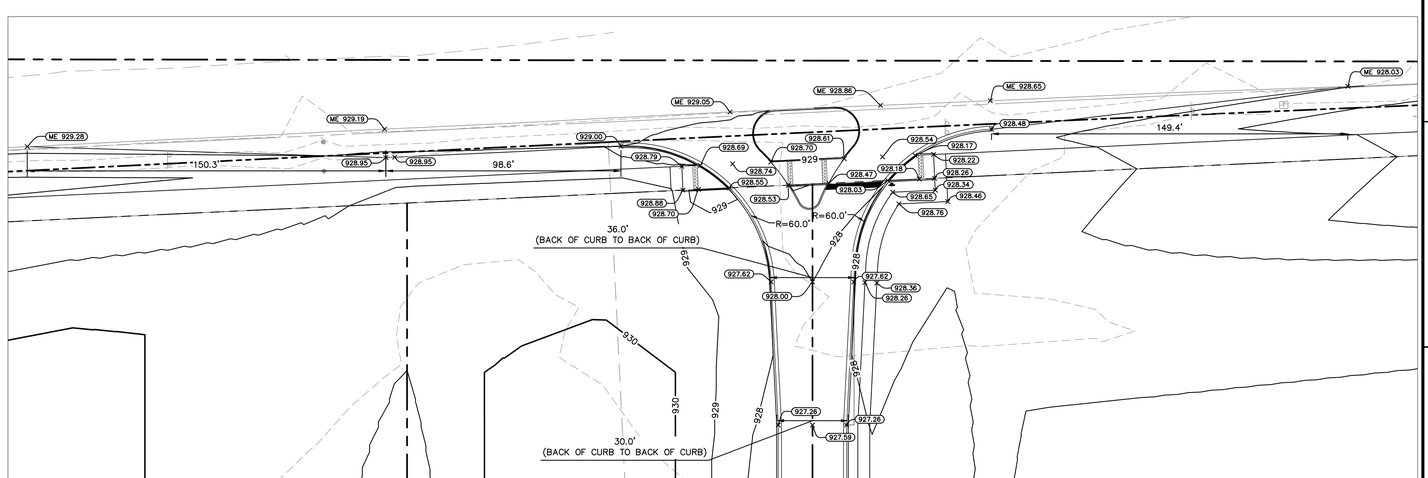
END LINE - DRIVE A

SCALE 1"=30'



BEGIN LINE - DRIVE B

SCALE 1"=30'



END LINE - DRIVE B

SCALE 1"=30'

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DRAWN BY: CVS
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GREGORY R. RICHARDS REGISTERED PROFESSIONAL ENGINEER 20100066 STATE OF INDIANA
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

INTERSECTION GRADING PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020

KHA PROJECT NO. 170194000

SHEET NUMBER

C5.1

Drawing name: K:\IND_LDEV\170194000_Colliers International_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C5.1 INTERSECTION GRADING PLAN.dwg C5.1 Oct 13, 2020 1:28pm by: Eric.Flacable
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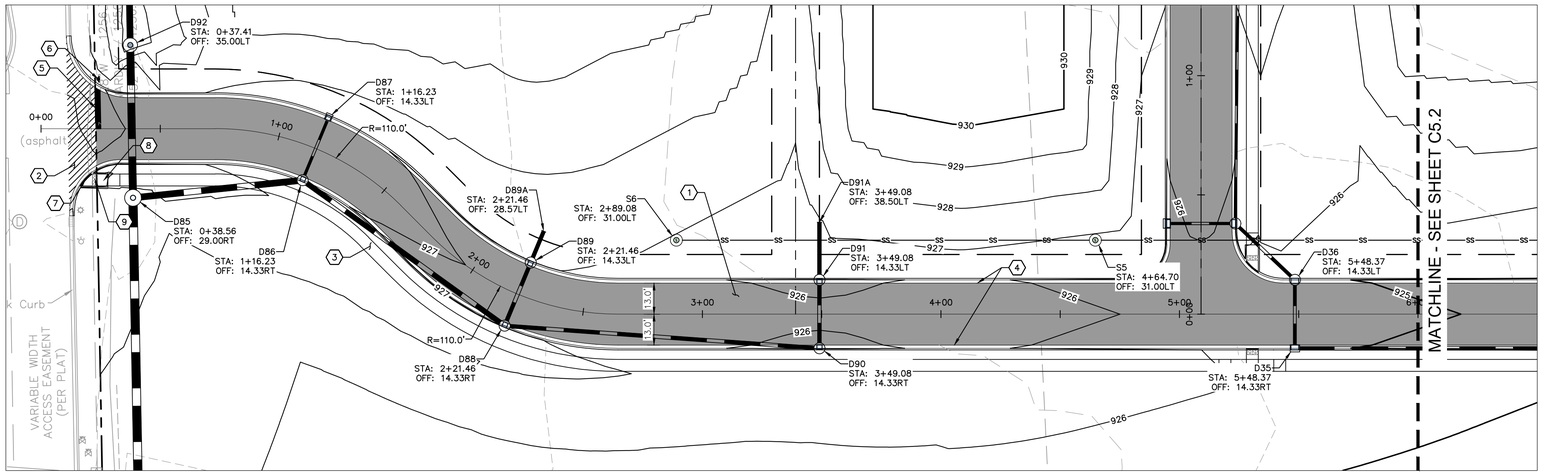
0 ## ## ##

GENERAL NOTES

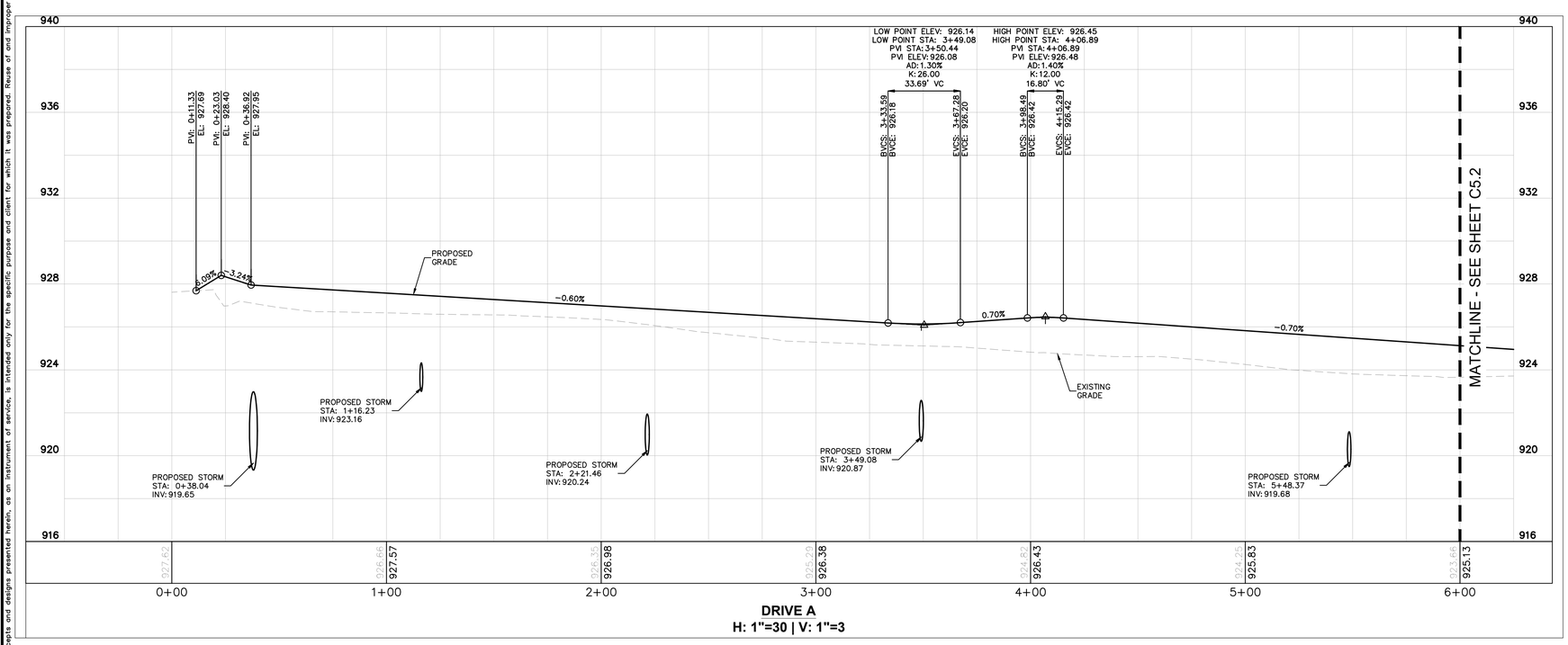
1. CONTRACTOR TO COORDINATE WITH ELECTRIC, TELECOM, AND GAS PROVIDERS FOR FINAL CONNECTION AND ROUTING.



PLAN
SCALE 1" = 30'

LEGEND

1. ASPHALT PAVEMENT (ZIONSVILLE LOCAL STREET – ASPHALT ALTERNATIVE 1)
   1.0" HMA SURFACE #11 OR #12, ON
   2.0" HMA BINDER #9, ON
   3" HMA BASE #5D, ON
   6" #53 CRUSHED STONE, ON
   COMPACTED SOIL SUBGRADE PREPARED PER INDOT SPECIFICATIONS SECTION 207–SUBGRADE
2. CONCRETE PAVEMENT (INDOT CLASS 3 DRIVE)
   9.0" PCCP, ON
   DENSE GRADED SUBBASE, ON
   GEOGRID TYPE 1B, ON
   SUBGRADE TREATMENT TYPE II (6" #53 CRUSHED STONE), ON
   COMPACTED SOIL SUBGRADE PREPARED PER INDOT SPECIFICATIONS SECTION 207–SUBGRADE
3. CONCRETE SIDEWALK (ZIONSVILLE FIGURE P–10)
4. CONCRETE CURB AND GUTTER, TYPE II (ZIONSVILLE FIGURE P–8)
5. 24" WIDE STOP BAR (SEE DETAILS)
6. STOP SIGN (MUTCD R1–1, SEE DETAILS
7. DEPRESSED CURB
8. ACCESSIBLE RAMP
9. 2' WIDE TACTILE WARNING STRIP
10. 6" CONCRETE CURB



DRIVE A
H: 1"=30 | V: 1"=3

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DRAWN BY: CVS
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REGISTERED
NOT APPROVED FOR CONSTRUCTION
INDIANA

POCK FAMILY FARMS, LLC

ROAD PLAN AND PROFILES

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C5.2

Drawing name: K:\IND_LDEV\170194000_Collierskinternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C5.1 ROAD PLAN AND PROFILES.dwg C5.1 ROAD PLAN AND PROFILES Oct 13, 2020 1:35pm by: Connor.Strege
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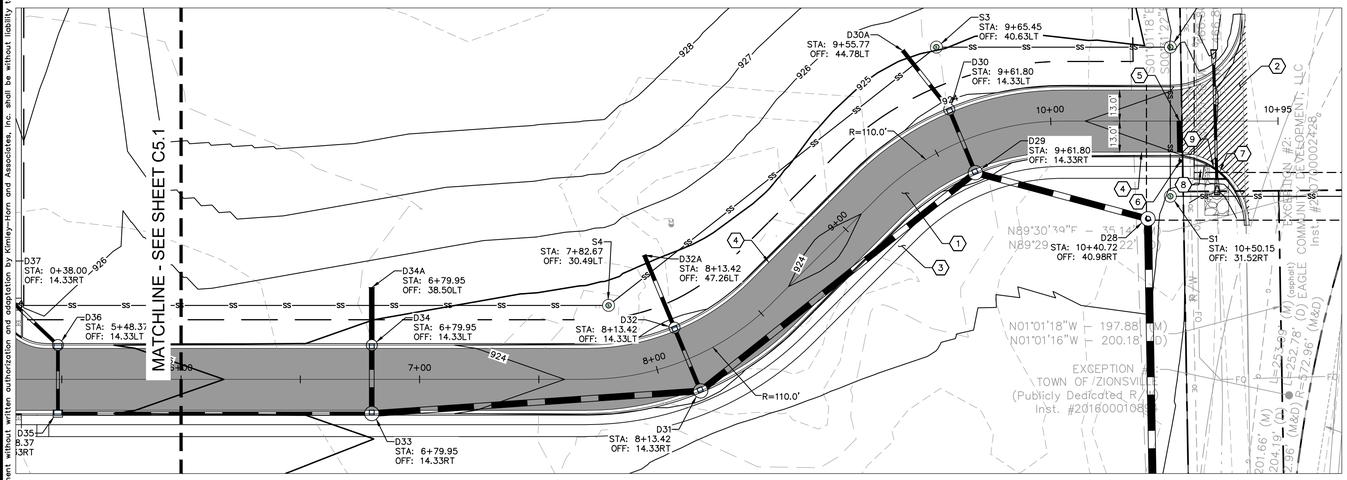
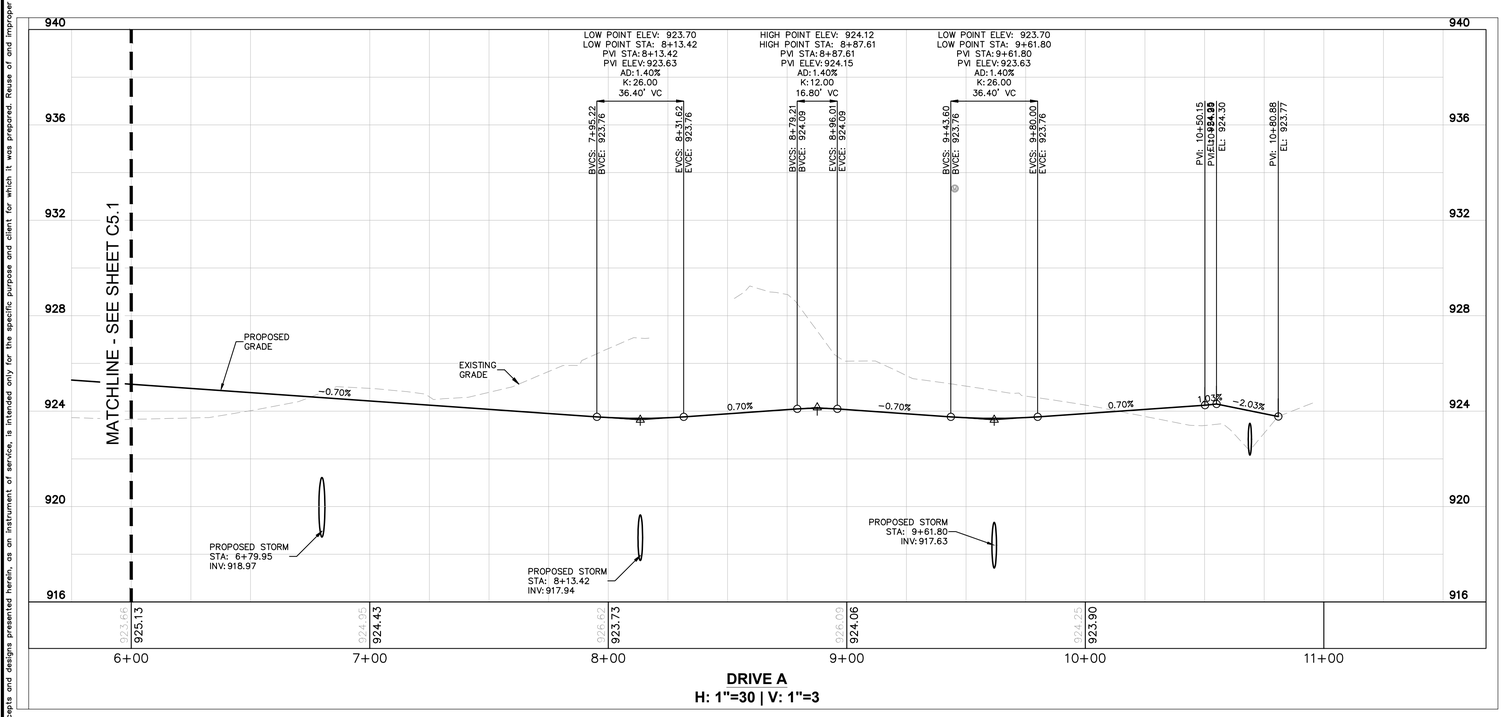


PLAN
SCALE 1" = 30'



DRIVE A
H: 1"=30 | V: 1"=3

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POCK FAMILY FARMS, LLC

ROAD PLAN AND PROFILES

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C5.3

Drawing name: K:\IND_LDEV\170194000_Dollar(international)_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C5.1 ROAD PLAN AND PROFILES.dwg C5.2 ROAD PLAN AND PROFILES Oct 13, 2020 1:34pm by: Connor.Stiegle
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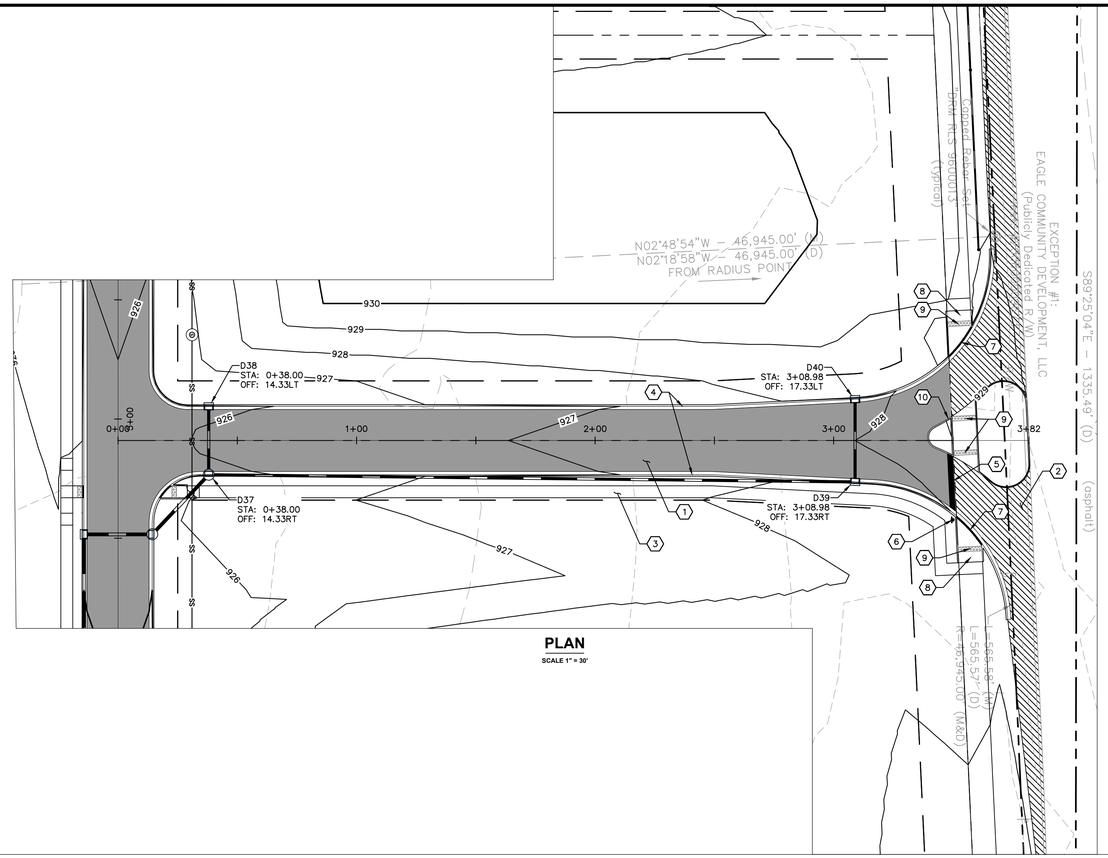
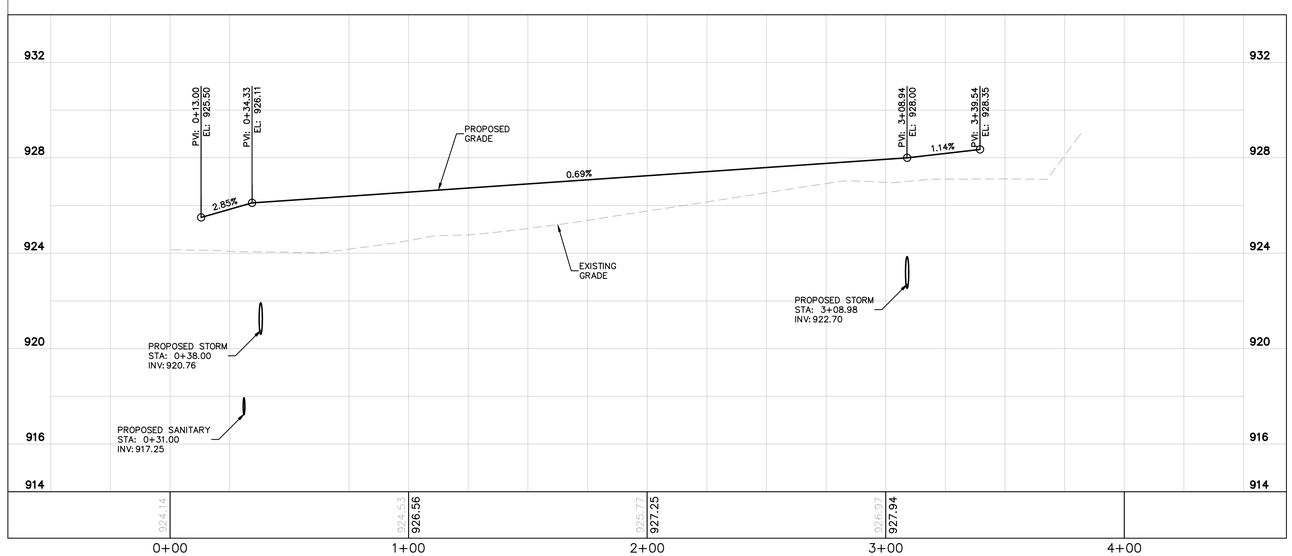


PLAN

SCALE 1" = 30'



DRIVE B

H: 1"=30 | V: 1"=3

GENERAL NOTES

1. CONTRACTOR TO COORDINATE WITH ELECTRIC, TELECOM, AND GAS PROVIDERS FOR FINAL CONNECTION AND ROUTING.

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LEGEND

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10. 6" CONCRETE CURB

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DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUSSELL
REGISTERED
PROFESSIONAL ENGINEER
INDIANA
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

ROAD PLAN AND PROFILES

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C5.4

Drawing name: K:\IND_LDEV\170194000_CollierInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C5.1 ROAD PLAN AND PROFILES.dwg C5.3 ROAD PLAN AND PROFILES Oct 13, 2020 1:34pm by: Connor.Sliwge
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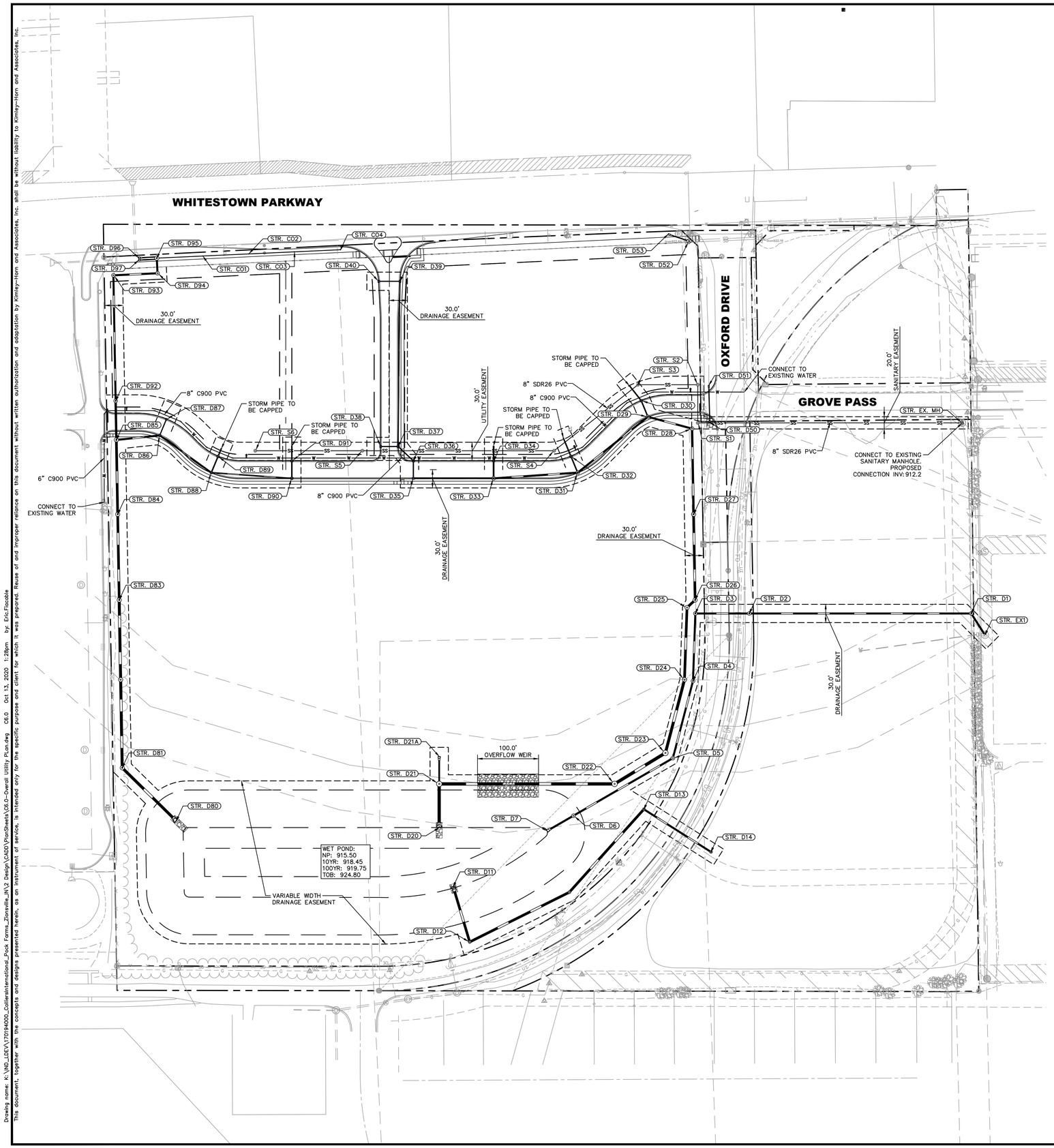

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NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

UTILITY NOTES

GENERAL UTILITY NOTES

1. ALL WATER LINES SHALL BE PVC C900 DR-14 OR DUCTILE IRON CL 350.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE AWWA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 24" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
6. CONTRACTOR TO CALL INDIANA 811 (811 OR 800-382-5544) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
7. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/ DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE MUNICIPALITY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
8. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
9. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
11. SEE ARCHITECTURAL AND MEP PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
12. LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.
13. SEE DETAILS FOR LOCATING STORM STRUCTURES WITHIN THE CURB LINE.
14. STORMWATER FACILITIES MUST BE FUNCTIONAL BEFORE BUILDING CONSTRUCTION BEGINS.

EXISTING LEGEND

- SIGN / TWO POST SIGN
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- GAS METER
- GAS VALVE
- CLEAN-OUT
- ELECTRIC METER BOX
- ELECTRIC TRANSFORMER
- ELECTRIC PEDESTAL
- GUARD POST
- AIR CONDITIONER UNIT
- LIGHT POLE ROUND
- REBAR SET/FOUND
- FLAT GRATE INLET
- COMBINATION POLE
- TELEPHONE PEDESTAL
- WOODEN LIGHT POLE
- LIGHT POLE SQUARE
- CONIFEROUS TREE & SIZE (12")
- DECIDUOUS TREE & SIZE (36")
- BUSH
- DRAINAGE MANHOLE
- SANITARY MANHOLE
- CURB INLET
- GROUND ACCENT LIGHT
- GUY WIRE
- 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

UTILITY LEGEND

- E — PROPOSED UNDERGROUND ELECTRIC LINE
- G — GAS LINE (BY GAS COMPANY)
- T — PROPOSED PHONE LINE
- RD — PROPOSED ROOF DRAIN LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM STRUCTURES
- SS — PROPOSED SANITARY SEWER LINE
- LAT — PROPOSED SANITARY LATERAL LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM/SANITARY CLEANOUT
- W — PROPOSED WATER LINE
- FP — PROPOSED FIRE PROTECTION LINE
- PROPOSED VALVE VAULT & WATER METER
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT, PIV, & FIRE DEPT CONNECTION
- PROPOSED WATER BENDS & TEE
- PROPOSED LIGHT POLE
- PROPOSED TRANSFORMER PAD (BY OTHERS)

KEY NOTES

(D) DRAINAGE STORM SEWER
D1. ROOF DRAIN CLEANOUT
D2. ROOF DRAIN LINE
D3. CONNECT ROOF DRAIN TO STRUCTURE
D4. PERFORATED UNDERDRAIN
(S) SANITARY SEWER
S1. SANITARY CLEANOUT
S2. SANITARY LATERAL LINE
S3. SANITARY LINE
(W) WATER LINE
W1. FIRE HYDRANT AND VALVE ASSEMBLY
W2. WATER TEE
W3. WATER BEND
W4. GATE VALVE
W5. WATER METER
W6. FIRE DEPT CONNECTION (FDC)
W7. POST INDICATOR VALVE (PIV)
W8. CONNECT TO EXISTING WATER (TAP OR TEE)
W9. WATER LINE
(G) GAS LINE
G1. GAS SERVICE LINE
(E) ELECTRIC / TELEPHONE / CABLE
E1. ELECTRIC SERVICE LINE
E2. ELECTRIC TRANSFORMER
E3. TELECOMMUNICATIONS LINE
(M) MISCELLANEOUS
M1. CONTRACTOR TO COORDINATE CONNECTION WITH UTILITY PROVIDER.
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NOTE: CONTRACTOR TO VERIFY WATER, SANITARY, GAS, & ETC LOCATIONS, SIZES AND TYPES WITH MEP PLANS PRIOR TO ORDERING MATERIALS.

No.	REVISIONS	DATE	BY

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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUSH
REGISTERED PROFESSIONAL ENGINEER
NO. 20100066
STATE OF INDIANA
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

OVERALL UTILITY PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C6.0

Drawing name: K:\IND_LDEV\170194000_Collersinternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C6.0-Overall Utility Plan.dwg C6.0 Oct 13, 2020 1:28pm by: Eric.Flocable
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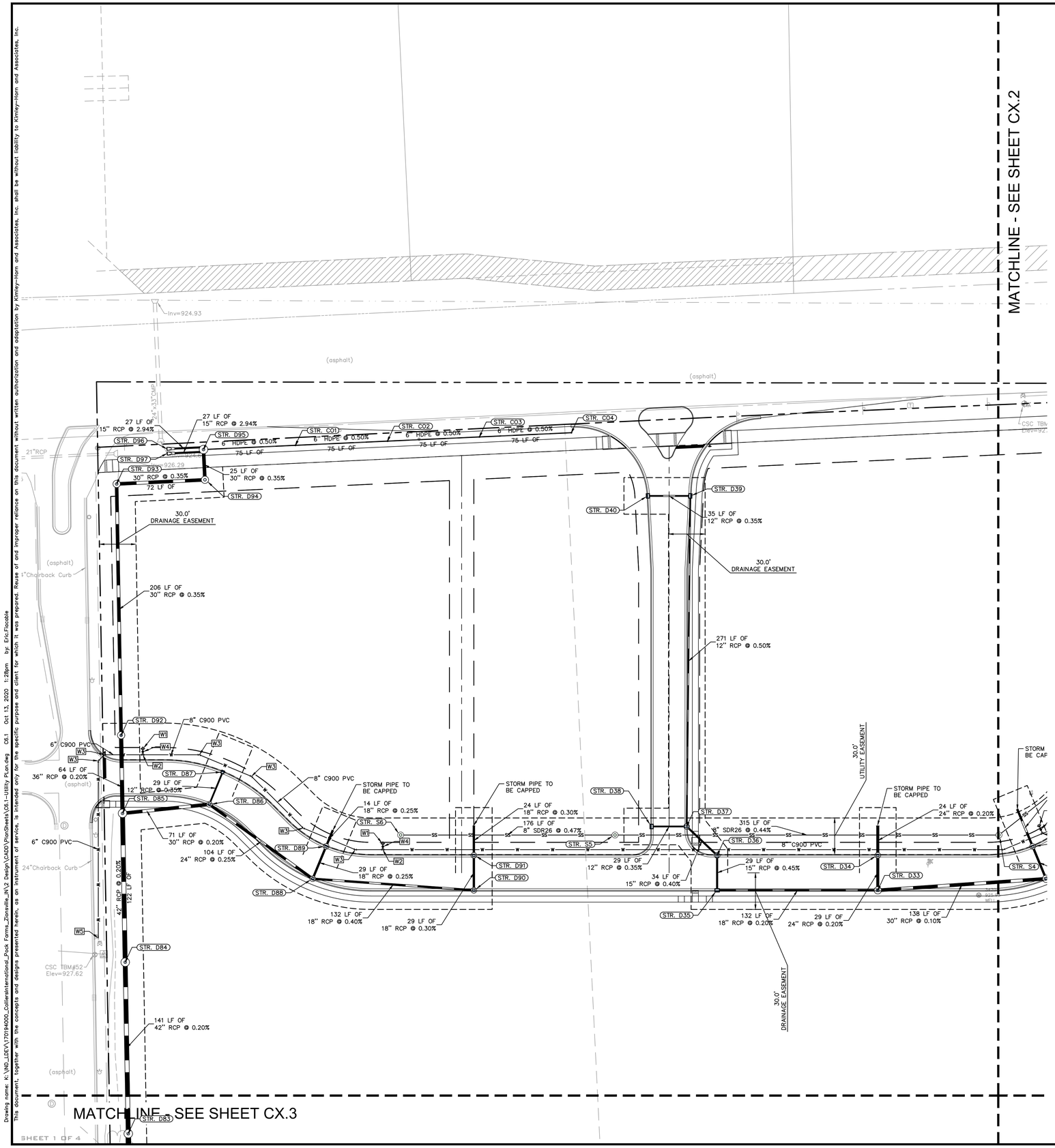

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS: NOTE: NEENAH CASTINGS
D33	TYPE "J" MH – R-3286-8V RIM: 924.24 INV IN: 919.25 (18"W) INV IN: 918.94 (24"N) INV OUT: 918.05 (30"E)
D34	TYPE "C" MH – R-3286-8V RIM: 924.24 INV IN: 919.10 (24"N) INV OUT: 919.00 (24"S)
D35	TYPE "M" INLET – R-3287-10V RIM: 925.16 INV IN: 919.61 (15"N) INV OUT: 919.51 (18"E)
D36	TYPE "C" MH – R-3287-SB10 RIM: 925.16 INV IN: 919.84 (15"NW) INV OUT: 919.74 (15"S)
D37	TYPE "C" MH – R-3287-SB10 RIM: 925.81 INV IN: 920.81 (12"N) INV IN: 920.71 (12"W) INV OUT: 919.98 (15"SE)
D38	TYPE "J" INLET – R-3287-10V RIM: 925.81 INV OUT: 920.81 (12"E)
D39	TYPE "M" INLET – R-3287-10V RIM: 927.62 INV IN: 922.64 (12"W) INV OUT: 922.16 (12"S)
D40	TYPE "M" INLET – R-3287-10V RIM: 927.62 INV OUT: 922.76 (12"E)
D84	TYPE "K" MH – R-1772 RIM: 926.70 INV IN: 919.25 (42"N) INV OUT: 919.15 (42"S)
D85	TYPE "K" MH – R-1772 RIM: 927.28 INV IN: 919.60 (36"N) INV IN: 919.60 (30"E) INV OUT: 919.50 (42"S)
D86	TYPE "C" MH – R-3286-8V RIM: 927.15 INV IN: 919.84 (24"SE) INV IN: 923.11 (12"N) INV OUT: 919.74 (30"W)
D87	TYPE "A" INLET – R-3286-8V RIM: 927.15 INV OUT: 923.21 (12"S)
D88	TYPE "C" MH – R-3286-8V RIM: 926.53 INV IN: 920.20 (18"E) INV IN: 920.20 (18"N) INV OUT: 920.10 (24"NW)
D89	TYPE "C" MH – R-3286-8V RIM: 926.53 INV IN: 920.37 (18"N) INV OUT: 920.27 (18"S)
D90	TYPE "C" MH – R-3010 RIM: 925.81 INV IN: 920.83 (18"N) INV OUT: 920.73 (18"W)
D91	TYPE "C" MH – R-3010 RIM: 925.81 INV IN: 921.02 (18"N) INV OUT: 920.92 (18"S)
D92	TYPE "J" MH – R-4342 RIM: 925.40 INV IN: 920.15 (30"N) INV OUT: 919.72 (36"S)
D93	TYPE "J" MH – R-1772 RIM: 927.98 INV IN: 920.98 (30"E) INV OUT: 920.88 (30"S)
D94	TYPE "J" MH – R-1772 RIM: 928.40 INV IN: 921.33 (30"N) INV OUT: 921.23 (30"W)
D95	TYPE "K" MH – R-1772 RIM: 927.39 INV IN: 925.89 (6"E) INV IN: 923.12 (15"W) INV IN: 923.70 (15"W) INV OUT: 921.42 (30"S)

Indiana Utilities Protection Service

Call 811 before you dig

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

UTILITY LEGEND

- PROPOSED UNDERGROUND ELECTRIC LINE
- GAS LINE (BY GAS COMPANY)
- PROPOSED PHONE LINE
- PROPOSED ROOF DRAIN LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM STRUCTURES
- PROPOSED SANITARY SEWER LINE
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- PROPOSED VALVE VAULT & WATER METER
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- PROPOSED WATER BENDS & TEE
- PROPOSED LIGHT POLE
- PROPOSED TRANSFORMER PAD (BY OTHERS)

KEY NOTES

(S) SANITARY SEWER
S1. SANITARY CLEANOUT
S3. SANITARY LINE
(W) WATER LINE
W1. FIRE HYDRANT AND VALVE ASSEMBLY
W2. WATER TEE
W3. WATER BEND
W4. GATE VALVE
W8. CONNECT TO EXISTING WATER (TAP OR TEE)
W9. WATER LINE
(G) GAS LINE
G1. GAS SERVICE LINE
(E) ELECTRIC / TELEPHONE / CABLE
E1. ELECTRIC SERVICE LINE
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EXISTING LEGEND

- SIGN / TWO POST SIGN
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- GAS METER
- GAS VALVE
- CLEAN-OUT
- ELECTRIC METER BOX
- ELECTRIC TRANSFORMER
- ELECTRIC PEDESTAL
- GUARD POST
- AIR CONDITIONER UNIT
- LIGHT POLE ROUND
- REBAR SET/FOUND
- FLAT GRATE INLET
- COMBINATION POLE
- TELEPHONE PEDESTAL
- WOODEN LIGHT POLE
- LIGHT POLE SQUARE
- CONIFEROUS TREE & SIZE
- DECIDUOUS TREE & SIZE
- BUSH
- DRAINAGE MANHOLE
- SANITARY MANHOLE
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- 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

SANITARY STRUCTURE TABLE

STRUCTURE NAME:	DETAILS: NOTE: NEENAH CASTINGS
S5	48" SAN MH RIM: 926.85 INV IN: 917.55 (8"W) INV OUT: 917.45 (8"E)
S6	48" SAN MH RIM: 926.94 INV OUT: 918.37 (8"E)

END SECTION STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D96	15" FLARED END SECTION INV OUT: 923.92 (15"E)
D97	15" FLARED END SECTION INV OUT: 924.50 (15"E)

GENERAL PLAN NOTES

REFER TO GENERAL NOTES SHEET FOR MORE INFORMATION INCLUDING THE FOLLOWING: (EXISTING LEGEND, BENCHMARK INFORMATION, AND SPECIFIC GENERAL PLAN NOTES.)

No.	REVISIONS	DATE	BY

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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

UTILITY PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C6.1

Drawing name: K:\IND_LDEV\170194000_CollierInternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C6.1-Utility Plan.dwg C6.1 Oct 13, 2020 1:28pm by: Eric.Flaccable
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SHEET 1 OF 4

Drawing name: K:\IND_LRD\170194000_Collerainternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C6.1-Utility Plan.dwg C6.2 Oct 13, 2020 1:29pm by: Eric.Flocable
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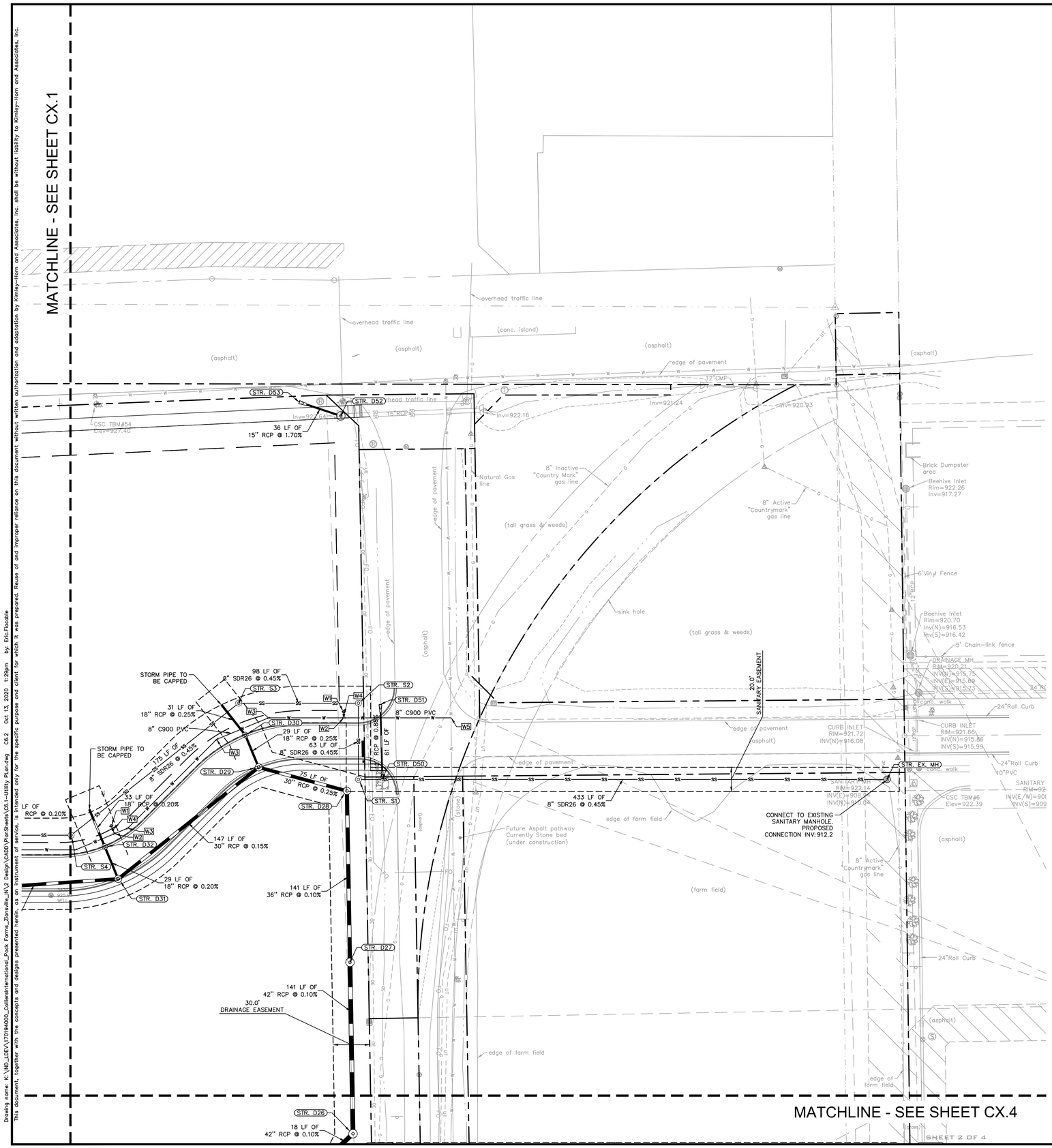

Indiana Utilities Protection Service

Call 811 before you dig

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

EXISTING LEGEND

- SIGN / TWO POST SIGN
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- GAS METER
- GAS VALVE
- CLEAN-OUT
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- DRAINAGE MANHOLE
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- GUY WIRE
- UNDG. WATER LINE
- UNDG. GAS LINE
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- UNDG. ELECTRIC LINE
- OVERHEAD ELE. & TEL
- OVERHEAD ELE TEL & CAB
- OVERHEAD ELECTRIC

VCP vitrified clay pipe
RCP reinforced concrete pipe
PVC polyethylene coated pipe

UTILITY LEGEND

- PROPOSED UNDERGROUND ELECTRIC LINE
- GAS LINE (BY GAS COMPANY)
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- PROPOSED STORM STRUCTURES
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- PROPOSED WATER BENDS & TEE
- PROPOSED LIGHT POLE
- PROPOSED TRANSFORMER PAD (BY OTHERS)

KEY NOTES

(S) SANITARY SEWER
S1. SANITARY CLEANOUT
S3. SANITARY LINE
(W) WATER LINE
W1. FIRE HYDRANT AND VALVE ASSEMBLY
W2. WATER TEE
W3. WATER BEND
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W8. CONNECT TO EXISTING WATER (TAP OR TEE)
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STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS: NOTE: NEENAH CASTINGS
D27	TYPE "K" MH – R-1772 RIM: 922.85 INV IN: 917.06 (36"N) INV OUT: 916.96 (42"S)
D28	TYPE "J" MH – R-1772 RIM: 924.46 INV IN: 917.30 (30"W) INV OUT: 917.20 (36"S)
D29	TYPE "J" MH – R-3010 RIM: 923.37 INV IN: 917.59 (30"SW) INV IN: 917.59 (18"N) INV OUT: 917.49 (30"E)
D30	TYPE "C" MH – R-3010 RIM: 923.37 INV IN: 917.66 (18"NW) INV OUT: 917.66 (18"S)
D31	TYPE "J" MH – R-3010 RIM: 923.37 INV IN: 917.91 (30"W) INV IN: 917.91 (18"N) INV OUT: 917.81 (30"NE)
D32	TYPE "C" MH – R-3010 RIM: 923.37 INV IN: 918.07 (18"N) INV OUT: 917.97 (18"S)
D52	TYPE "C" MH – R-1772 RIM: 927.82 INV IN: 922.74 (15"W)

SANITARY STRUCTURE TABLE

STRUCTURE NAME:	DETAILS: NOTE: NEENAH CASTINGS
EX. MH	48" SAN MH RIM: 913.39 INV IN: 912.20 (8"W)
S1	48" SAN MH RIM: 923.80 INV IN: 914.25 (8"N) INV OUT: 914.15 (8"E)
S2	48" SAN MH RIM: 923.96 INV IN: 914.63 (8"W) INV OUT: 914.53 (8"S)
S3	48" SAN MH RIM: 925.08 INV IN: 915.17 (8"SW) INV OUT: 915.07 (8"E)
S4	48" SAN MH RIM: 924.53 INV IN: 916.06 (8"W) INV OUT: 915.96 (8"NE)

END SECTION STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D50	12" FLARED END SECTION INV IN: 922.05 (12"N)
D51	12" FLARED END SECTION INV OUT: 922.59 (12"S)
D53	15" FLARED END SECTION INV OUT: 923.35 (15"E)

GENERAL PLAN NOTES

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No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 317-218-9560
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SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

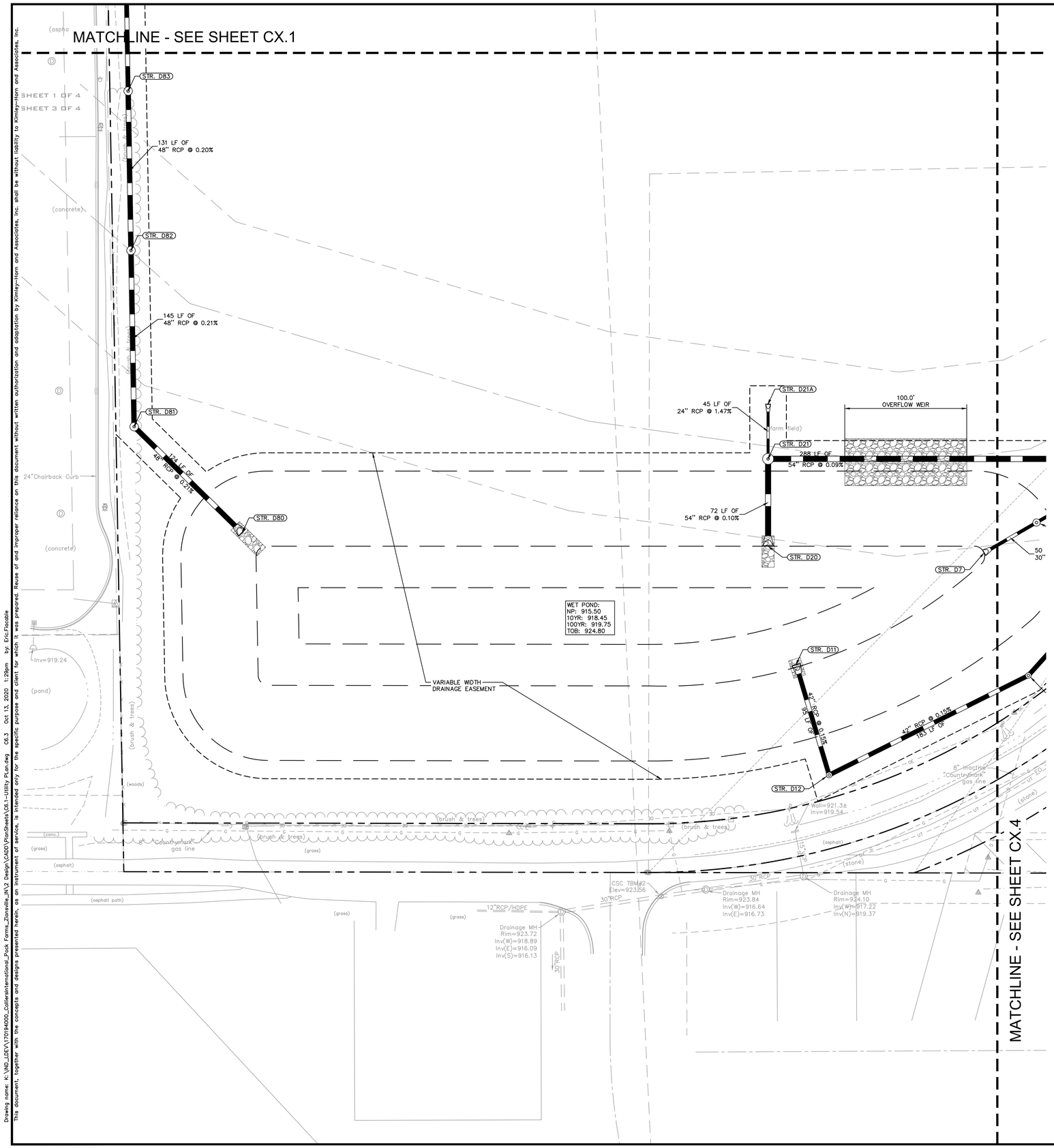
GREGORY RICHARD RAY
REGISTERED
NOT APPROVED FOR CONSTRUCTION
INDIANA
PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

UTILITY PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C6.2



Drawing name: K:\IND_LDEV\170194000_Collerainternational_Pock Farms_Plainsville_IN\2 Design\CADD\PlanSheets\C6.1-Utility Plan.dwg C6.3 Oct 13, 2020 1:29pm by: Eric Flacable

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Indiana Utilities Protection Service
Call 811 before you dig

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS: NOTE: NEENAH CASTINGS
D12	TYPE "C" MH – R–1772 RIM: 922.03 INV IN: 915.74 (42"NE) INV OUT: 915.64 (42"N)
D21	TYPE "L" MH – R–1772 RIM: 923.94 INV IN: 915.67 (54"E) INV IN: 916.99 (24"N) INV OUT: 915.57 (54"S)
D81	TYPE "K" MH – R–1772 RIM: 924.45 INV IN: 918.11 (48"N) INV OUT: 918.01 (48"SE)
D82	TYPE "K" MH – R–1772 RIM: 925.30 INV IN: 918.51 (48"N) INV OUT: 918.41 (48"S)
D83	TYPE "K" MH – R–1772 RIM: 925.70 INV IN: 918.87 (42"N) INV OUT: 918.77 (48"S)

END SECTION STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D7	30" FLARED END SECTION INV OUT: 915.50 (30"NE)
D11	42" FLARED END SECTION INV IN: 915.50 (42"S)
D20	54" FLARED END SECTION INV IN: 915.50 (54"N)
D21A	24" FLARED END SECTION INV OUT: 917.65 (24"S)
D80	48" FLARED END SECTION INV IN: 917.75 (48"NW)

UTILITY LEGEND

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- BV — PROPOSED VALVE VAULT & WATER METER
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S1. SANITARY CLEANOUT
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EXISTING LEGEND

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- WATER METER
- GAS METER
- GAS VALVE
- CLEAN-OUT
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- TELEPHONE PEDESTAL
- WOODEN LIGHT POLE
- LIGHT POLE SQUARE
- CONIFEROUS TREE & SIZE
- DECIDUOUS TREE & SIZE
- BUSH
- DRAINAGE MANHOLE
- SANITARY MANHOLE
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- GROUND ACCENT LIGHT
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- OET — OVERHEAD ELE. & TEL
- OETC — OVERHEAD ELE TEL & CAB
- OE — OVERHEAD ELECTRIC

VCP vitrified clay pipe
RCP reinforced concrete pipe
PVC polyethylene coated pipe

GENERAL PLAN NOTES

REFER TO GENERAL NOTES SHEET FOR MORE INFORMATION INCLUDING THE FOLLOWING: (EXISTING LEGEND, BENCHMARK INFORMATION, AND SPECIFIC GENERAL PLAN NOTES.)

No.	REVISIONS	DATE	BY

Kimley»Horn

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SCALE: AS NOTED
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DRAWN BY: CVS
CHECKED BY: GRR

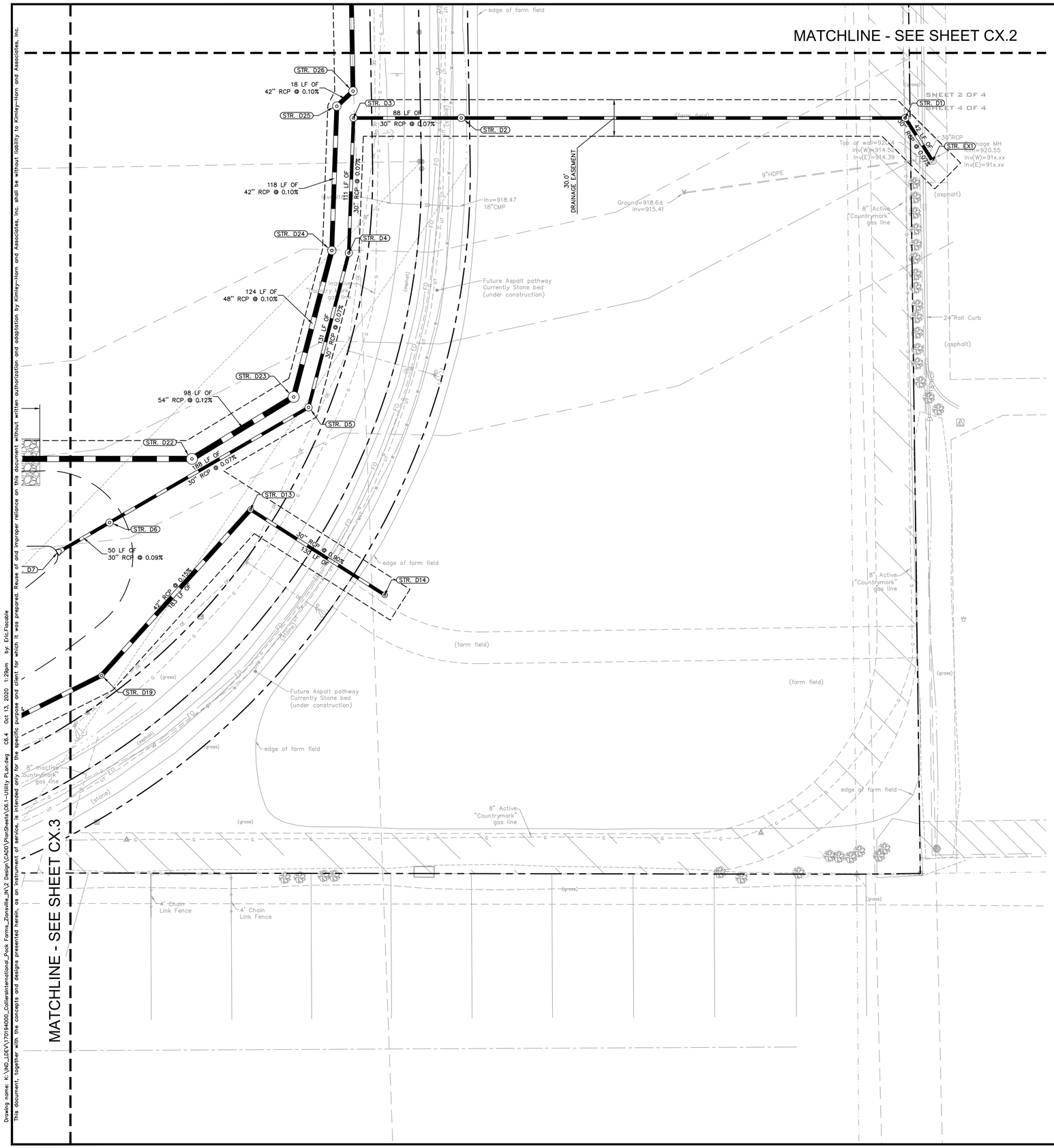
GREGORY RICHARD RIDDLE
REGISTERED
NO. 20100066
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

UTILITY PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C6.3



Indiana Utilities Protection Service

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NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

UTILITY LEGEND

E	PROPOSED UNDERGROUND ELECTRIC LINE
G	GAS LINE (BY GAS COMPANY)
T	PROPOSED PHONE LINE
RD	PROPOSED ROOF DRAIN LINE
	PROPOSED STORM SEWER LINE
	PROPOSED STORM STRUCTURES
SS	PROPOSED SANITARY SEWER LINE
LAT	PROPOSED SANITARY LATERAL LINE
	PROPOSED SANITARY MANHOLE
	PROPOSED STORM/SANITARY CLEANOUT
W	PROPOSED WATER LINE
FP	PROPOSED FIRE PROTECTION LINE
WV WM	PROPOSED VALVE VAULT & WATER METER
	PROPOSED VALVE BOX
FH PIV DC	PROPOSED FIRE HYDRANT, PIV, & FIRE DEPT CONNECTION
	PROPOSED WATER BENDS & TEE
	PROPOSED LIGHT POLE
T	PROPOSED TRANSFORMER PAD (BY OTHERS)

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS: NOTE: NEENAH CASTINGS
D1	TYPE "J" MH – R-1772 RIM: 920.57 INV IN: 914.30 (30"W) INV OUT: 914.20 (30"SE)
D2	TYPE "J" MH – R-1772 RIM: 920.67 INV IN: 914.67 (30"W) INV OUT: 914.57 (30"E)
D3	TYPE "J" MH – R-1772 RIM: 921.87 INV IN: 914.84 (30"S) INV OUT: 914.74 (30"E)
D4	TYPE "J" MH – R-1772 RIM: 921.68 INV IN: 915.02 (30"S) INV OUT: 914.92 (30"N)
D5	TYPE "J" MH – R-1772 RIM: 921.94 INV IN: 915.22 (30"SW) INV OUT: 915.12 (30"N)
D6	TYPE "J" MH – R-1772 RIM: 922.82 INV IN: 915.46 (30"SW) INV OUT: 915.36 (30"NE)
D13	TYPE "C" MH – R-1772 RIM: 922.85 INV IN: 916.49 (30"SE) INV OUT: 916.39 (42"SW)
D14	TYPE "C" MH – R-1772 RIM: 922.45 INV OUT: 917.66 (30"NW)
D19	TYPE "C" MH – R-1772 RIM: 922.49 INV IN: 916.12 (42"NE) INV OUT: 916.02 (42"SW)
D22	TYPE "L" MH – R-1772 RIM: 922.94 INV IN: 916.05 (54"NE) INV OUT: 915.95 (54"W)
D23	TYPE "L" MH – R-1772 RIM: 923.15 INV IN: 916.26 (48"N) INV OUT: 916.16 (54"SW)
D24	TYPE "K" MH – R-1772 RIM: 922.80 INV IN: 916.49 (42"N) INV OUT: 916.39 (48"S)
D25	TYPE "K" MH – R-1772 RIM: 922.50 INV IN: 916.70 (42"NE) INV OUT: 916.60 (42"S)
D26	TYPE "K" MH – R-1772 RIM: 922.60 INV IN: 916.82 (42"N) INV OUT: 916.72 (42"SW)
EX1	TYPE "C" MH – R-1772 RIM: 920.55 INV IN: 914.17 (30"NW)

KEY NOTES

(S) SANITARY SEWER
S1. SANITARY CLEANOUT
S3. SANITARY LINE
(W) WATER LINE
W1. FIRE HYDRANT AND VALVE ASSEMBLY
W2. WATER TEE
W3. WATER BEND
W4. GATE VALVE
W8. CONNECT TO EXISTING WATER (TAP OR TEE)
W9. WATER LINE
(G) GAS LINE
G1. GAS SERVICE LINE
(E) ELECTRIC / TELEPHONE / CABLE
E1. ELECTRIC SERVICE LINE
E2. ELECTRIC TRANSFORMER
E3. TELECOMMUNICATIONS LINE
(M) MISCELLANEOUS
M1. CONTRACTOR TO COORDINATE CONNECTION WITH UTILITY PROVIDER.
M2. CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH AND SIZE OF EXISTING UTILITY TO ENSURE CONFLICTS DO NOT EXIST WITH PROPOSED UTILITIES.
M3. POTENTIAL UTILITY CONFLICT. ALL (WATER, SANITARY, DRAINAGE STORM) CROSSINGS TO HAVE 18" MIN. VERTICAL CLEARANCE. ALL WATER SERVICE LINES TO REMAIN PERPENDICULAR AT CROSSING IN SUCH THAT IT FORMS AN ANGLE BETWEEN 45° AND 90°.

NOTE: CONTRACTOR TO VERIFY WATER, SANITARY, GAS, & ETC LOCATIONS, SIZES AND TYPES WITH MEP PLANS PRIOR TO ORDERING MATERIALS.

EXISTING LEGEND

SIGN / TWO POST SIGN
WATER VALVE
FIRE HYDRANT
WATER METER
GAS METER
GAS VALVE
CLEAN-OUT
ELECTRIC METER BOX
ELECTRIC TRANSFORMER
ELECTRIC PEDESTAL
GUARD POST
AIR CONDITIONER UNIT
LIGHT POLE ROUND
REBAR SET/FOUND
FLAT GRATE INLET
COMBINATION POLE
TELEPHONE PEDESTAL
WOODEN LIGHT POLE
LIGHT POLE SQUARE
CONIFEROUS TREE & SIZE
DECIDUOUS TREE & SIZE
BUSH
DRAINAGE MANHOLE
SANITARY MANHOLE
CURB INLET
GROUND ACCENT LIGHT
GUY WIRE

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

GENERAL PLAN NOTES

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PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

UTILITY PLAN

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C6.4

Drawing name: K:\IND_LDEV\170194000_Collierville\International_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C6.1-Utility Plan.dwg C6.4 Oct 13, 2020 1:29pm by: Eric.Flocable
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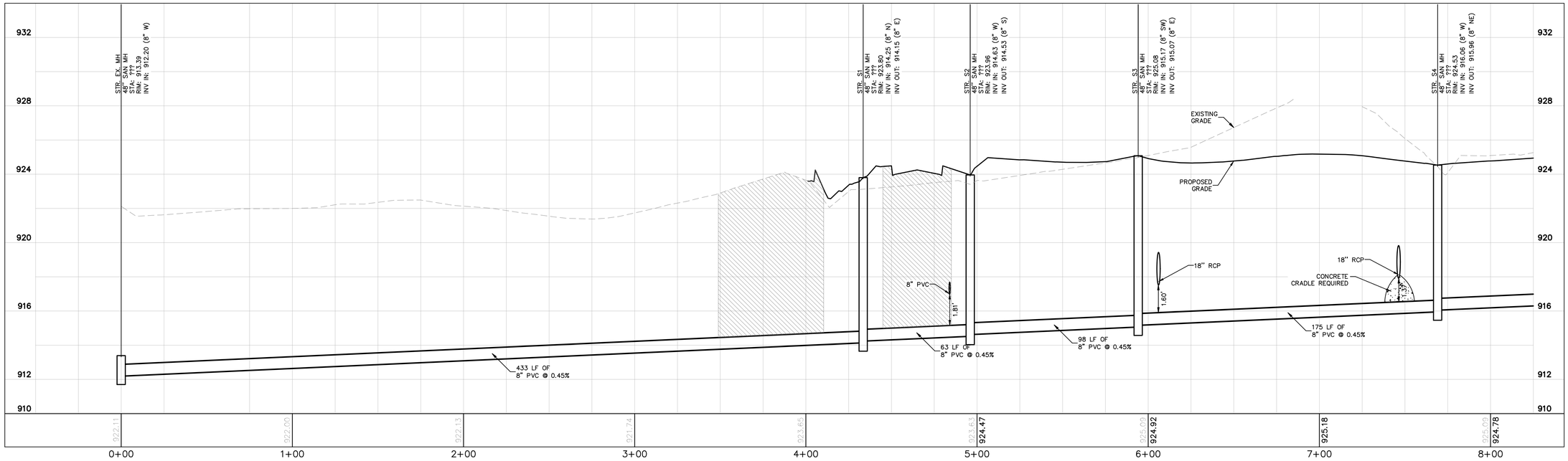

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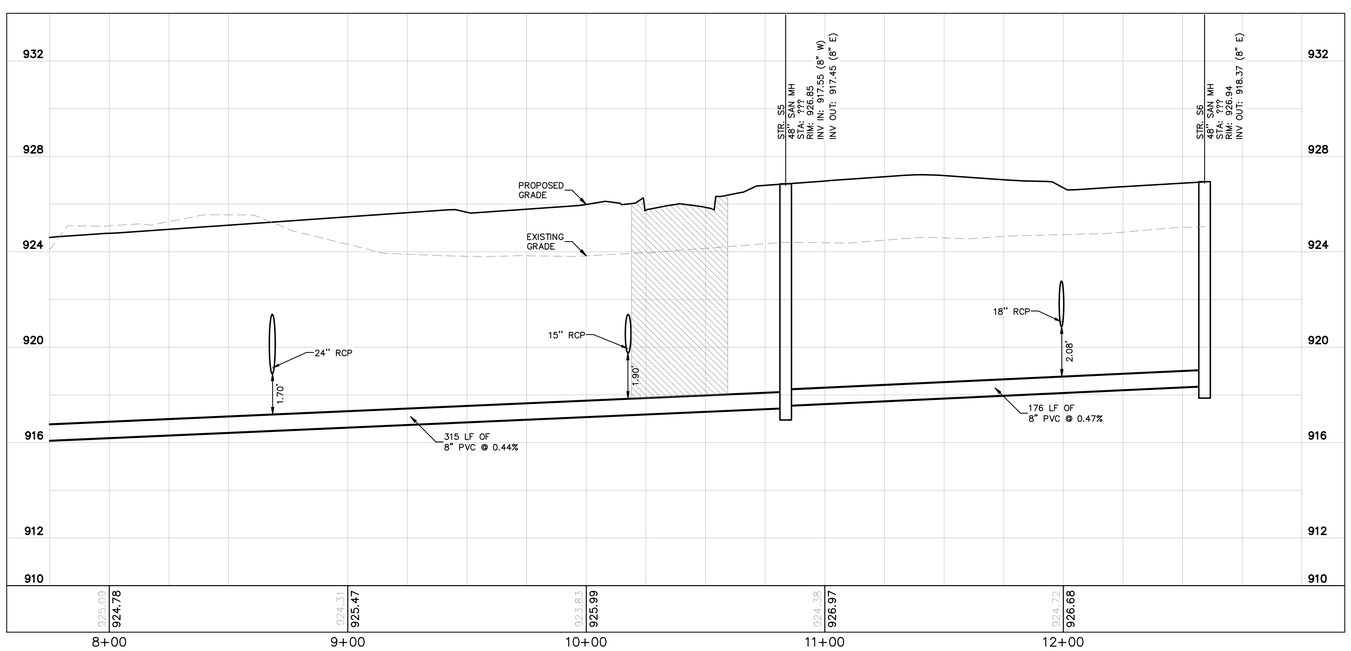

SANITARY LINE 1
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LEGEND

GRANULAR BACKFILL
REQUIRED BENEATH AND WITHIN 5 FEET OF PAVEMENT. REFER TO THE TOWN OF ZIONSVILLE STANDARDS FOR BACKFILL REQUIREMENTS.

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SHEET NUMBER
C6.5

Drawing name: K:\IND_LDEV\170194000_Collierskrtsmallond_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C6.4-Utility Profiles.dwg C6.5 Oct 13, 2020 1:29pm by: Eric.Fiocable
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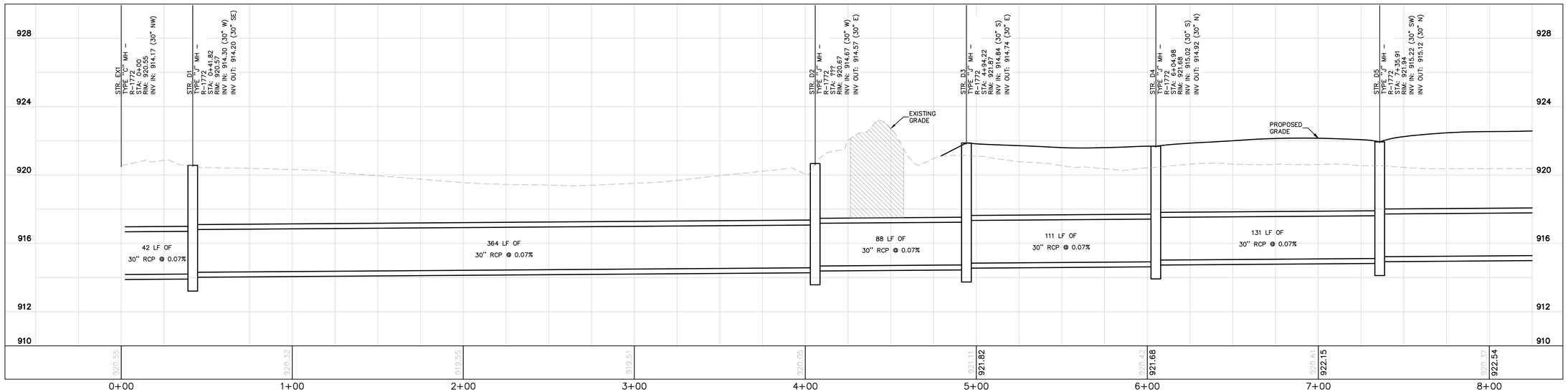

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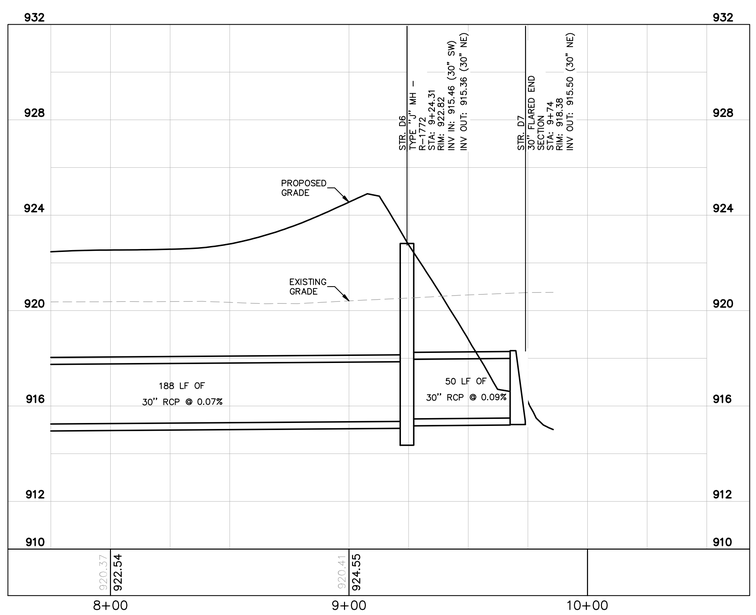

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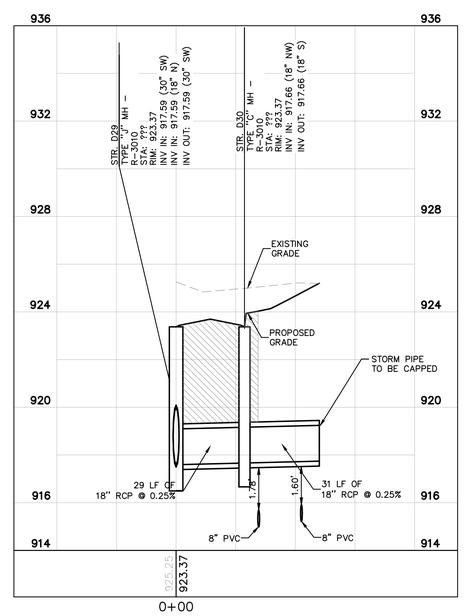

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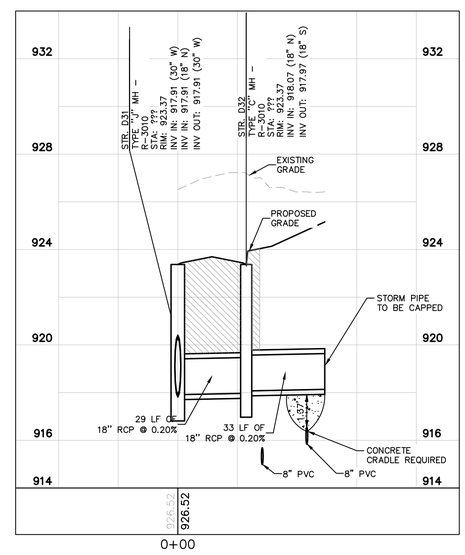

STORM LINE 4
H: 1"=30 | V: 1"=3

LEGEND

GRANULAR BACKFILL
REQUIRED BENEATH AND WITHIN 5 FEET OF PAVEMENT. REFER TO THE TOWN OF ZIONSVILLE STANDARDS FOR BACKFILL REQUIREMENTS.

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INDIANA PROFESSIONAL ENGINEER

POCK FAMILY FARMS, LLC

UTILITY PROFILES

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C6.6

Drawing name: K:\IND_LDEV\170194000_Collierwinternational_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C6.4-Utility Profiles.dwg C6.6 Oct 13, 2020 1:29pm by: Eric.Fiocable
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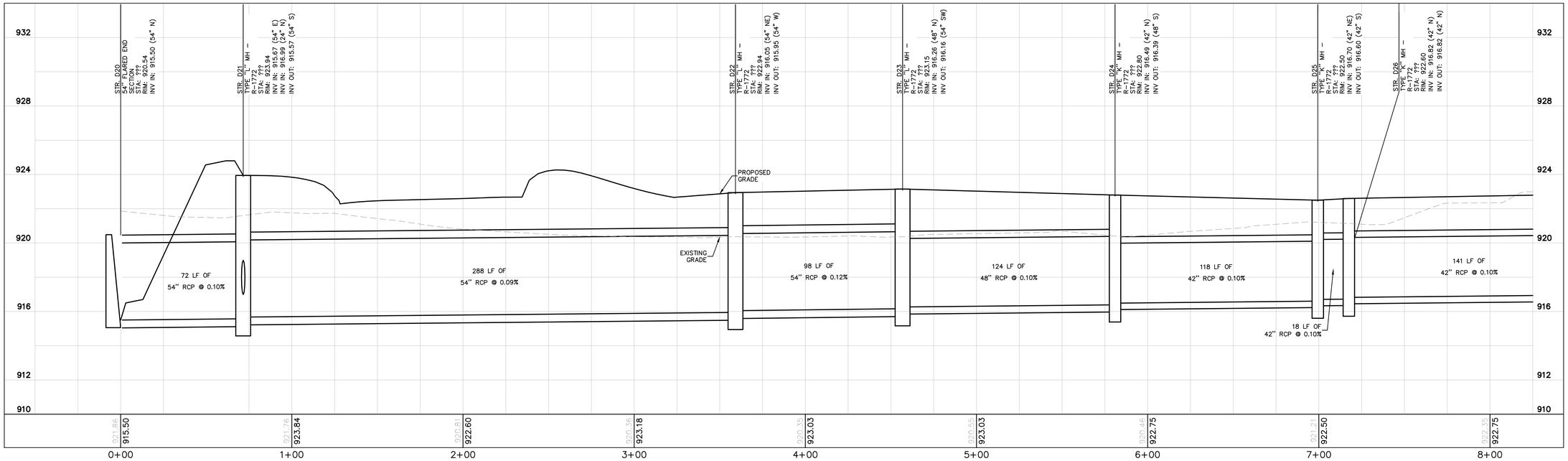

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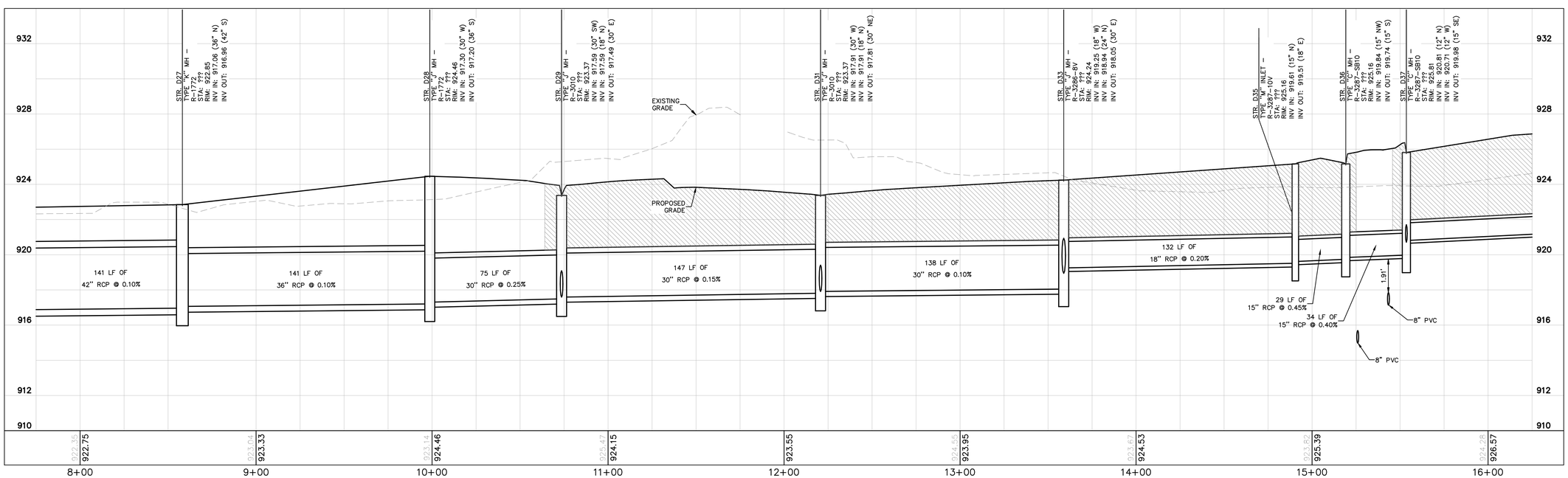

STORM LINE 2
H: 1"=30 | V: 1"=3

LEGEND

GRANULAR BACKFILL
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POCK FARM INFRASTRUCTURE PHASE 1

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SHEET NUMBER
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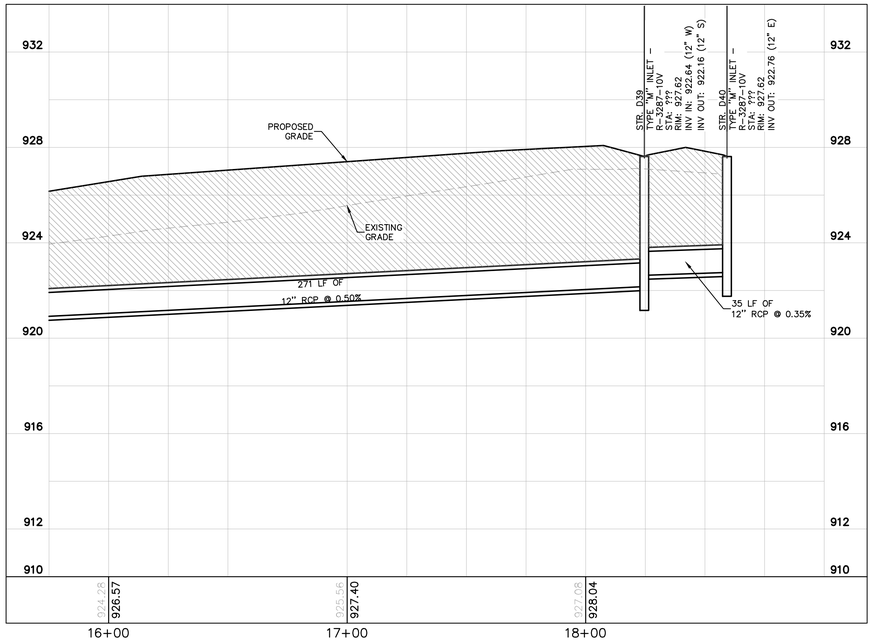

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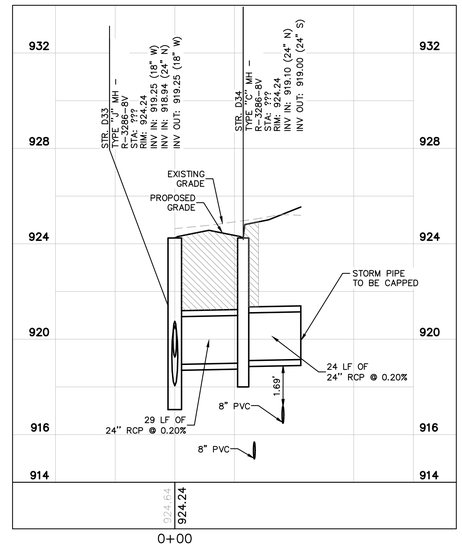

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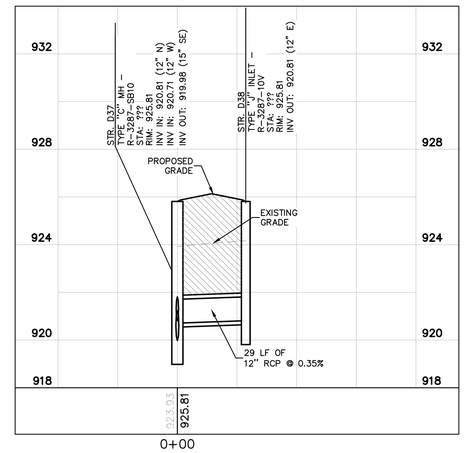

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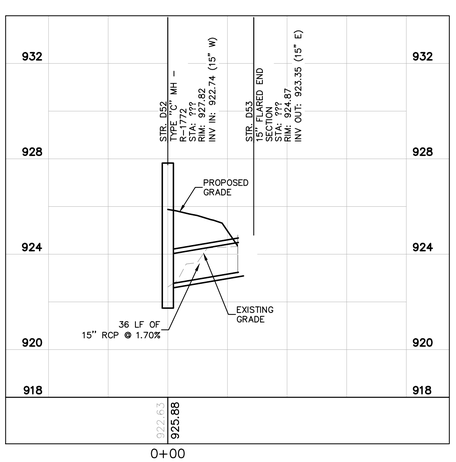

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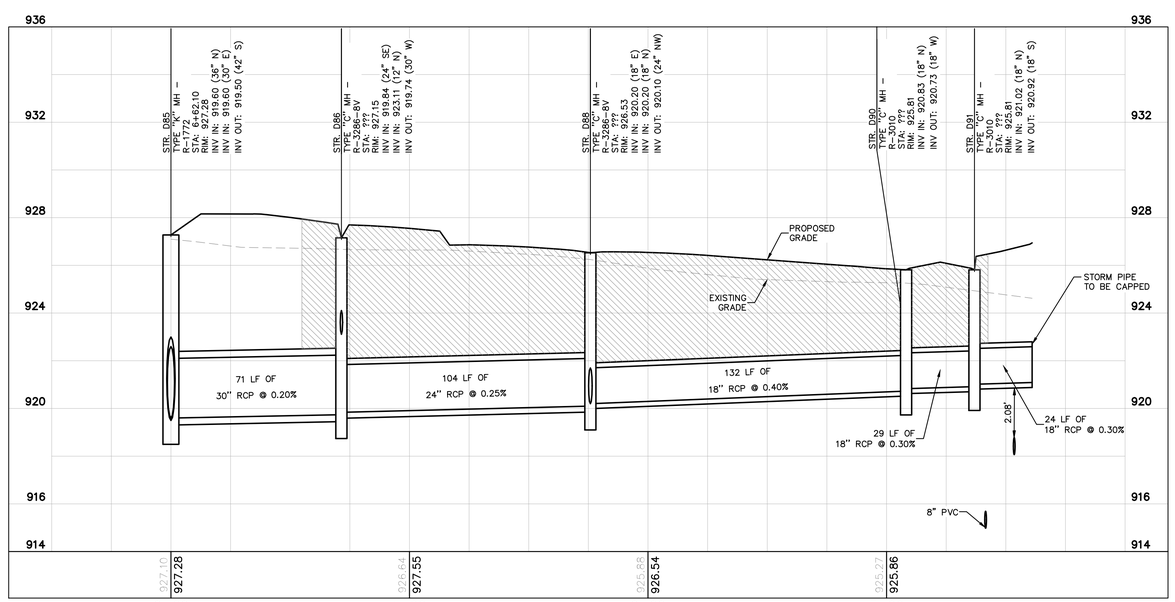

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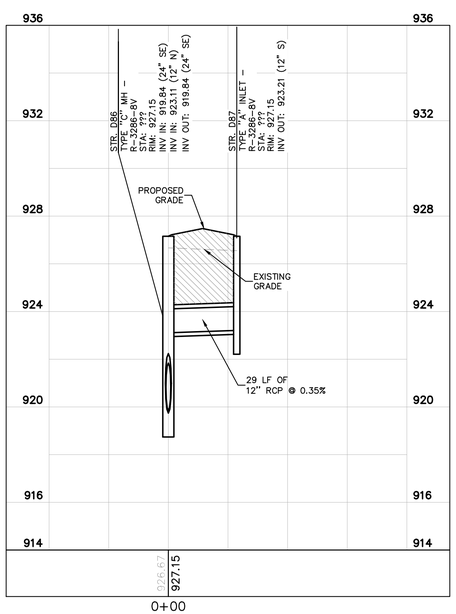

STRM LINE 10
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LEGEND

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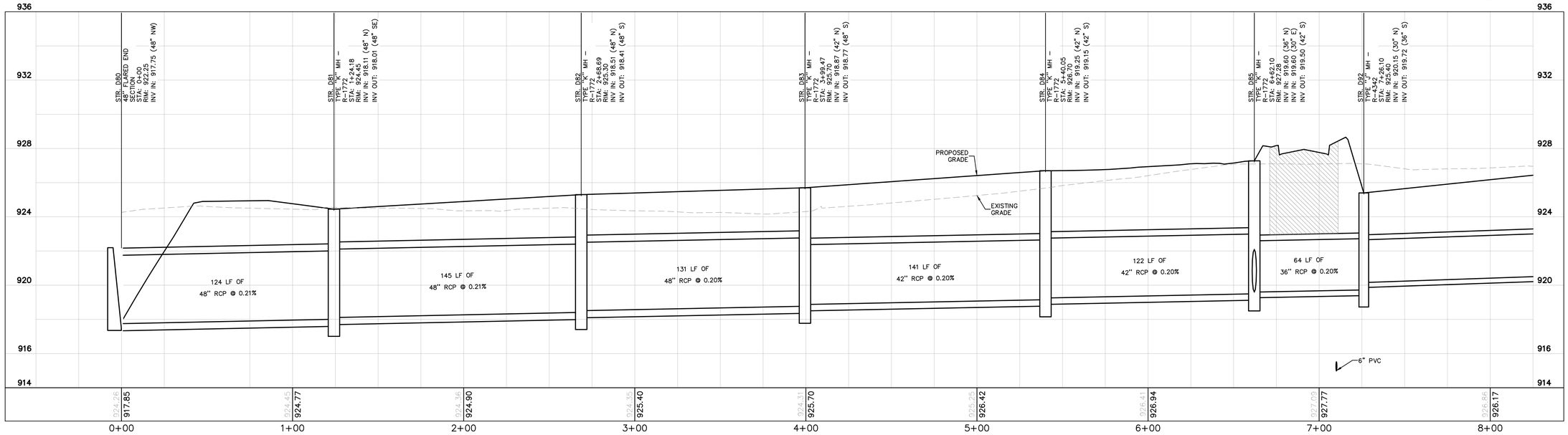

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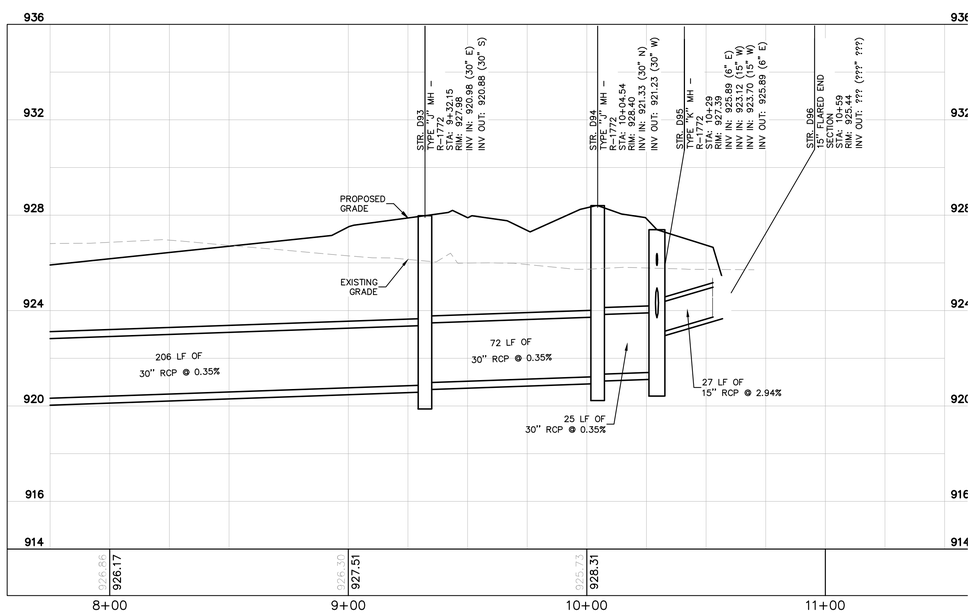

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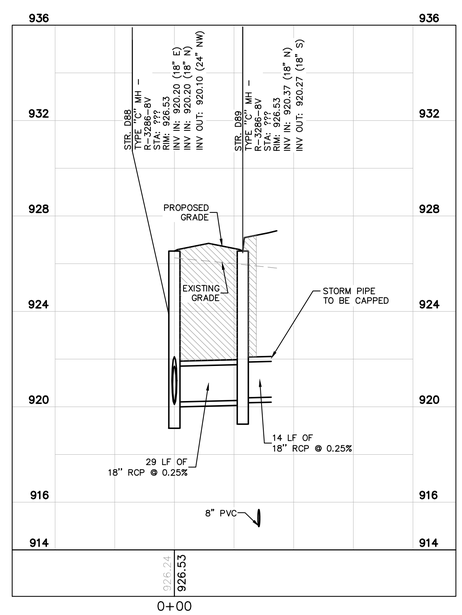

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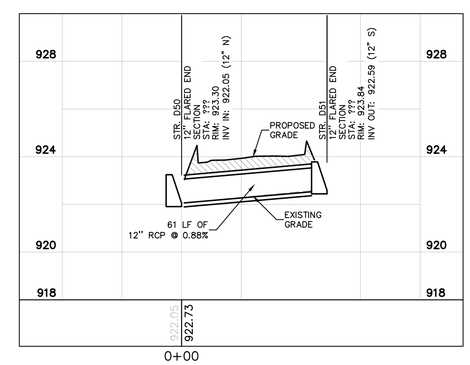

STORM LINE 13
H: 1"=30 | V: 1"=3

LEGEND

GRANULAR BACKFILL
REQUIRED BENEATH AND WITHIN 5 FEET OF PAVEMENT. REFER TO THE TOWN OF ZIONSVILLE STANDARDS FOR BACKFILL REQUIREMENTS.

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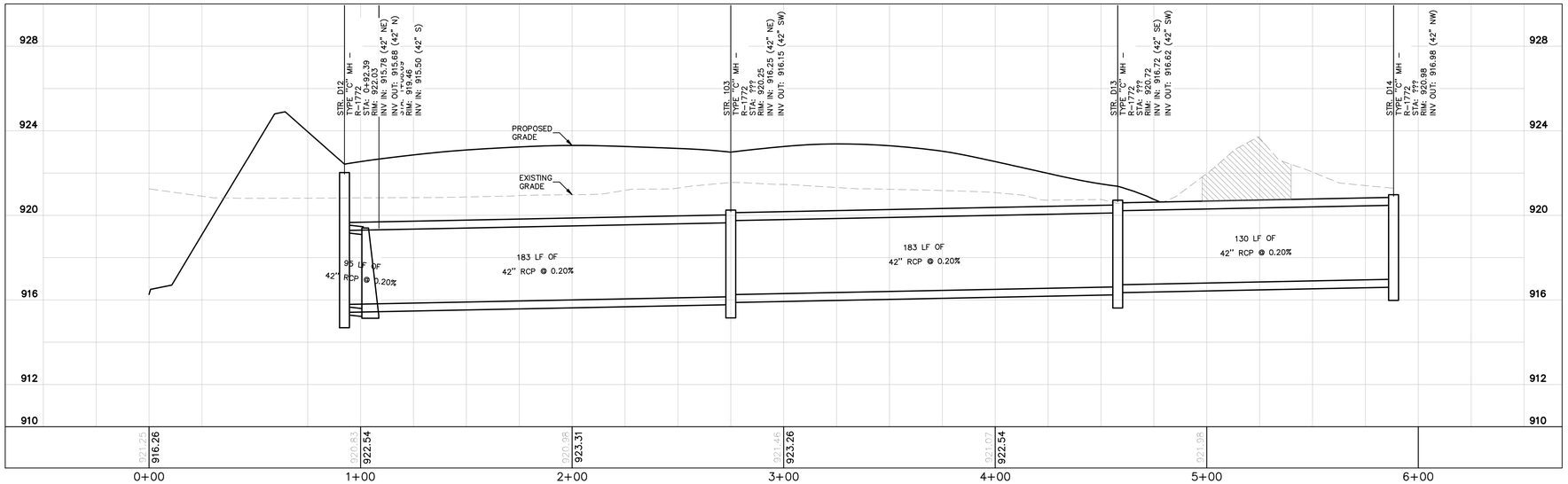

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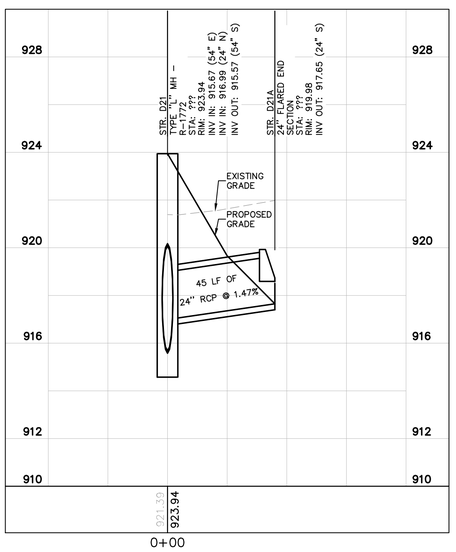

STORM LINE 14
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LEGEND

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POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C6.10

Drawing name: K:\IND_LDEV\170194000_Dallas\International_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C6.4-Utility Profiles.dwg C6.10 Oct 13, 2020 1:29pm by: Eric.Tocable
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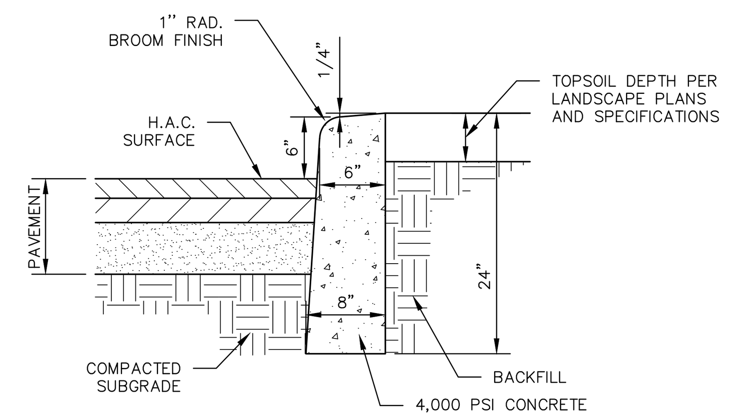
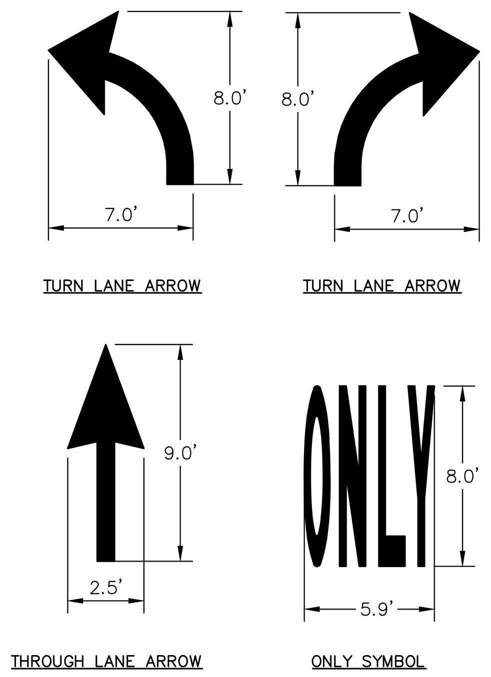


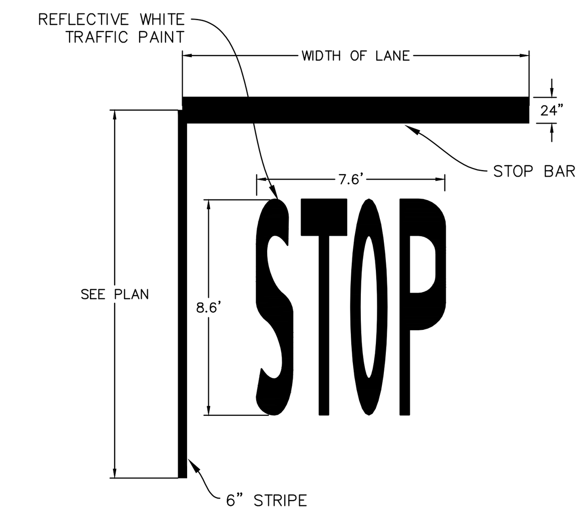
NOTE:
INSTALL JOINTS EVERY 15' AND ALIGN WITH SIDEWALK JOINTS WHERE ADJACENT TO SIDEWALK.

6" CONCRETE CURB
N.T.S.

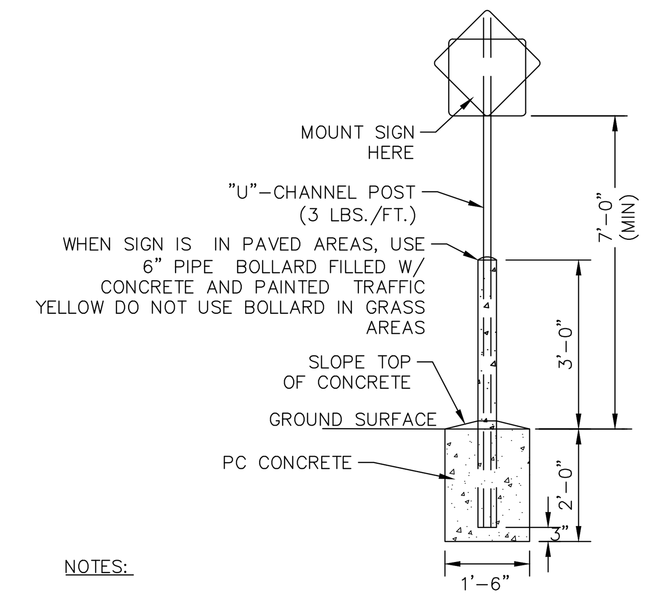


NOTE: ALL TRAFFIC FLOW ARROWS TO BE PAINTED PER STATE DOT STANDARDS PER DIMENSIONS ABOVE.

TRAFFIC FLOW ARROW
N.T.S.



STOP BAR
N.T.S.

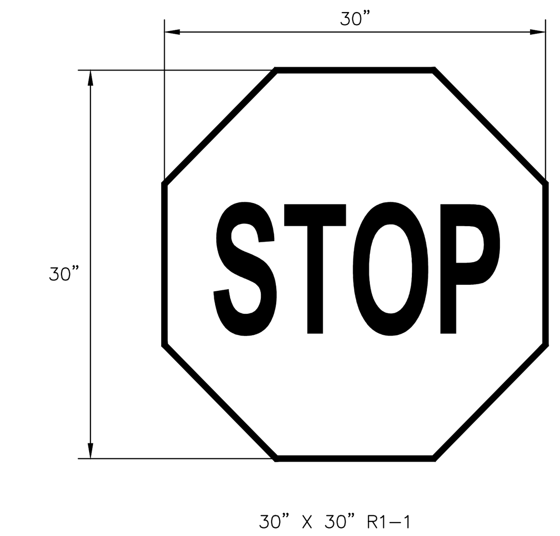


NOTES:

POLE AND SIGN TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.

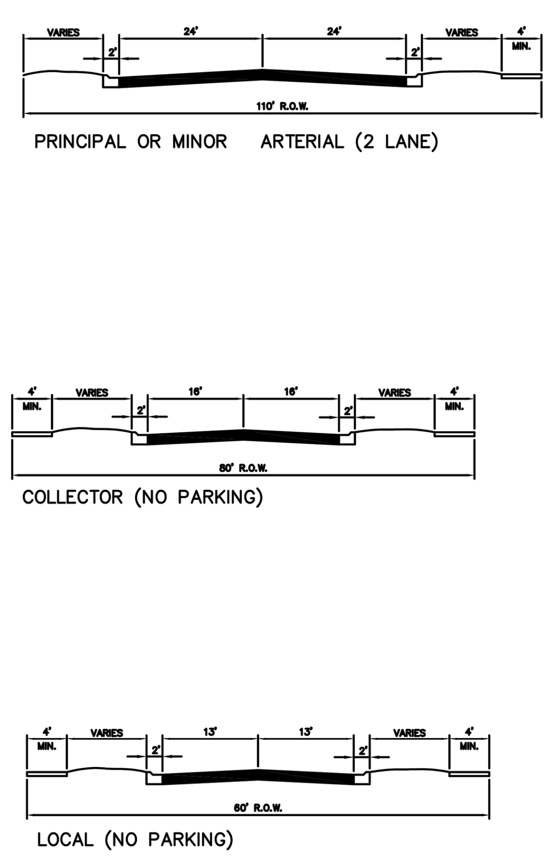
ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

STANDARD SIGN BASE
N.T.S.



30" X 30" R1–1

STOP SIGN
N.T.S.



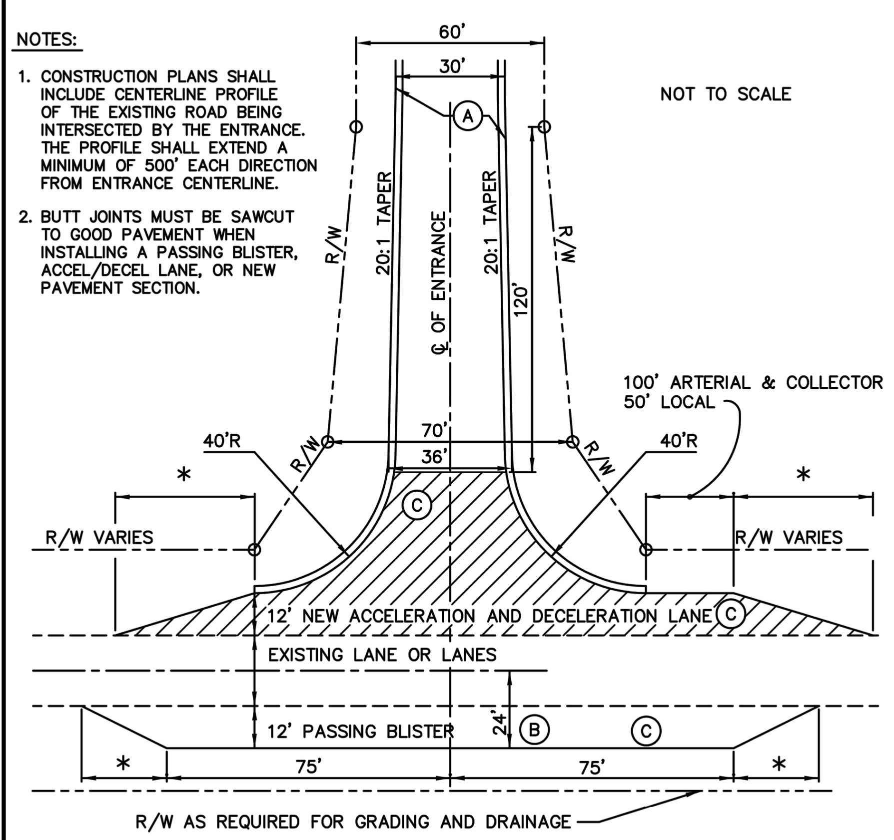
MINIMUM PAVEMENT CROSS SECTIONS

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

TOWN OF ZIONSVILLE, INDIANA
MARCH, 2003
FIGURE P–1

NOTES:
1. CONSTRUCTION PLANS SHALL INCLUDE CENTERLINE PROFILE OF THE EXISTING ROAD BEING INTERSECTED BY THE ENTRANCE. THE PROFILE SHALL EXTEND A MINIMUM OF 500' EACH DIRECTION FROM ENTRANCE CENTERLINE.
2. BUTT JOINTS MUST BE SAWCUT TO GOOD PAVEMENT WHEN INSTALLING A PASSING BLISTER, ACCEL/DECEL LANE, OR NEW PAVEMENT SECTION.

NOT TO SCALE



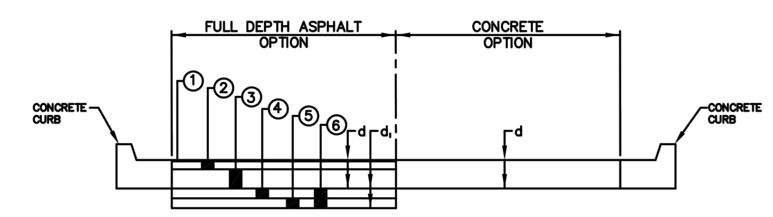
(A) 2' CURB & GUTTER
(B) PASSING BLISTER WHEN REQUIRED
(C) LANE WIDENING SHALL MATCH EXIST. PAVEMENT SURFACE TYPE

* 150' ARTERIAL
100' COLLECTOR
75' LOCAL

MINIMUM STANDARDS FOR DRIVE OR STREET ENTRANCES
(NOT FOR INDIVIDUAL SINGLE–FAMILY RESIDENCES)

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

TOWN OF ZIONSVILLE, INDIANA
AUGUST, 2004
FIGURE P–2



LOCAL STREETS

	ASPHALT (d=8")	ASPHALT ALTERNATIVE 1 (d+d1 =6"+6"=12")
1	1" SURFACE #11 OR #12	1" SURFACE #11 OR #12
2	2" BINDER #9	2" BINDER #9
3	5" BASE #5D	3" BASE #5D
4	N.A.	N.A.
5	N.A.	N.A.
6	N.A.	6" COMP. AGGR. (SIZE No. 53)

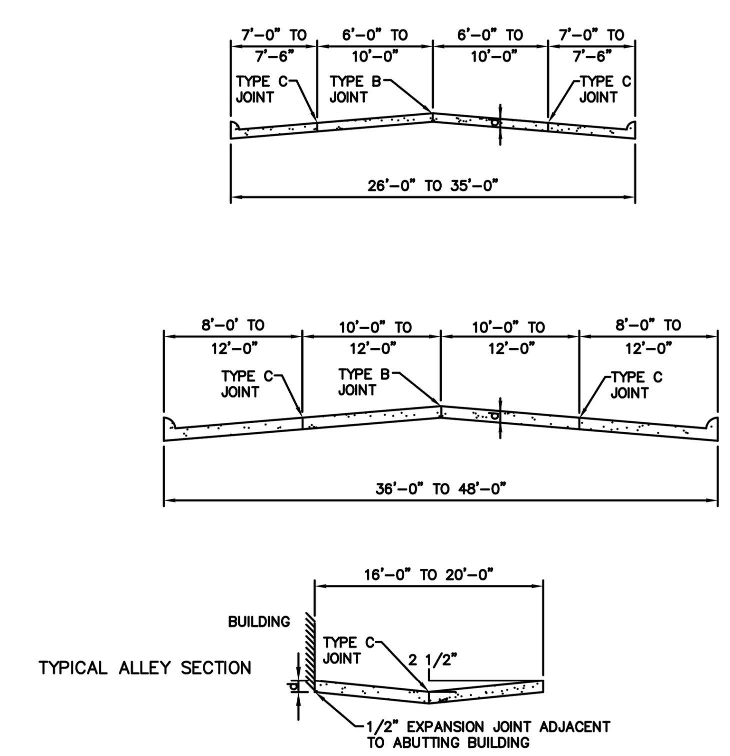
CONCRETE
d=6" CONCRETE

NOTE: * ADD 1" TO ALL TOTAL BITUMINOUS AND CONCRETE THICKNESSES IF ANTICIPATED TRUCK TRAFFIC IS GREATER THAN 10%.
* DEPTH OF CONCRETE GUTTER SHALL EQUAL DEPTH OF CONCRETE PAVEMENT.

TYPICAL PAVEMENT SECTIONS

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

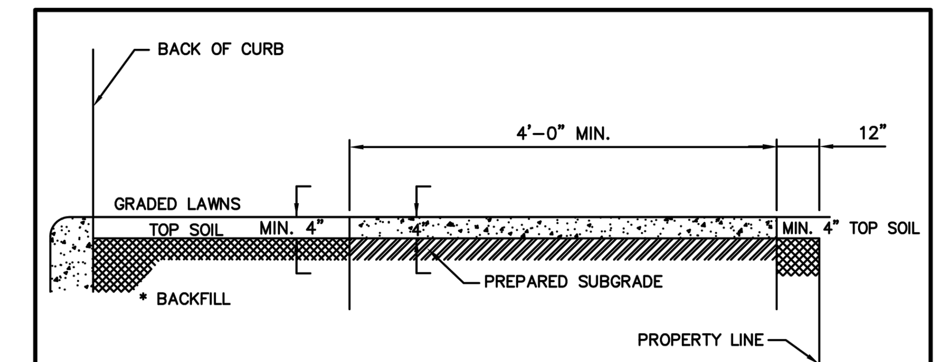
TOWN OF ZIONSVILLE, INDIANA
MAY, 2000
FIGURE P–3.1



PAVEMENT CROSS SECTIONS––JOINT LOCATIONS

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

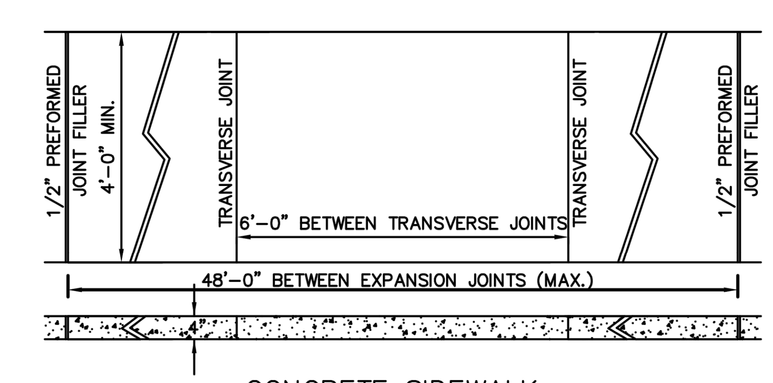
TOWN OF ZIONSVILLE, INDIANA
MAY, 2000
FIGURE P–4



TYPICAL SIDEWALK SECTION
NOT TO SCALE

* THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 6" IN DEPTH.

SUBGRADE UNDER ALL CURBS, SIDEWALKS, AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH I.N.D.O.T. SPECIFICATIONS.

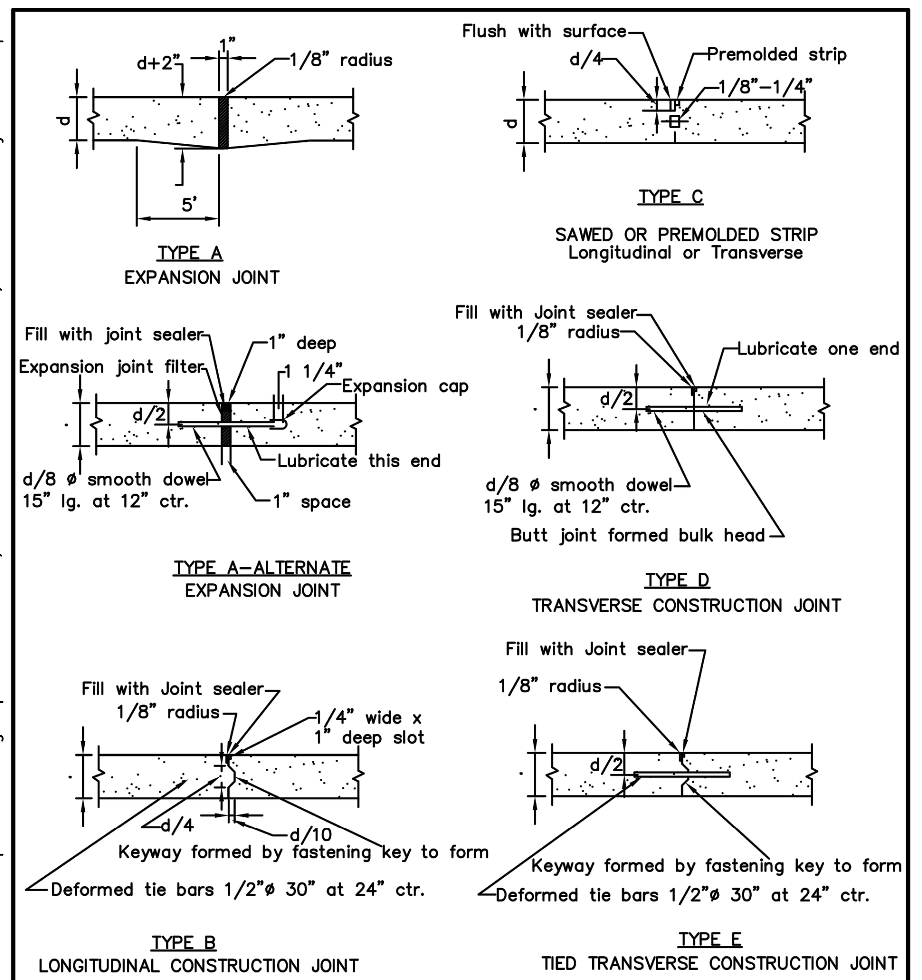


CONCRETE SIDEWALK
NOT TO SCALE

SIDEWALK DETAILS

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

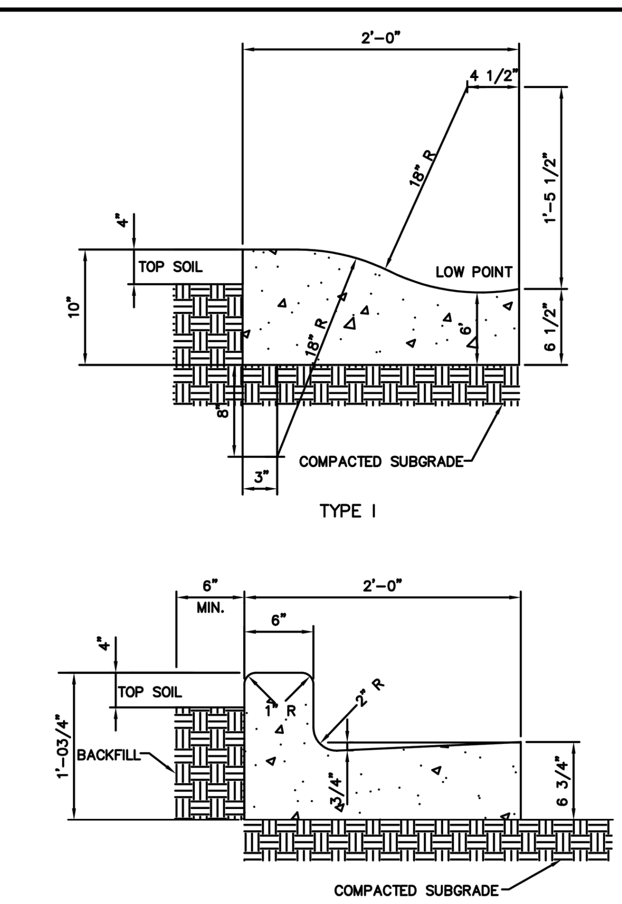
TOWN OF ZIONSVILLE, INDIANA
MAY, 2000
FIGURE P–10



JOINT DETAILS

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

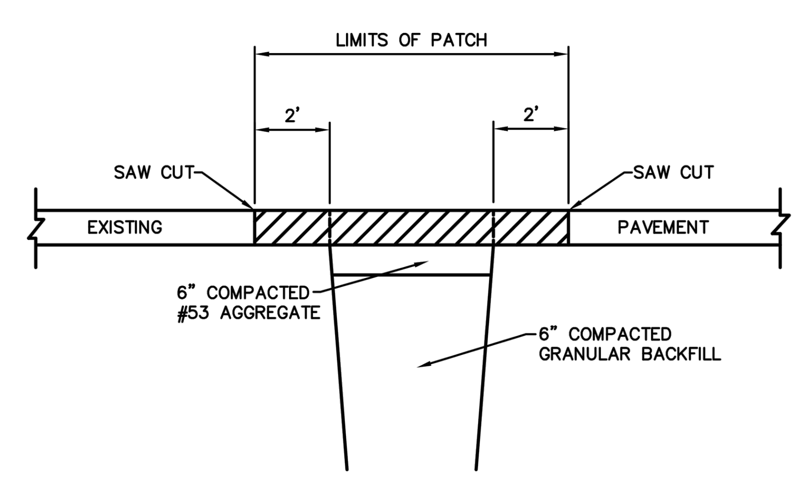
TOWN OF ZIONSVILLE, INDIANA
MAY, 2000
FIGURE P–5



CONCRETE CURB & GUTTER TYPE I & II

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

TOWN OF ZIONSVILLE, INDIANA
MARCH, 2003
FIGURE P–8



GENERAL DETAIL

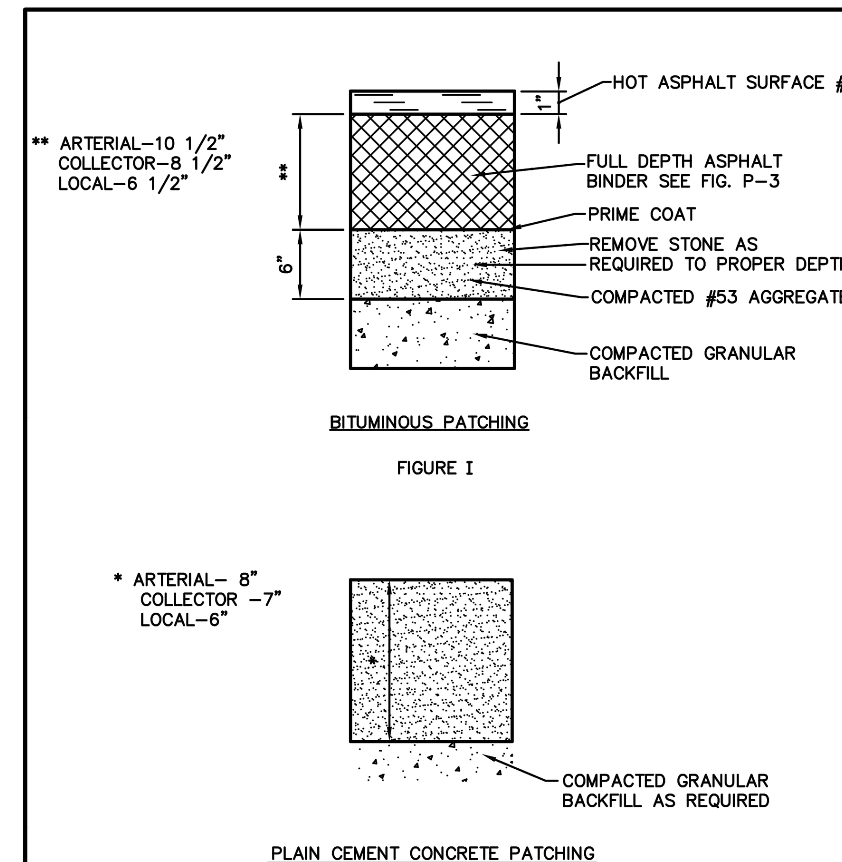
NOTES:
1. SAW CUT 1/3 PAVEMENT THICKNESS THEN BREAK OUT.

NOT TO SCALE

REPAIR CUTS WITHIN PAVEMENT LIMITS

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

TOWN OF ZIONSVILLE, INDIANA
MARCH, 2003
FIGURE P–18

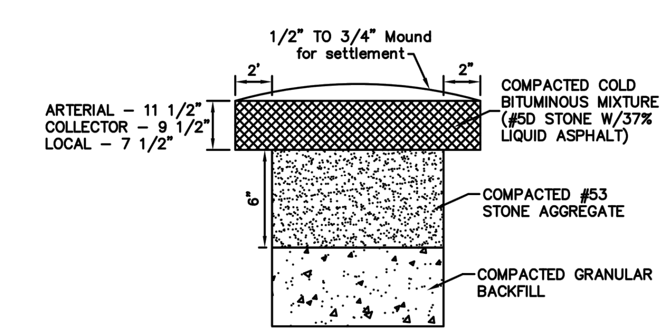


NOT TO SCALE

REPAIR CUTS WITHIN PAVEMENT LIMITS – CONT.

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

TOWN OF ZIONSVILLE, INDIANA
MARCH, 2003
FIGURE P–19



TEMPORARY PATCH
(FROM NOV.10–APRIL 15)

NOT TO SCALE

REPAIR OF CUTS WITHIN PAVEMENT LIMITS – CONT.

HNTB ARCHITECTS ENGINEERS PLANNERS INDIANAPOLIS, INDIANA

TOWN OF ZIONSVILLE, INDIANA
MAY, 2000
FIGURE P–20

No.	REVISIONS	DATE	BY

Kimley»Horn
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250 EAST 96TH STREET, SUITE 580, INDIANAPOLIS, IN 46240
PHONE: 317–218–9560
WWW.KIMLEY–HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD ... REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

CONSTRUCTION DETAILS

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C7.0

Drawing name: K:\IND_LDEV\170194000_CollierslnternationaI_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C7.0–Construction Details.dwg C7.0 Oct 13, 2020 1:29pm by: Eric.Fiacable
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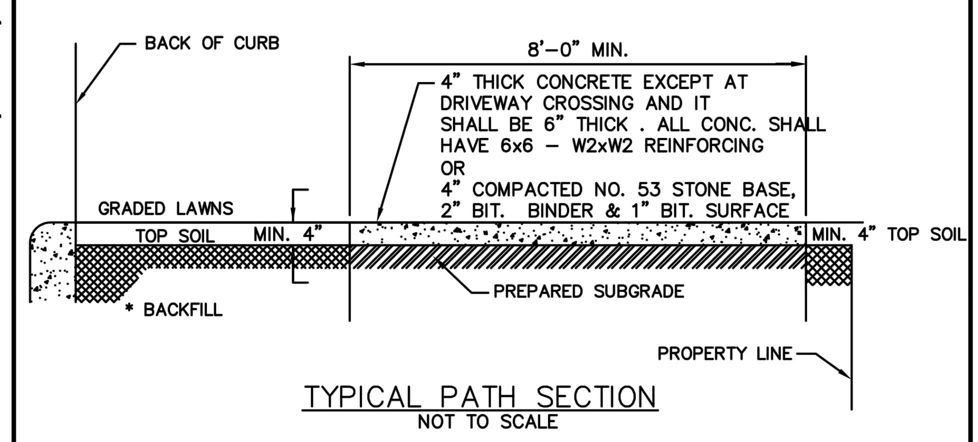


TYPICAL PATH SECTION
NOT TO SCALE

* THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 6" IN DEPTH.

SUBGRADE UNDER ALL CURBS, SIDEWALKS, PATHS AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH I.N.D.O.T. SPECIFICATIONS.

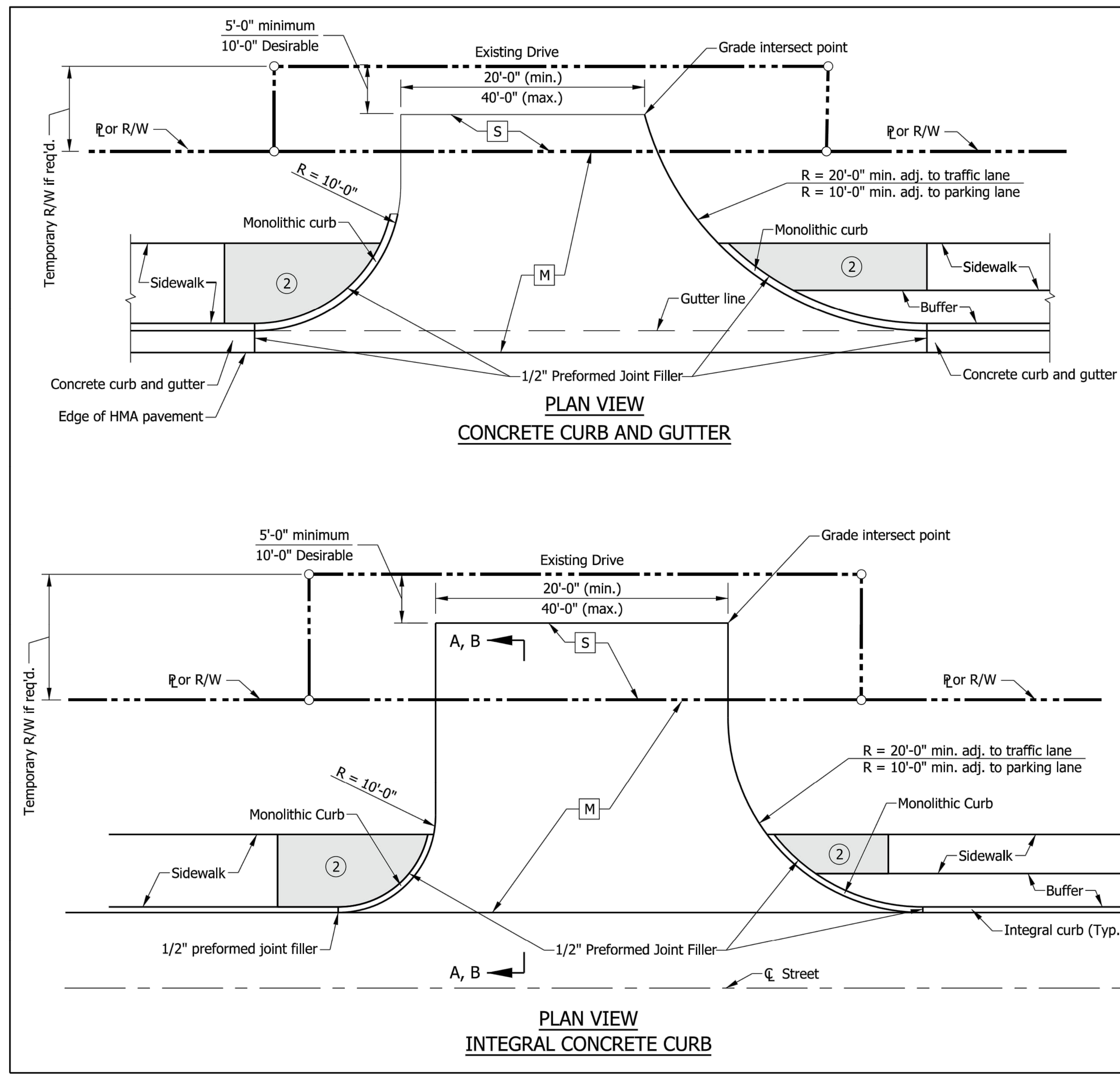
SEE SECTION 02502 (STANDARDS FOR ROADWAY CONSTRUCTION) FOR DETAILED DISCRIPTION OF BICYCLE/JOGGING PATH CONSTRUCTION

BICYCLE/JOGGING PATH DETAIL

HNTB
ARCHITECTS ENGINEERS PLANNERS
INDIANAPOLIS, INDIANA

TOWN OF ZIONSVILLE, INDIANA
MAY, 2000

FIGURE P–21



NOTES:

1. See Standard Drawing E 610-DRIV-09 for Section A-A, and Section B-B.
2. See Standard Drawing E 604-SDWK-03 for sidewalk driveway crossing details.
3. See Standard Drawing E 610-DRIV-14 for joint placement, monolithic curb, and concrete curb and gutter details.

LEGEND

M — PCCP for Approaches 9 in., on Dense Graded Subbase, on Geogrid Type 1B, on Subgrade Treatment Type II (6 in. Coarse Aggregate No. 53)

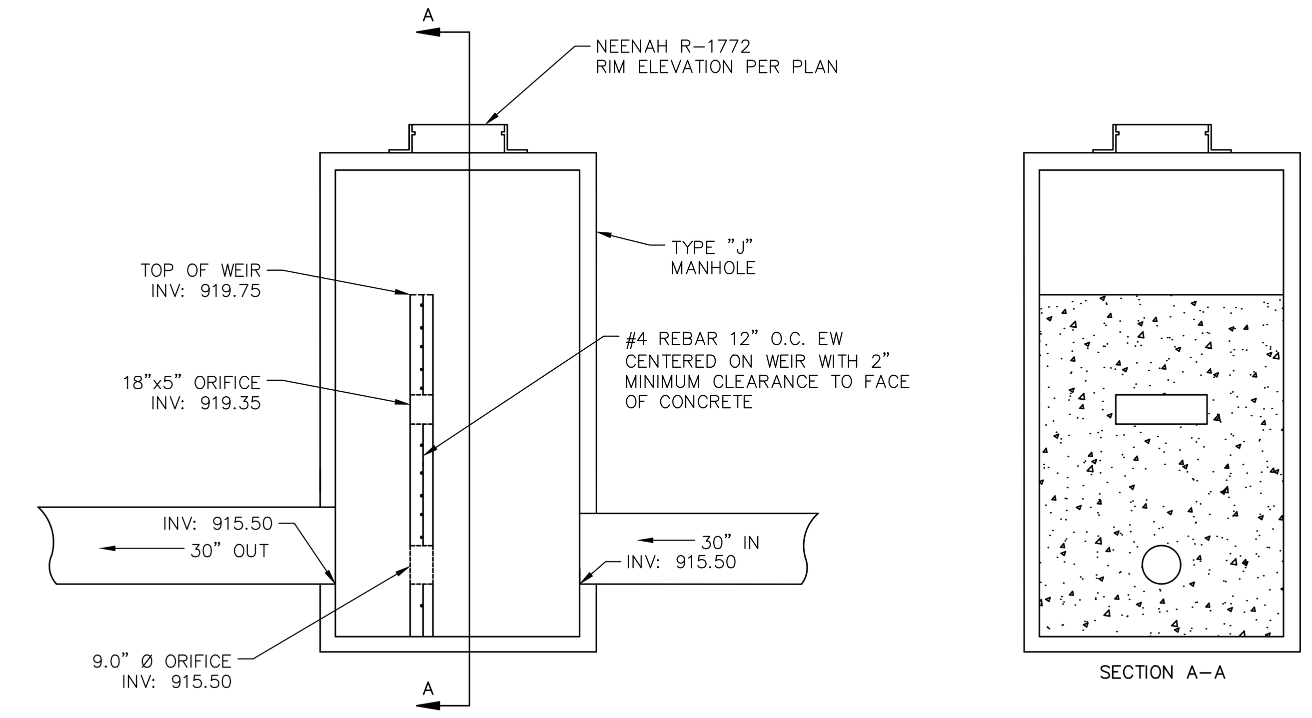
S — For type and thickness equivalent to surface in place, see plans.

Sidewalk elevation transitions.

INDIANA DEPARTMENT OF TRANSPORTATION
CLASS III DRIVE (COMMERCIAL)
SEPTEMBER 2019
STANDARD DRAWING NO. E 610-DRIV-04

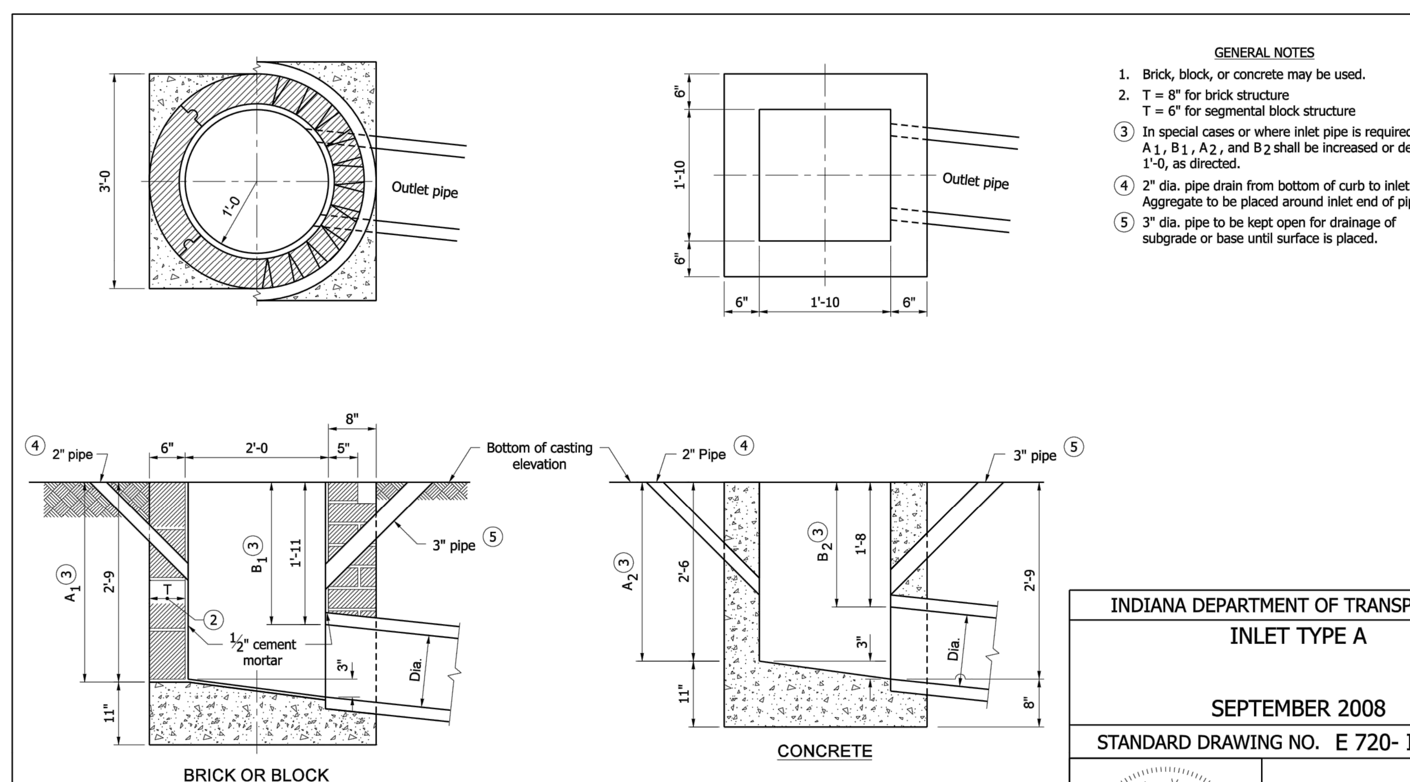
ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGN STANDARDS ENGINEER — 5/1/2019 DATE
CHIEF ENGINEER — 6/5/2019 DATE



OUTLET CONTROL STRUCTURE - D6

N.T.S.



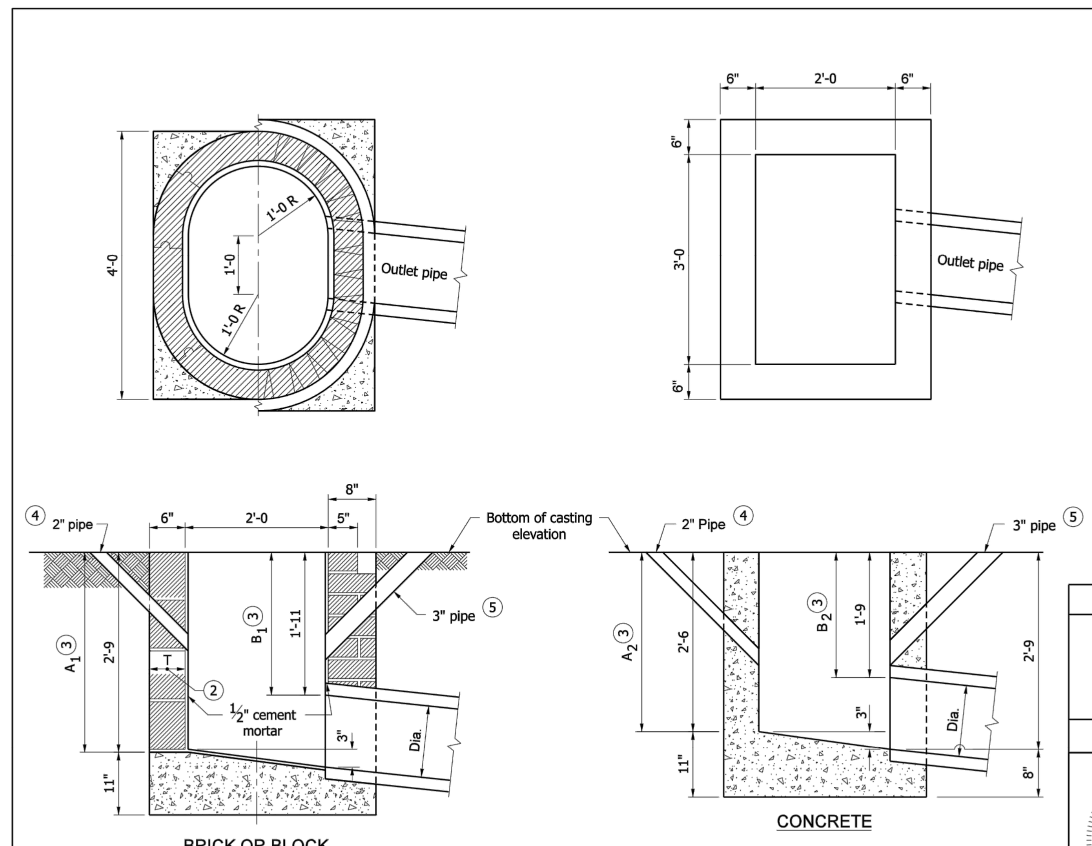
GENERAL NOTES

1. Brick, block, or concrete may be used.
2. T = 8" for brick structure
   T = 6" for segmental block structure
3. In special cases or where inlet pipe is required, A_1, B_1, A_2, and B_2 shall be increased or decreased 1'-0, as directed.
4. 2" dia. pipe drain from bottom of curb to inlet. Aggregate to be placed around inlet end of pipe.
5. 3" dia. pipe to be kept open for drainage of subgrade or base until surface is placed.

INDIANA DEPARTMENT OF TRANSPORTATION
INLET TYPE A
SEPTEMBER 2008
STANDARD DRAWING NO. E 720- INST-01

RICHARD L. VANCLEAVE REGISTERED No. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER
DESIGN STANDARDS ENGINEER

/s/ Richard L. VanCleave — 09/02/08
DESIGN STANDARDS ENGINEER — DATE
/s/ Mark A. Miller — 09/02/08
CHIEF HIGHWAY ENGINEER — DATE



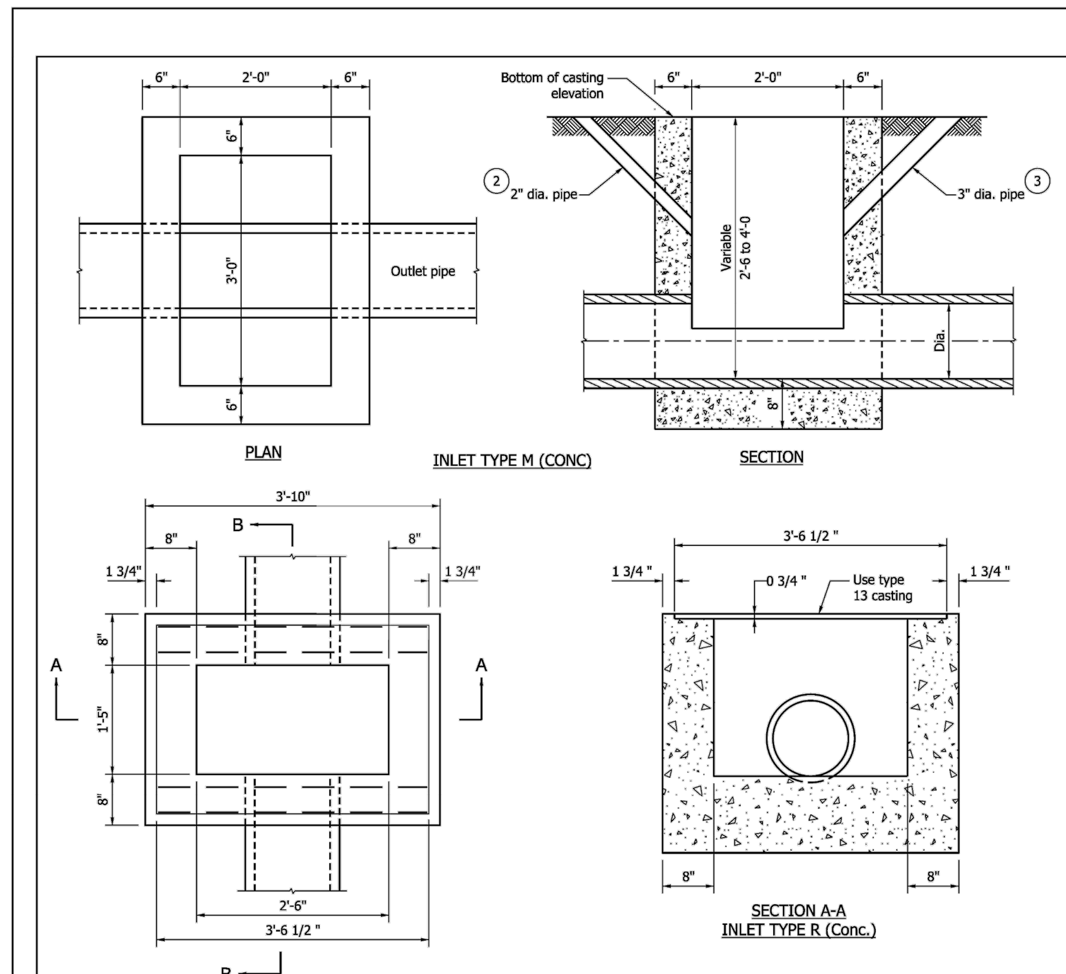
GENERAL NOTES

1. Brick, block, or concrete may be used.
2. T = 8" for brick structure
   T = 6" for segmental block structure
3. In special cases or where inlet pipe is required, A_1, B_1, A_2, and B_2 shall be increased or decreased 1'-0, as directed.
4. 2" dia. pipe drain from bottom of curb to inlet. Aggregate to be placed around inlet end of pipe.
5. 3" dia. pipe to be kept open for drainage of subgrade or base until surface is placed.

INDIANA DEPARTMENT OF TRANSPORTATION
INLET TYPE J
SEPTEMBER 2008
STANDARD DRAWING NO. E 720- INST-06

RICHARD L. VANCLEAVE REGISTERED No. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER
DESIGN STANDARDS ENGINEER

/s/ Richard L. VanCleave — 09/02/08
DESIGN STANDARDS ENGINEER — DATE
/s/ Mark A. Miller — 09/02/08
CHIEF HIGHWAY ENGINEER — DATE



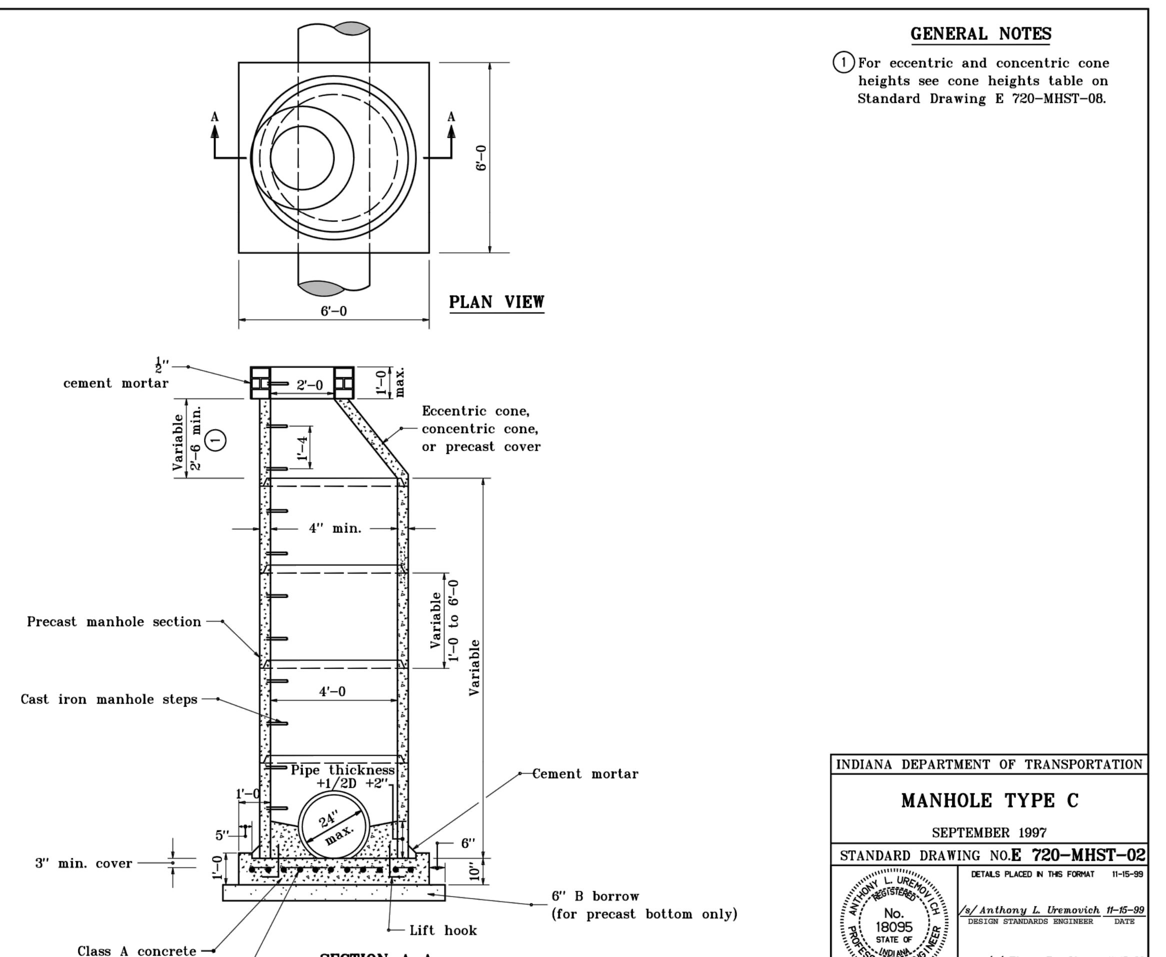
GENERAL NOTES

1. If inlet pipe is required, A_1 and B_1 shall be increased or decreased 1'-0 as directed.
2. 2" dia. drain from bottom of curb to inlet. Aggregate to be placed around inlet end of pipe.
3. 3" min. dia. pipe to be kept open for drainage of subgrade or base until surface is placed.

INDIANA DEPARTMENT OF TRANSPORTATION
INLET TYPE M & R
SEPTEMBER 2009
STANDARD DRAWING NO. E 720 INST-07

RICHARD L. VANCLEAVE REGISTERED No. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER
DESIGN STANDARDS ENGINEER

/s/ Richard L. VanCleave — 09/01/09
DESIGN STANDARDS ENGINEER — DATE
/s/ Mark A. Miller — 09/01/09
CHIEF HIGHWAY ENGINEER — DATE



GENERAL NOTES

1. For eccentric and concentric cone heights see cone heights table on Standard Drawing E 720–MHST–08.

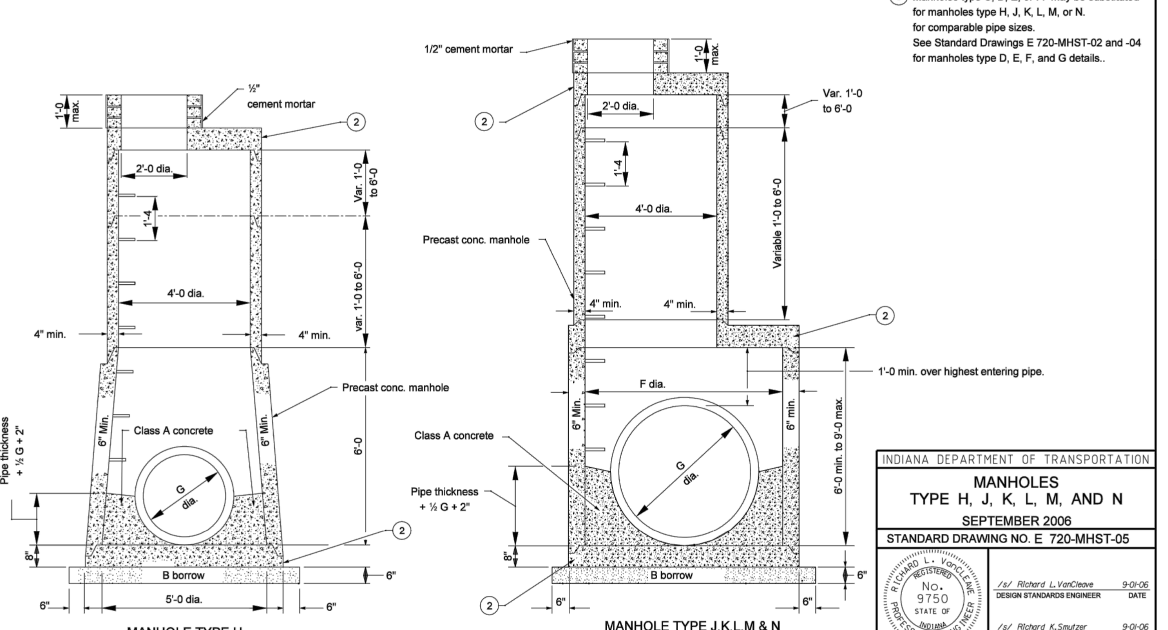
INDIANA DEPARTMENT OF TRANSPORTATION
MANHOLE TYPE C
SEPTEMBER 1997
STANDARD DRAWING NO. E 720–MHST–02

ANTHONY L. UREMOVICH REGISTERED No. 18095 STATE OF INDIANA PROFESSIONAL ENGINEER
DESIGN STANDARDS ENGINEER

DETAILS PLACED IN THIS FORMAT — 11–15–99
/s/ Anthony L. Uremovich — 11–15–99
DESIGN STANDARDS ENGINEER — DATE
/s/ Firooz Zandi — 11–15–99
CHIEF HIGHWAY ENGINEER — DATE
ORIGINALLY APPROVED — 9–02–97

MANHOLE PIPE SIZES

Type	G (in.)	F (ft. in.)	Maximum Pipe Size Rt. ∡ to Mainline (in.)	Maximum Pipe Size for Mainline (in.)
H	24 to 36	——	30	36
J	24 to 36	5'-0	30	36
K	36 to 48	6'-0	36	48
L	48 to 54	8'-0	48	54
M	54 to 72	8'-6	66	72
N	72 to 84	9'-0	72	84



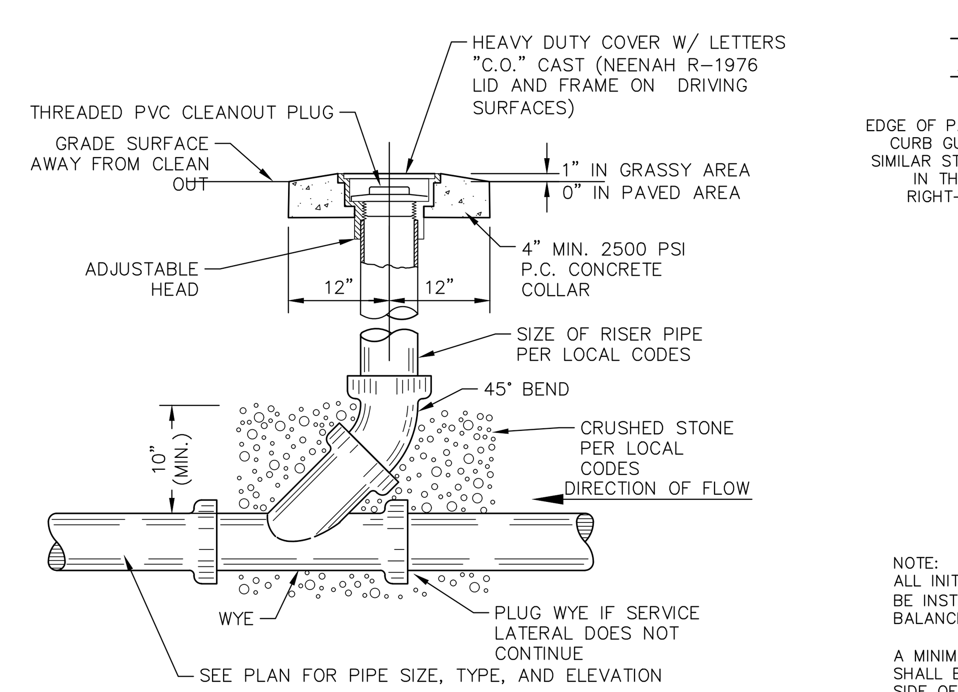
NOTES

1. Drop pipe may be used with manholes Type H, J, K, L, M, or N. Such manhole shall be referred to as drop manholes type H, J, K, L, M, or N. For details of construction see Standard Drawing E 720-MHST-03.
2. See Standard Drawing E 720-MHST-06 for Details A, B, and C.
3. Manholes type C, D, E, or F. may be substituted for manholes type H, J, K, L, M, or N. for comparable pipe sizes. See Standard Drawings E 720-MHST-02 and -04 for manholes type D, E, F, and G details..

INDIANA DEPARTMENT OF TRANSPORTATION
MANHOLES
TYPE H, J, K, L, M, AND N
SEPTEMBER 2006
STANDARD DRAWING NO. E 720-MHST-05

RICHARD L. VANCLEAVE REGISTERED No. 9750 STATE OF INDIANA PROFESSIONAL ENGINEER
DESIGN STANDARDS ENGINEER

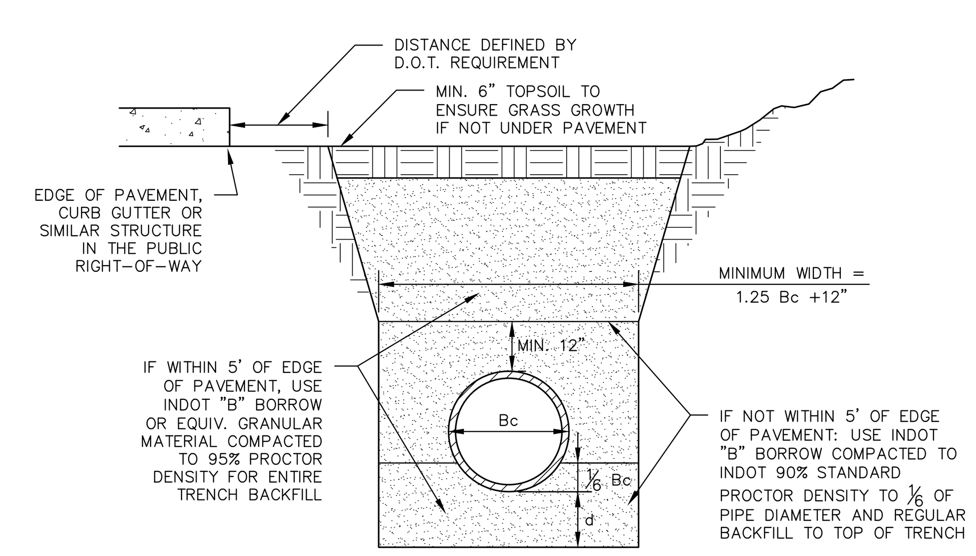
/s/ Richard L. VanCleave — 9-01-06
DESIGN STANDARDS ENGINEER — DATE
/s/ Richard K. Smutzer — 9-01-06
CHIEF HIGHWAY ENGINEER — DATE



NOTE: SEE APPLICABLE DETAIL FOR BACKFILL AND BEDDING INSTRUCTIONS.

SANITARY/STORM CLEAN-OUT

N.T.S.



LEGEND
Bc= OUTSIDE DIAMETER
D= INSIDE DIAMETER
d= DEPTH OF BEDDING MATERIAL BELOW PIPE

NOTE:
ALL INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.

A MINIMUM 9" OF CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.

D	d (MIN)
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

DEPTH OF BEDDING MATERIAL BELOW PIPE

REINFORCED CONCRETE PIPE (RCP) BEDDING DETAIL

N.T.S.

REVISIONS		
No.	DATE	BY

Kimley»Horn
©2020 KIMLEY–HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 580, INDIANAPOLIS, IN 46240
PHONE: 317–218–9560
WWW.KIMLEY–HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD ... REGISTERED ... STATE OF INDIANA PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

CONSTRUCTION DETAILS

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C7.1

Drawing name: K:\IND_LDEV\170194000_CollierslnternationaI_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C7.0–Construction Details.dwg C7.1 Oct 13, 2020 1:30pm by: Eric.Fiacable
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Drawing name: K:\IND_LDEV\170194000_CollierslnternationaI_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C7.0-Construction Details.dwg CONSTRUCTION DETAILS Oct 13, 2020 1:30pm by: Eric.Fiacable
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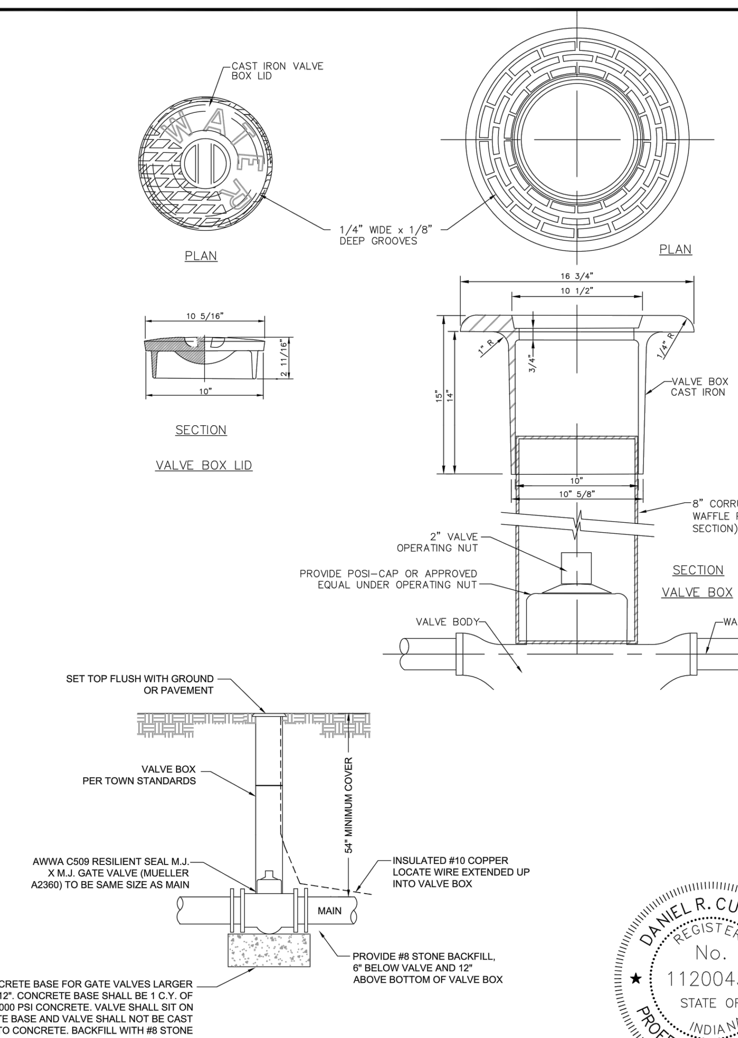
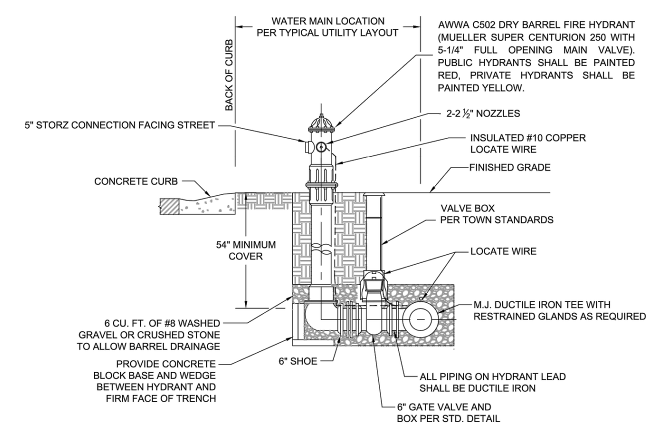


DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS | NO. | DESCRIPTION | DATE | BY

TYPICAL GATE VALVE & VALVE BOX
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 2

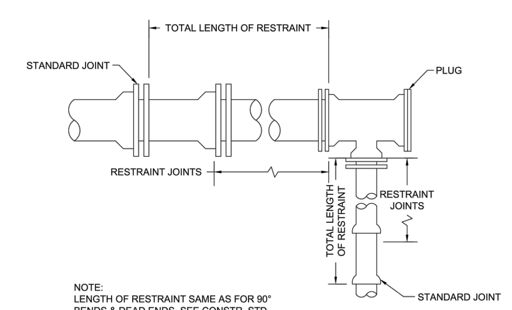


NOTE:
SNOWPLOWABLE BLUE REFLECTORS SHALL BE INSTALLED IN CENTER OF ROAD AT ALL FIRE HYDRANTS; PROVIDE TOWN WITH AN OPERATING WRENCH AND TRAFFIC DAMAGE REPAIR KIT(S). SEE TOWN SPECIFICATIONS.

DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS | NO. | DESCRIPTION | DATE | BY

STANDARD FIRE HYDRANT
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 6

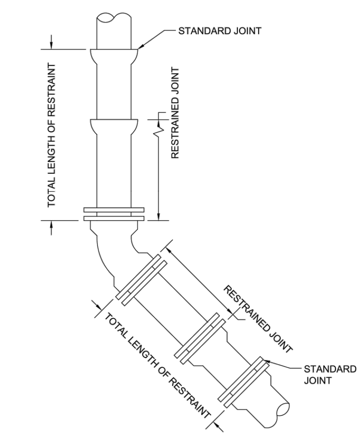


NOTE:
LENGTH OF RESTRAINT SAME AS FOR 90° BENDS & DEAD ENDS. SEE CONSTR. STD. "LENGTH AND METHOD OF RESTRAINT"

DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS | NO. | DESCRIPTION | DATE | BY

RESTRAINT OF TEES-DETAIL
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 10

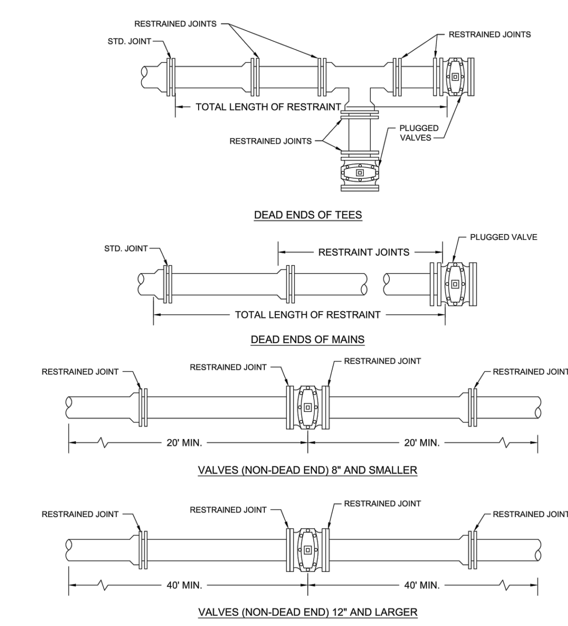


NOTE:
SEE CONSTRUCTION STD. FOR "LENGTH AND METHOD OF RESTRAINT"

DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS | NO. | DESCRIPTION | DATE | BY

RESTRAINT OF BENDS-DETAIL
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 11



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REVISIONS | NO. | DESCRIPTION | DATE | BY

RESTRAINING VALVES-DETAIL
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 13

LENGTH IN FT. TO BE REST. ON EACH SIDE OF FITTING FOR 4" DI PIPE W/ POLY						
TYPE OF BEND	4" TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	DEADENDS
HORIZ. BEND	44	18	10	10	10	53
VERT. BEND			22 UPPER 10 LOWER	11 UPPER 10 LOWER	10 UPPER 10 LOWER	

LENGTH IN FT. TO BE REST. ON EACH SIDE OF FITTING FOR 12" DI PIPE W/ POLY										
TYPE OF BEND	4" TEE	6" TEE	8" TEE	10" TEE	12" TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	DEADENDS
HORIZ. BEND	28	58	89	116	144	49	21	10	10	152
VERT. BEND							63 UPPER 17 LOWER	31 UPPER 10 LOWER	15 UPPER 10 LOWER	

LENGTH IN FT. TO BE REST. ON EACH SIDE OF FITTING FOR 6" DI PIPE W/ POLY							
TYPE OF BEND	4" TEE	6" TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	DEADENDS
HORIZ. BEND	39	66	25	11	10	10	74
VERT. BEND				31 UPPER 10 LOWER	15 UPPER 10 LOWER	10 UPPER 10 LOWER	

LENGTH IN FT. TO BE REST. ON EACH SIDE OF FITTING FOR 16" DI PIPE W/ POLY											
TYPE OF BEND	4" TEE	6" TEE	8" TEE	10" TEE	12" TEE	16" TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	DEADENDS
HORIZ. BEND	19	48	79	105	133	188	63	26	13	10	196
VERT. BEND								82 UPPER 22 LOWER	39 UPPER 11 LOWER	20 UPPER 10 LOWER	

LENGTH IN FT. TO BE REST. ON EACH SIDE OF FITTING FOR 8" DI PIPE W/ POLY								
TYPE OF BEND	4" TEE	6" TEE	8" TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	DEADENDS
HORIZ. BEND	34	62	89	32	14	10	10	97
VERT. BEND					41 UPPER 12 LOWER	20 UPPER 10 LOWER	11 UPPER 10 LOWER	

LENGTH IN FT. TO BE REST. ON EACH SIDE OF FITTING FOR 20" DI PIPE W/ POLY											
TYPE OF BEND	6" TEE	8" TEE	10" TEE	12" TEE	16" TEE	20" TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	DEADENDS
HORIZ. BEND	27	35	42	50	65	80	55	23	11	10	80
VERT. BEND								45 UPPER 20 LOWER	22 UPPER 10 LOWER	11 UPPER 10 LOWER	

1. CONTRACTOR SHALL INSTALL RJDI FITTINGS FOR ALL VERTICAL AND HORIZONTAL BENDS.
2. RESTRAINED LENGTHS WERE CALCULATED ASSUMING 54" DEPTH OF BURY, A 2.0 FACTOR OF SAFETY, TYPE 3 TRENCH CONDITIONS, "CL" SOIL CLASSIFICATION, AND 150 PSI HYDROSTATIC TEST PRESSURES. DESIGNER AND CONTRACTOR SHALL VERIFY INSTALLATION CONDITIONS AND MODIFY RESTRAINT LENGTHS AS REQUIRED TO MEET ACTUAL CONDITIONS SUBJECT TO REVIEW BY THE TOWN OF WHITESTOWN.
3. ALL WATER MAIN APPURTENANCES WITHIN RJDI LIMITS MUST BE RESTRAINED AT EACH JOINT.

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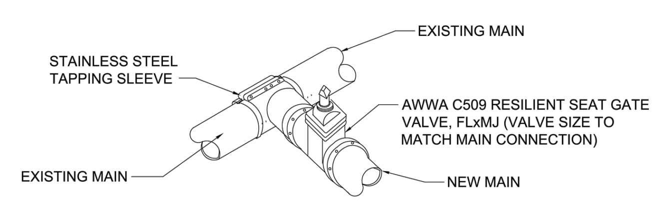
REVISIONS | NO. | DESCRIPTION | DATE | BY

RESTRAINT JOINT TABLES
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 14



NOTE:

1. NO MECHANICAL JOINT TAPPING SLEEVES WILL BE ACCEPTED.
2. BOLTS, NUTS, & WASHERS SHALL BE 304 STAINLESS STEEL.

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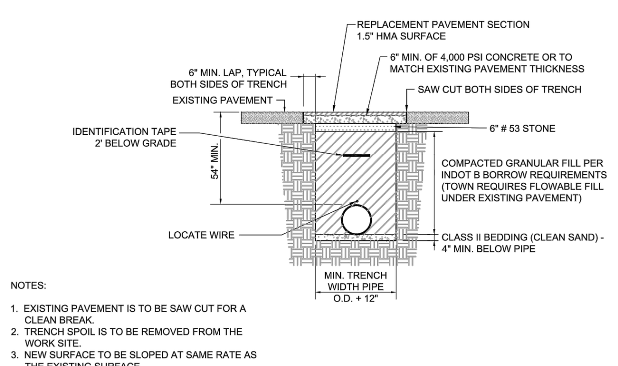
REVISIONS | NO. | DESCRIPTION | DATE | BY

WET TAP TO EXISTING MAIN
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 15

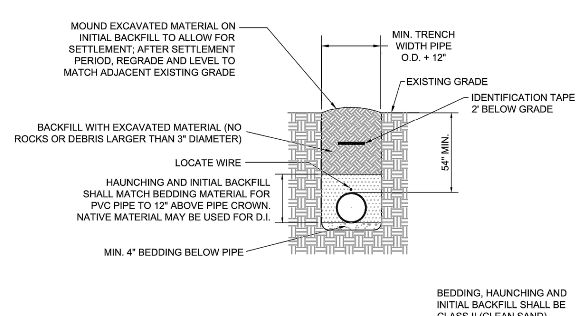


NOTES:
1. EXISTING PAVEMENT IS TO BE SAW CUT FOR A CLEAN BREAK.
2. TRENCH SPOIL IS TO BE REMOVED FROM THE WORK SITE.
3. NEW SURFACE TO BE SLOPED AT SAME RATE AS THE EXISTING SURFACE.
4. GRANULAR FILL SHALL BE PROVIDED WITHIN 5' OF PAVED SURFACE.
5. EXISTING PAVEMENT SHALL BE BACKFILLED WITH FLOWABLE FILL.

DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS | NO. | DESCRIPTION | DATE | BY

TYPICAL TRENCH DETAIL FOR D.I. AND PVC C900 PIPE 12" DIA. OR LESS IN PAVED AREAS
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 18



BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL BE CLASS II (CLEAN SAND)

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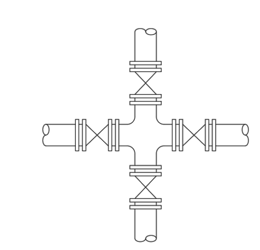
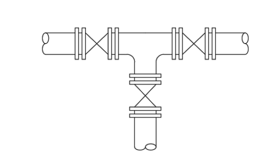
REVISIONS | NO. | DESCRIPTION | DATE | BY

TYPICAL TRENCH DETAIL FOR D.I. OR PVC C900 PIPE 12" DIA. OR LESS IN UNPAVED AREAS
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 19



4 VALVES REQUIRED AT "CROSS"



3 VALVES REQUIRED AT "TEE"

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REVISIONS | NO. | DESCRIPTION | DATE | BY

VALVE DETAILS AT INTERSECTIONS
STANDARD DETAILS
TOWN OF WHITESTOWN
DATE: 07/11/18 SCALE: NTS SHEET NO. 23

REVISIONS | No. | DATE | BY

Kimley»Horn
©2020 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 580,
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

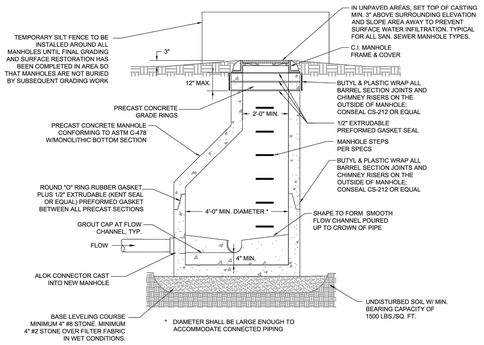
GREGORY RICHARD PLE REGISTERED PE ...66 STATE OF INDIANA PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

CONSTRUCTION DETAILS

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C7.2



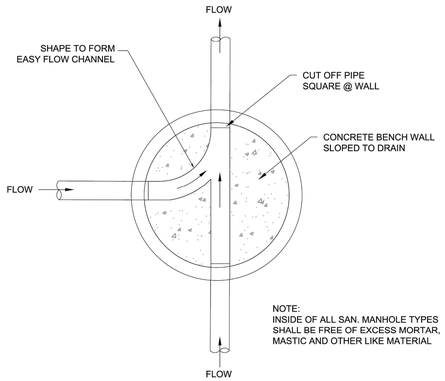
DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

TYPE "A" MANHOLE
STANDARD PRECAST MANHOLE
STANDARD DETAILS
TOWN OF WHITESTOWN

WHITESTOWN

DATE: 07/11/18
SCALE: NTS
SHEET NO. 28



NOTE:
INSIDE OF ALL SAN. MANHOLE TYPES SHALL BE FREE OF EXCESS MORTAR, MASTIC AND OTHER LIKE MATERIAL

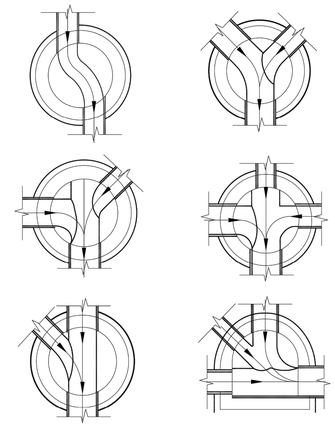
DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

STANDARD MANHOLE BENCH WALL
STANDARD DETAILS
TOWN OF WHITESTOWN

WHITESTOWN

DATE: 07/11/18
SCALE: NTS
SHEET NO. 32



SANITARY SEWER
BENCH SLOPE: 1/2" PER FOOT

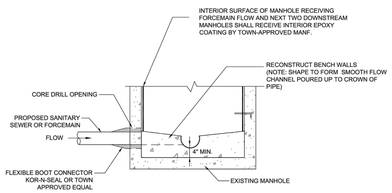
DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

STANDARD MANHOLE BENCHES
STANDARD DETAILS
TOWN OF WHITESTOWN

WHITESTOWN

DATE: 07/11/18
SCALE: NTS
SHEET NO. 33



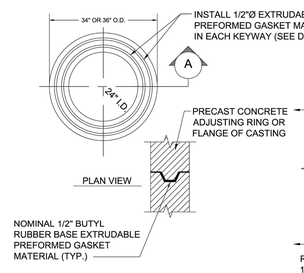
DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

EXISTING MANHOLE CONNECTION DETAIL
STANDARD DETAILS
TOWN OF WHITESTOWN

WHITESTOWN

DATE: 07/11/18
SCALE: NTS
SHEET NO. 35



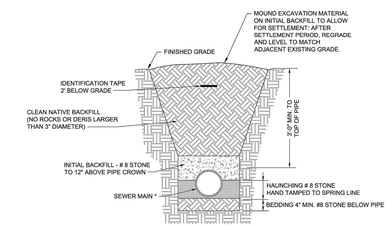
DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

PRECAST ADJUSTING RING
STANDARD DETAILS
TOWN OF WHITESTOWN

WHITESTOWN

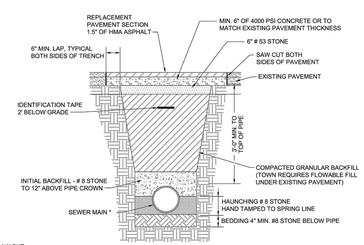
DATE: 07/11/18
SCALE: NTS
SHEET NO. 36



NOTE:
FORCEMAINS ARE TO BE INSTALLED PER THE TYPICAL TRENCH DETAILS FOR WATER MAINS (SEE SHEET 3)

SEWER TRENCH
UNPAVED AREAS

* SDR 26 OR DUCTILE IRON USED FOR SEWER DEEPER THAN 15'.



NOTES:
1. EXISTING PAVEMENT IS TO BE SAW CUT FOR A CLEAN BREAK.
2. TRENCH SPOIL IS TO BE REMOVED FROM THE WORK SITE.
3. NEW SURFACE TO BE SLOPED AT SAME RATE AS THE EXISTING SURFACE.
4. GRANULAR FILL TO BE USED WITHIN 5' OF ALL PAVED AREAS.
5. EXISTING PAVEMENT SHALL BE BACKFILLED WITH FLOWABLE FILL.

SEWER TRENCH
UNDER PAVEMENT

DANIEL R. CUTSHAW REGISTERED No. 11200431 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

TYPICAL GRAVITY SANITARY SEWER TRENCH DETAILS
STANDARD DETAILS
TOWN OF WHITESTOWN

WHITESTOWN

DATE: 07/11/18
SCALE: NTS
SHEET NO. 42

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2020 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 580,
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CVS
DRAWN BY: CVS
CHECKED BY: GRR

GREGORY RICHARD RUSH REGISTERED No. 20100066 STATE OF INDIANA PROFESSIONAL ENGINEER
NOT APPROVED FOR CONSTRUCTION

POCK FAMILY FARMS, LLC

CONSTRUCTION DETAILS

POCK FARM INFRASTRUCTURE PHASE 1

ORIGINAL ISSUE: 10/13/2020
KHA PROJECT NO. 170194000
SHEET NUMBER
C7.3

Drawing name: K:\IND_LDEV\170194000_Collierville\International_Pock Farms_Zionsville_IN\2 Design\CADD\PlanSheets\C7.0-Construction Details.dwg C7.3 Oct 13, 2020 1:30pm by: EricFloodle
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Pock Farm Infrastructure Phase 1

Drainage Report

Street Address TBD
Zionsville, IN 46077

October 13, 2020

Prepared For:
Pock Family Farms, LLC

Prepared By:
Kimley-Horn and Associates, Inc.
250 East 96th Street, Suite 580
Indianapolis, IN 46240
Contact: Greg Ripple, P.E.
Phone: (317) 218-9560
KH Project Number: 1701940000

Kimley»Horn

Kimley»Horn

Table of Contents

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2.0. Introduction 3
3.0. Existing Conditions 3
4.0. Proposed Conditions 5
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Appendix D: Existing Drainage Conditions 11
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Appendix F: Proposed Storm Sewer Design 13
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1.0. Project Summary

Project Name:	Pock Farm Infrastructure Phase 1
Location:	Street Address TBD
Report Type:	Drainage Report
Reviewing Agency:	Town of Zionsville
Storm Sewer Sizing:	Rational Method
Detention Basin Sizing:	SCS Method (HydroCAD)
Stormwater Quality:	Wet Pond (Master Planned)
Stormwater Quantity:	Wet Pond (Master Planned)
Design Standards:	Stormwater Technical Standards Manual – Town of Zionsville, Indiana (December 2004) Stormwater Technical Standards Manual – Town of Zionsville, Indiana (January 11, 2017)

Note: Per the attached agreement between the Town of Zionsville and Pock Family Farm, LLC dated December 19th, 2013, the project shall not be held to any requirements of the Stormwater Management Ordinance more stringent than the standards set forth in Ordinance No. 2004-26.

2.0. Introduction

Kimley-Horn and Associates, Inc. has been retained by Pock Family Farm, LLC to prepare construction documents and provide civil engineering services for the proposed Pock Family Farm, the proposed construction of a ±1,070 LF and a ±370 LF private drive and mass grading of a ±25.07 acre project in Zionsville, Indiana. The area disturbed for this project is approximately 25.57 acres in size.

This drainage report documents the hydrologic and hydraulic calculations used to design the onsite storm sewer system and proposed detention pond.

3.0. Existing Conditions

FEMA

According to FEMA Flood Insurance Rate Map 18011C0329E dated January 18, 2012 provided in **Appendix B**, the site resides within "Zone X" which corresponds to areas determined to be outside of the 0.2% annual chance floodplain.

Soil Characteristics

Per the United States Geological Survey's (USGS) Natural Resources Conservation Service (NRCS) Web Soil Survey, the site soil consists predominately of Crosby silt loam, fine-loamy subsoil-Urban land complex (YclA) and Cyclone silty clay loam-Urban land complex (YcyA). Refer to **Appendix C** for the NRCS Web Soil Survey soil report.

Existing Site Features

The project site is located to the southwest of the intersection of Whitestown Parkway and Oxford Drive in Zionsville, IN. The site is predominately row crops, with a single residential parcel amounting to 2.79 of the 25.57-acre project site. An aerial of the project site has been included in **Appendix A**.

The existing site is composed of two drainage basins. The existing northeast basin (13.40 acres) discharges through a culvert running under Oxford Drive approximately 750 LF south of the intersection of Whitestown Parkway and Oxford Drive. Runoff ultimately discharges into the Villas by Watermark development. The existing southwest basin (11.68 acres) discharges through a culvert running under Oxford Drive approximately 155 LF from the intersection of Oxford Drive and Royal Run Boulevard. Runoff ultimately discharges into the existing storm infrastructure within the Royal Run subdivision. The existing Solomon Harman legal drain runs west to east through the site, collecting infiltration and discharging into the existing Villas by Watermark development to the east. Refer to **Appendix D** for additional information regarding existing drainage.

The tables below indicate the existing runoff from the site for the 10 Year and 100 Year storm events using the SCS TR-20 Method for each existing outlet and the overall site.

Storm Event	Discharge Rate (cfs)
10 YR-24 HR	19.60
100 YR-24 HR	35.60

Table 1: Existing Discharge Rates – EX NE

Storm Event	Discharge Rate (cfs)
10 YR-24 HR	21.44
100 YR-24 HR	38.82

Table 2: Existing Discharge Rates – EX SW

Storm Event	Discharge Rate (cfs)
10 YR-24 HR	39.25
100 YR-24 HR	71.29

Table 3: Existing Discharge Rates – EXISTING SUMMATION

The Town of Zionsville allows discharge rates of 0.3 cfs per acre of development for 0-10 year return interval storms and 0.5 cfs per acre of developed area for 11-100 year return interval storms. The table below indicates the allowable release rates for the proposed project site to the east, per the 13.40 existing acres discharging to the outlet in the existing condition.

Storm Event	Discharge Rate (cfs)
10 YR-24 HR	4.01
100 YR-24 HR	6.69

Table 4: Allowable Discharge Rates

The Villas by Watermark development storm sewer has been designed to accept runoff from the proposed project site, as well as the parcel in-between the proposed project site and the Villas by Watermark. Per Appendix C of the drainage report by Innovative Engineering dated 11/12/2013, this runoff amount is 35.99 cfs for the 10 Year-24 Hour event. Refer to **Appendix H** for excerpts from the previous drainage report.

Offsite flow enters the Villas storm infrastructure via the Solomon Harman legal drain, sheet flow (accepted by end section "109A"), and an existing area drain serving the parcel in-between the Pock Farm and Villas development. The table below indicates the existing release rates for the offsite area within the parcel in-between the Pock Farm and Villas development.

Storm Event	Discharge Rate (cfs)
10 YR-24 HR	10.27
100 YR-24 HR	18.59

Table 5: Existing Discharge Rates – EX OFFSITE

The table below indicates the allowable release rates for the Pock Farm development when considering the EX OFFSITE basin entering the Villas storm infrastructure.

Storm Event	Discharge Rate (cfs)
10 YR-24 HR	25.72
100 YR-24 HR	17.40

Table 6: Allowable Discharge Rates – Physical Constraints

Per Tables 4 and 6, the Town's allowable discharge limits are more restrictive.

4.0. Proposed Conditions

The proposed project includes the construction of a ±1,070 LF and a ±370 LF private drive and mass grading of a ±25.07 acre project in Zionsville, Indiana. The area disturbed for this project is approximately 25.57 acres in size.

Proposed onsite private storm inlets, sewers, and swales have been designed to carry site drainage from the pavement and grassed areas to the proposed wet pond, prior to releasing to the east. Refer to **Appendix E** for a proposed drainage area map.

The table below indicates the proposed runoff from the site for the 10 Year and 100 Year storm events using the SCS TR-20 Method (without considering proposed detention).

Storm Event	Proposed Discharge Rate (cfs)
10 YR-24HR	98.55
100 YR-24 HR	151.16

Table 5: Proposed Discharge Rates – Proposed Storm Northwest

The table below indicates the proposed release from the proposed detention for the 10 Year and 100 Year storm events using the SCS TR-20 Method, alongside the allowable release rates.

Storm Event	Proposed Discharge Rate (cfs)	Allowable Discharge Rate (cfs)
10 YR-24HR	3.41	4.01
100 YR-24 HR	5.42	6.69

Table 6: Proposed Discharge Rates – Proposed Storm Southeast

The proposed curve number for the site was determined by assuming 85% impervious area across the site (CN=95). Refer to **Appendix E** for the associated curve number calculations.

Stormwater Quality

Water quality for the proposed site will be provided by proposed wet pond (Refer to **Appendix G** for Stormwater Quality Design).

Conclusions

The proposed drainage design for this project has been designed to meet the intent of the Town of Zionsville Stormwater Technical Standards Manual and comply with the existing drainage design. No adverse impacts are anticipated to affect any adjacent or downstream properties.

5.0 Appendices

Appendix A: Aerial Photography

PROJECT SITE
Gateway E Dr
Aldridge Dr
Andrews Way
Schooler Drive
Fairfield St
el Paso St
Central Blvd
Central Boulevard
Heartland Dr
The Commons
Regents Park Dr
Beekman Pl
Bishops Green
East Deerfield Drive
W Stonegate Dr
E Stonegate Dr
Whitestown Pkwy
Center Dr
Crane Dr
E 650 S
Maple Grove Blvd
Mottleson Dr
Muller Dr
Purcell Dr
Silver Leaf Dr
Concord Dr
Blackstone Dr
Independence Dr
Luria Ln
Kingsbury Way
Glenwood Trace
Sussex Dr
Royal Run Blvd
Abby Ln
S 650 E
Hunters Ridge N
Yorkshire Cir
Hampshire Dr
Roxbury Rd
Canterbury Dr
Lancaster Pl
Wimbledon Dr
Dorchester Dr
Lexington Cir
Woodcliff Cir
Sprong Rd
Hunt Club
65
Google Earth
© 2020 Google

Appendix B: FEMA FIRMette

National Flood Hazard Layer FIRMette

FEMA

86°20'38"W 39°57'4"N

86°20'W 39°56'36"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/6/2020 at 10:56 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix C: NRCS Web Soil Survey

Hydrologic Soil Group—Boone County, Indiana

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Boone County, Indiana
Survey Area Data: Version 23, Jun 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 1, 2018—Sep 30, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
UcfA	Urban land-Crosby silt loam complex, fine-loamy subsoil, 0 to 2 percent slopes		1.8	7.0%
YclA	Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes	C/D	7.9	30.9%
YctA	Crosby-Urban land-Treaty complex, fine-loamy subsoil, 0 to 2 percent slopes	C/D	0.1	0.4%
YcxA	Cyclone-Urban land complex, 0 to 1 percent slopes	B/D	0.0	0.1%
YcyA	Cyclone silty clay loam-Urban land complex, 0 to 2 percent slopes	B/D	15.7	61.5%
Totals for Area of Interest			**25.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

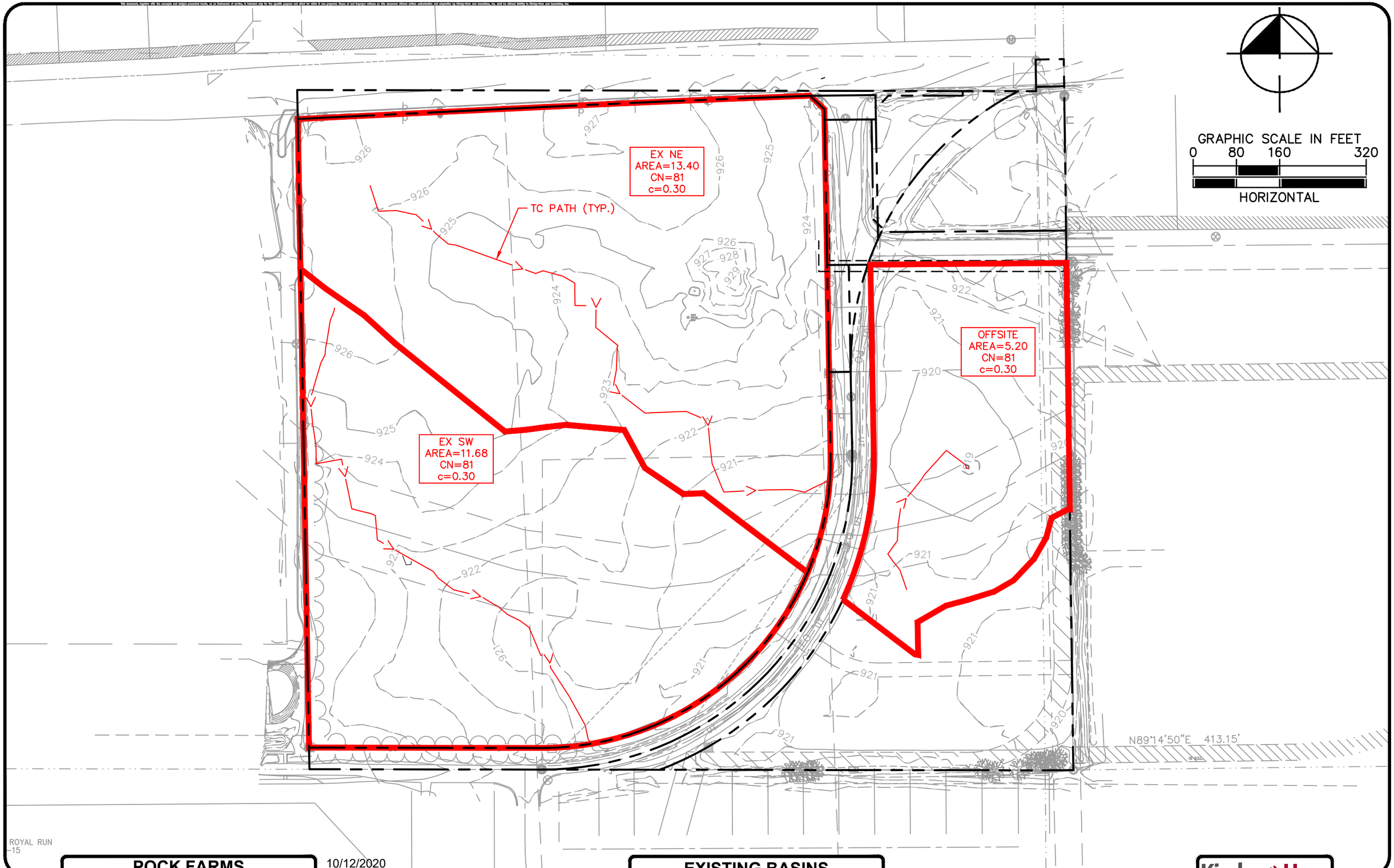
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix D: Existing Drainage Conditions



POCK FARMS
ZIONSVILLE, INDIANA

10/12/2020

EXISTING BASINS MAP

Kimley»Horn

Kimley»Horn

PROJECT:	**Pock Farm Infrastructure Phase 1**
BY:	**Connor Strege**
DATE:	**13-Oct-20**

Site Soil	
Hydrologic Group	%
A	0.0%
B	61.6%
C	31.3%
D	7.1%
Total	100.0%

Basin	Area (ac)							Weighted C	Weighted CN	Weighted CN
	Row Crops - Good	Pasture - Good	Open Space - Good Condition (>75% Cover)	Impervious - Paved	Impervious - Rooftop	Water - Pond or Lake	Total		Actual Soil Group	Next Less Impervious Soil Group
EX NE	13.37	0.00	0.00	0.00	0.03	0.00	13.40	0.30	81	**87**
EX SW	11.68	0.00	0.00	0.00	0.00	0.00	11.68	0.30	81	**87**
EX OFFSITE	5.20	0.00	0.00	0.00	0.00	0.00	5.20	0.30	81	**87**

Time of Concentration (T_c) or Travel Time (T_t)

Project:	Pock Farms	By:	CVS	Date:	10/12/2020
Location:	Zionsville, Indiana	Checked:		Date:	
Basin:	EX NE				

Present X Developed -

Tc X T_t - through subarea

Sheet Flow								
Segment ID								
Surface description (Table 3-1)		Unpaved						
Manning's roughness coeff., n (Table 3-1)		0.24						
Flow Length, L (L < 300 ft)	ft	100						
Rainfall Calculation Method		Entity Rainfall Data						
Two-year 24-hr rainfall, P2	in	2.66						
Land slope, s	ft/ft	0.004						
$T_t = \frac{.007\,(nL)^{0.8}}{(P_2)^{0.5}s^{0.4}}$	hr	0.50	+		+		=	0.50

Shallow Concentrated Flow								
Segment ID								
Surface description, (paved or unpaved)		Unpaved		-		-		
Flow length, L	ft	1136		-		-		
Watercourse slope, s	ft/ft	0.005		-		-		
Average velocity, V (Figure 3-1)	ft/s	1.13		-		-		
$T_t = \frac{L}{3600\,V}$	hr	0.28	+	-	+	-	=	0.28

Channel Flow								
Segment ID								
Channel Geometry		-		-		-		
Discharge (cfs)		-		-		-		
Diameter (ft)		-		-		-		
Bottom Width (ft)		-		-		-		
Side Slope (x:1) (ft)		-		-		-		
Slope of Channel (ft)		-		-		-		
Manning's Roughness Coefficient		-		-		-		
Depth (ft)		-		-		-		
Cross Sectional Area (ft^2)		-		-		-		
Wetted Perimeter (ft)		-		-		-		
Hydraulic Radius (ft)		-		-		-		
Velocity (ft/s)		-		-		-		
Flow length, L	ft	-		-		-		
$T_t = \frac{L}{3600\,V}$	hr	-	+	-	+	-	=	0.00

Watershed or subarea T_c or T_t	hr	0.78
	min	46.56

Time of Concentration (T_c) or Travel Time (T_t)

Project:	Pock Farms	By:	CVS	Date:	10/12/2020
Location:	Zionsville, Indiana	Checked:		Date:	
Basin:	EX SW				

Present X Developed -

Tc X T_t - through subarea

Sheet Flow								
Segment ID								
Surface description (Table 3-1)		Unpaved						
Manning's roughness coeff., n (Table 3-1)		0.24						
Flow Length, L (L < 300 ft)	ft	100						
Rainfall Calculation Method		Entity Rainfall Data						
Two-year 24-hr rainfall, P2	in	2.66						
Land slope, s	ft/ft	0.011						
$T_t = \frac{.007\,(nL)^{0.8}}{(P_2)^{0.5}s^{0.4}}$	hr	0.33	+		+		=	0.33

Shallow Concentrated Flow								
Segment ID								
Surface description, (paved or unpaved)		Unpaved		-		-		
Flow length, L	ft	1008		-		-		
Watercourse slope, s	ft/ft	0.006		-		-		
Average velocity, V (Figure 3-1)	ft/s	1.20		-		-		
$T_t = \frac{L}{3600\,V}$	hr	0.23	+	-	+	-	=	0.23

Channel Flow								
Segment ID								
Channel Geometry		-		-		-		
Discharge (cfs)		-		-		-		
Diameter (ft)		-		-		-		
Bottom Width (ft)		-		-		-		
Side Slope (x:1) (ft)		-		-		-		
Slope of Channel (ft)		-		-		-		
Manning's Roughness Coefficient		-		-		-		
Depth (ft)		-		-		-		
Cross Sectional Area (ft^2)		-		-		-		
Wetted Perimeter (ft)		-		-		-		
Hydraulic Radius (ft)		-		-		-		
Velocity (ft/s)		-		-		-		
Flow length, L	ft	-		-		-		
$T_t = \frac{L}{3600\,V}$	hr	-	+	-	+	-	=	0.00

Watershed or subarea T_c or T_t	hr	0.56
	min	33.64

Time of Concentration (T_c) or Travel Time (T_t)

Project:	Pock Farms	By:	CVS	Date:	10/12/2020
Location:	Zionsville, Indiana	Checked:		Date:	
Basin:	EX OFFSITE				

Present X Developed -

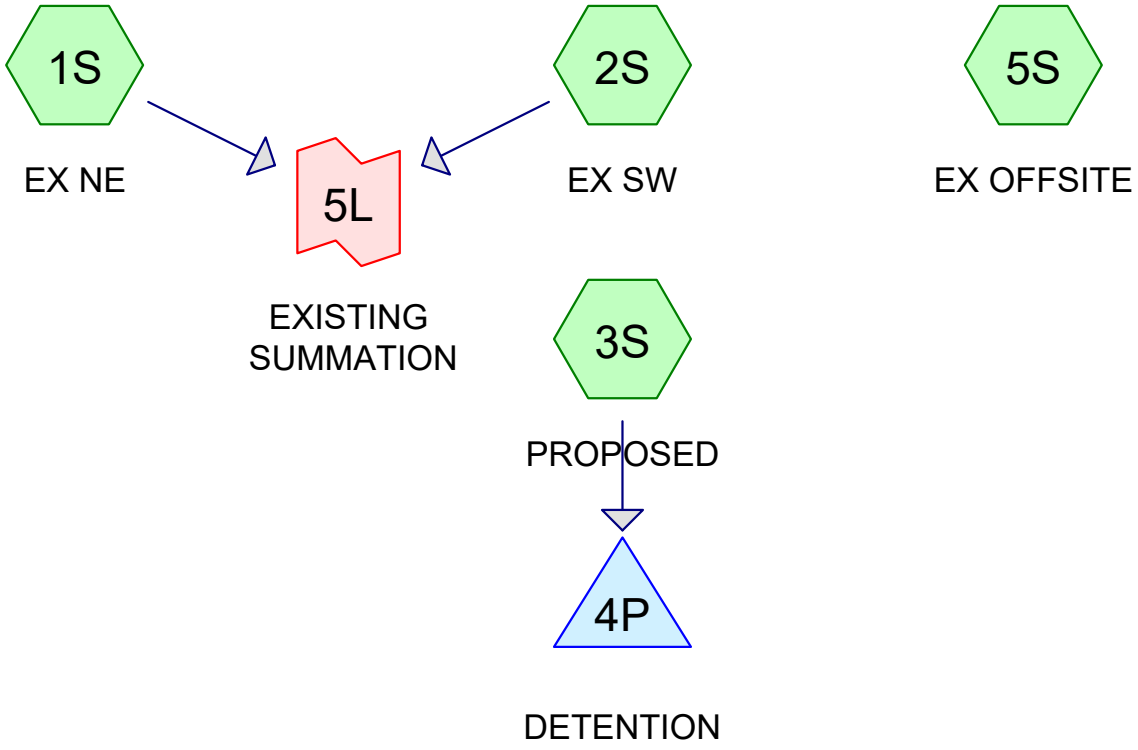
Tc X T_t - through subarea

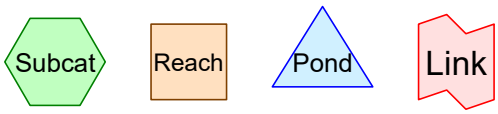
Sheet Flow								
Segment ID								
Surface description (Table 3-1)		Unpaved						
Manning's roughness coeff., n (Table 3-1)		0.24						
Flow Length, L (L < 300 ft)	ft	100						
Rainfall Calculation Method		Entity Rainfall Data						
Two-year 24-hr rainfall, P2	in	2.66						
Land slope, s	ft/ft	0.005						
$T_t = \frac{.007\,(nL)^{0.8}}{(P_2)^{0.5}s^{0.4}}$	hr	0.45	+		+		=	0.45

Shallow Concentrated Flow								
Segment ID								
Surface description, (paved or unpaved)		Unpaved		-		-		
Flow length, L	ft	258		-		-		
Watercourse slope, s	ft/ft	0.009		-		-		
Average velocity, V (Figure 3-1)	ft/s	1.49		-		-		
$T_t = \frac{L}{3600\,V}$	hr	0.05	+	-	+	-	=	0.05

Channel Flow								
Segment ID								
Channel Geometry		-		-		-		
Discharge (cfs)		-		-		-		
Diameter (ft)		-		-		-		
Bottom Width (ft)		-		-		-		
Side Slope (x:1) (ft)		-		-		-		
Slope of Channel (ft)		-		-		-		
Manning's Roughness Coefficient		-		-		-		
Depth (ft)		-		-		-		
Cross Sectional Area (ft^2)		-		-		-		
Wetted Perimeter (ft)		-		-		-		
Hydraulic Radius (ft)		-		-		-		
Velocity (ft/s)		-		-		-		
Flow length, L	ft	-		-		-		
$T_t = \frac{L}{3600\,V}$	hr	-	+	-	+	-	=	0.00

Watershed or subarea T_c or T_t	hr	0.50
	min	30.14





Routing Diagram for 170194000
Prepared by Kimley-Horn, Printed 10/13/2020
HydroCAD® 10.00-22 s/n 09843 © 2018 HydroCAD Software Solutions LLC

Events for Subcatchment 1S: EX NE

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 Yr-24 Hr	2.47	7.50	1.029	0.92
10 Yr-24 Hr	4.20	19.60	2.558	2.29
100 Yr-24 Hr	**6.29**	**35.60**	**4.633**	**4.15**

Summary for Subcatchment 1S: EX NE

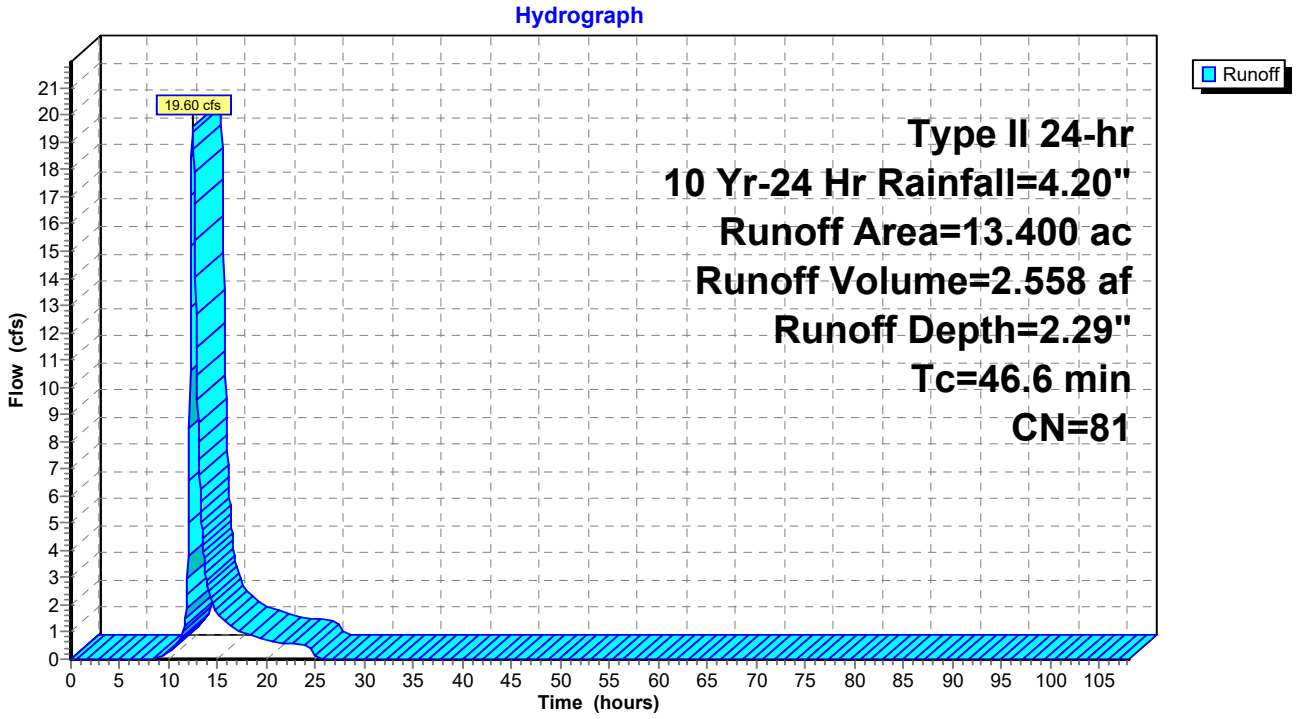
Runoff = 19.60 cfs @ 12.45 hrs, Volume= 2.558 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 Yr-24 Hr Rainfall=4.20"

	Area (ac)	CN	Description
*	13.400	81	Matches Value From Spreadsheet
	13.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
46.6					**Direct Entry, Matches Value From Spreadsheet**

Subcatchment 1S: EX NE



Summary for Subcatchment 1S: EX NE

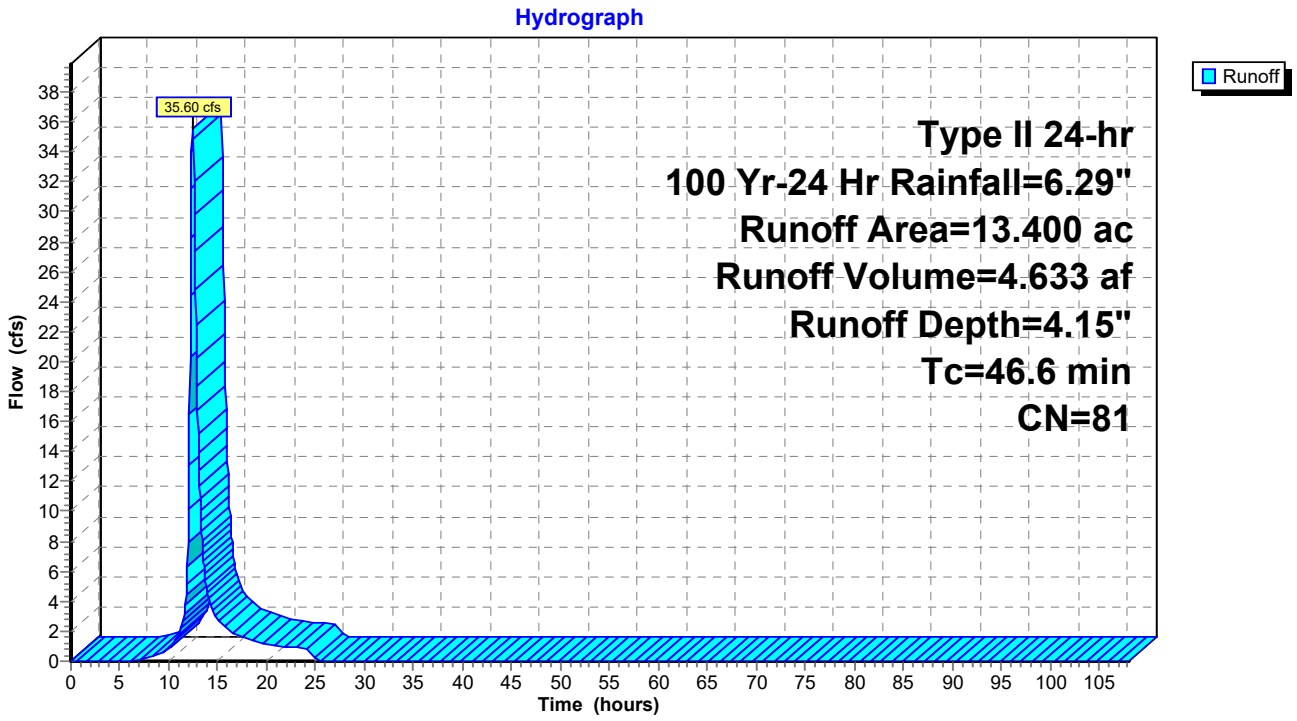
Runoff = 35.60 cfs @ 12.44 hrs, Volume= 4.633 af, Depth= 4.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Yr-24 Hr Rainfall=6.29"

	Area (ac)	CN	Description
*	13.400	81	Matches Value From Spreadsheet
	13.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
46.6					**Direct Entry, Matches Value From Spreadsheet**

Subcatchment 1S: EX NE



Events for Subcatchment 5S: EX OFFSITE

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 Yr-24 Hr	2.47	3.96	0.399	0.92
10 Yr-24 Hr	4.20	10.27	0.993	2.29
100 Yr-24 Hr	**6.29**	**18.59**	**1.798**	**4.15**

Summary for Subcatchment 5S: EX OFFSITE

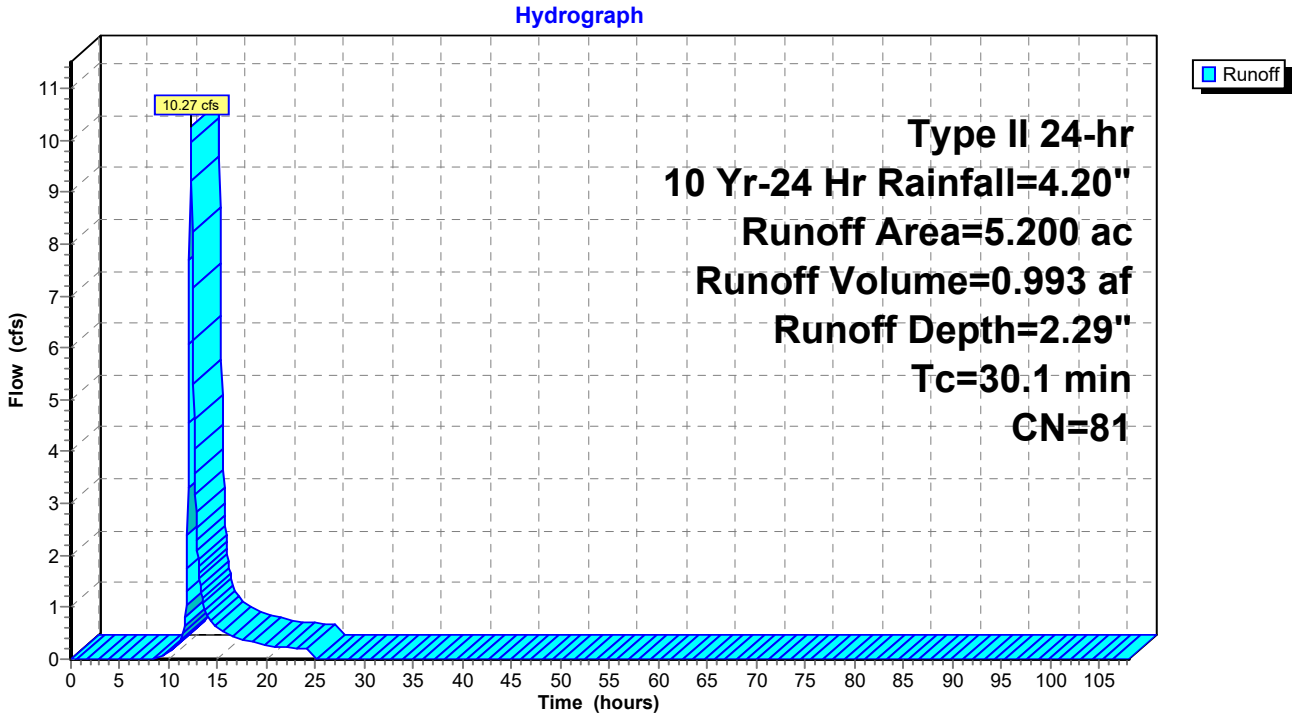
Runoff = 10.27 cfs @ 12.25 hrs, Volume= 0.993 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 Yr-24 Hr Rainfall=4.20"

	Area (ac)	CN	Description
*	5.200	81	Matches Value From Spreadsheet
	5.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.1					**Direct Entry, Matches Value From Spreadsheet**

Subcatchment 5S: EX OFFSITE



Summary for Subcatchment 5S: EX OFFSITE

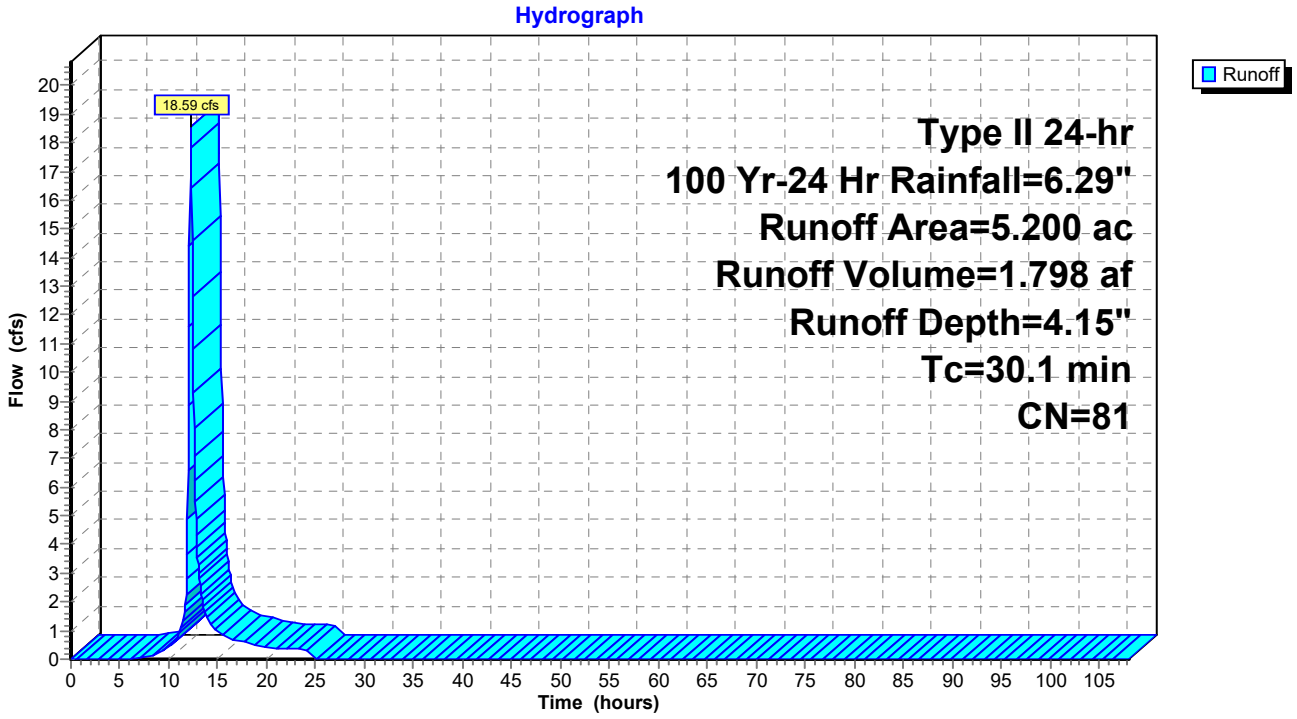
Runoff = 18.59 cfs @ 12.24 hrs, Volume= 1.798 af, Depth= 4.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Yr-24 Hr Rainfall=6.29"

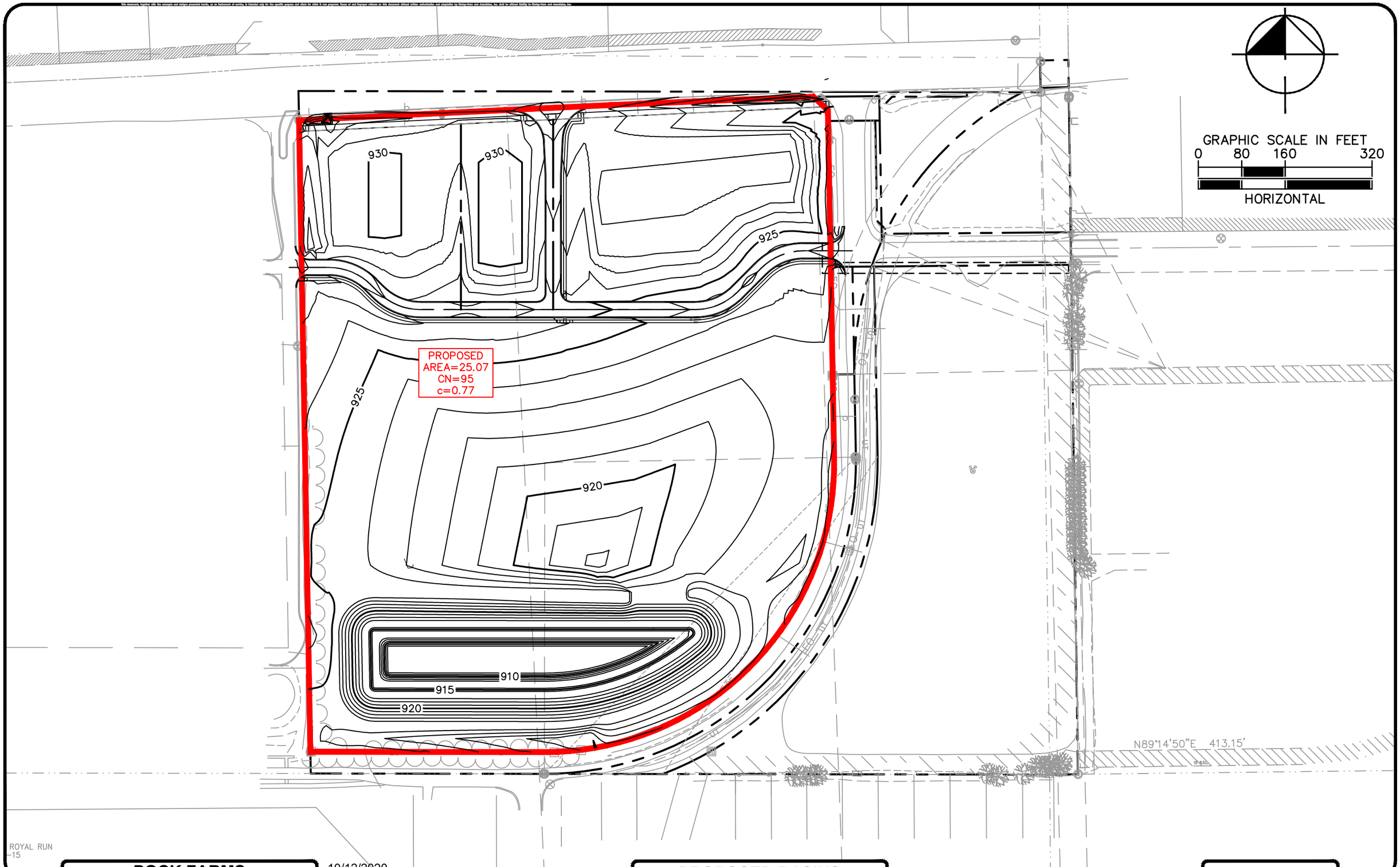
	Area (ac)	CN	Description
*	5.200	81	Matches Value From Spreadsheet
	5.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.1					**Direct Entry, Matches Value From Spreadsheet**

Subcatchment 5S: EX OFFSITE



Appendix E: Proposed Drainage Conditions



POCK FARMS
ZIONSVILLE, INDIANA

10/12/2020

PROPOSED BASINS MAP

Kimley»Horn

Kimley»Horn

PROJECT:	**Pock Farm Infrastructure Phase 1**
BY:	**Connor Strege**
DATE:	**13-Oct-20**

Site Soil	
Hydrologic Group	%
A	0.0%
B	61.6%
C	31.3%
D	7.1%
Total	100.0%

Basin	Area (ac)							Weighted C	Weighted CN	Weighted CN
	Row Crops - Good	Pasture - Good	Open Space - Good Condition (>75% Cover)	Impervious - Paved	Impervious - Rooftop	Water - Pond or Lake	Total		Actual Soil Group	Next Less Impervious Soil Group
PROPOSED (ASSUMED 85% IMPERVIOUS)	0.00	0.00	3.76	21.31	0.00	0.00	25.07	0.77	93	**95**

Events for Subcatchment 3S: PROPOSED

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 Yr-24 Hr	2.47	54.35	4.041	1.93
10 Yr-24 Hr	4.20	98.55	7.580	3.63
100 Yr-24 Hr	**6.29**	**151.16**	**11.908**	**5.70**

Summary for Subcatchment 3S: PROPOSED

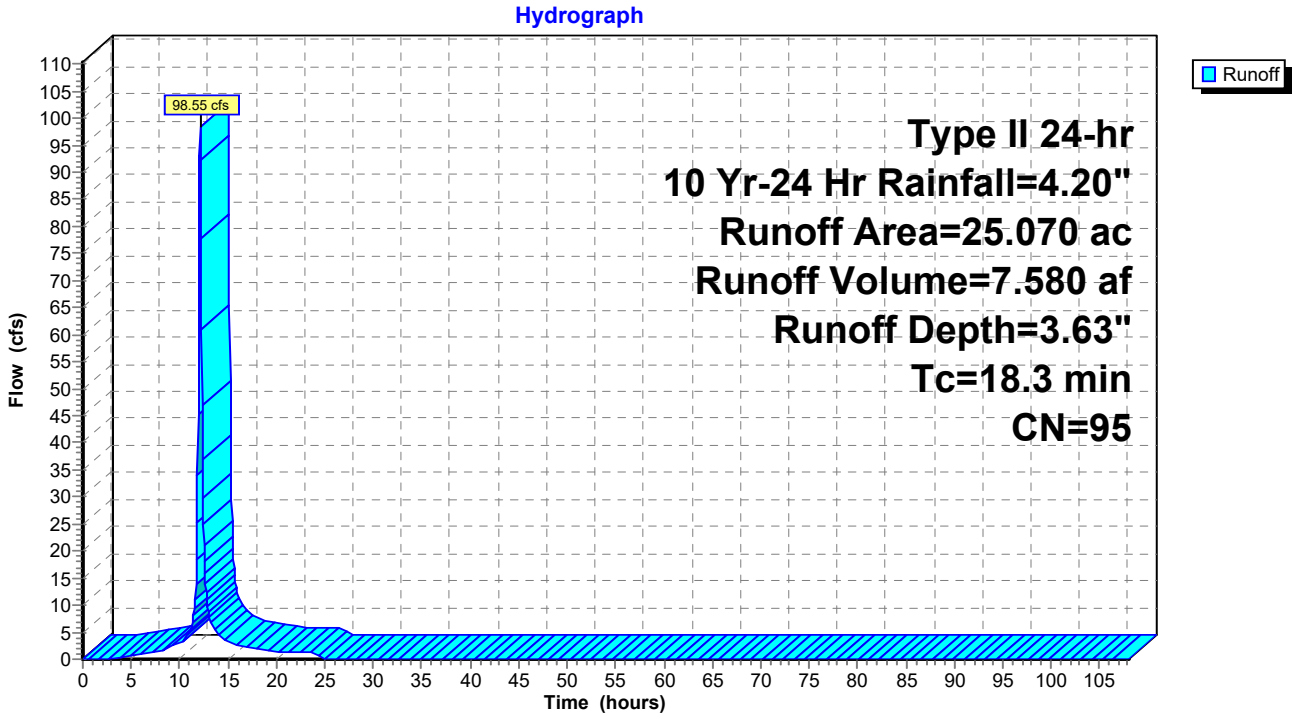
Runoff = 98.55 cfs @ 12.10 hrs, Volume= 7.580 af, Depth= 3.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 Yr-24 Hr Rainfall=4.20"

	Area (ac)	CN	Description
*	25.070	95	Matches Value From Spreadsheet
	25.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3					**Direct Entry, Matches Value From Spreadsheet**

Subcatchment 3S: PROPOSED



Summary for Subcatchment 3S: PROPOSED

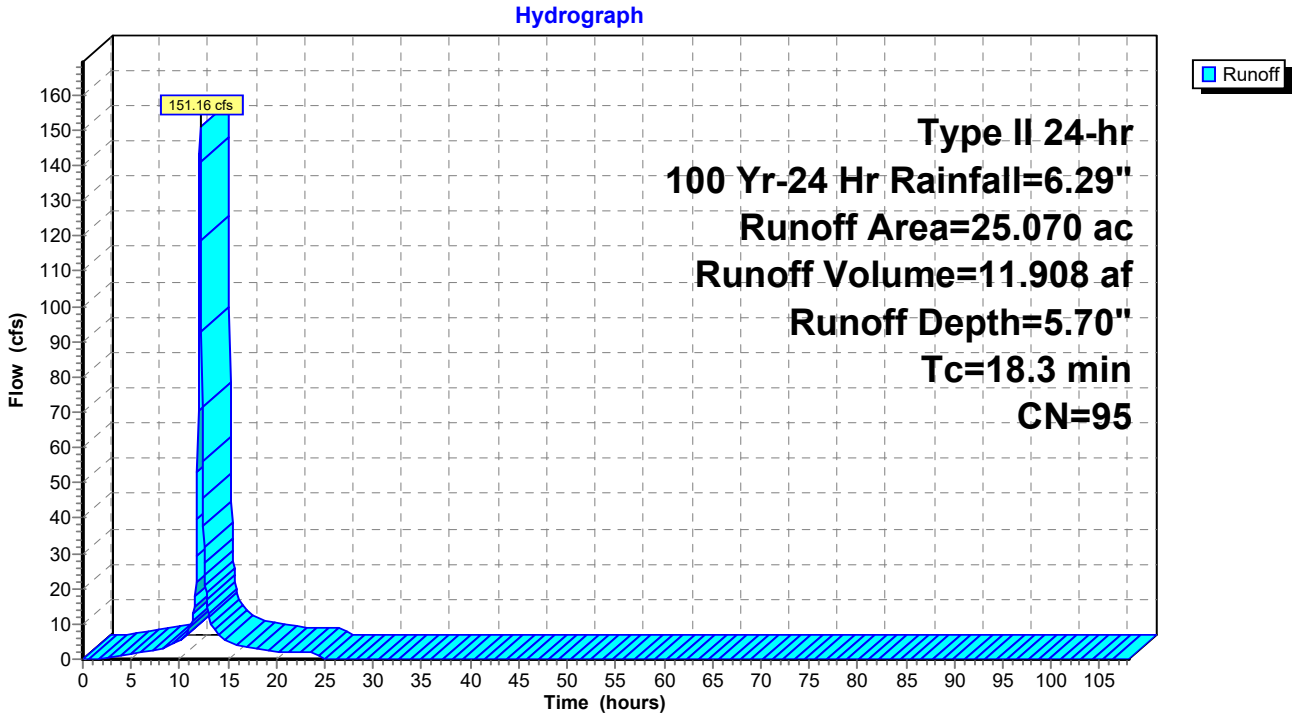
Runoff = 151.16 cfs @ 12.10 hrs, Volume= 11.908 af, Depth= 5.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Type II 24-hr 100 Yr-24 Hr Rainfall=6.29"

	Area (ac)	CN	Description
*	25.070	95	Matches Value From Spreadsheet
	25.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3					**Direct Entry, Matches Value From Spreadsheet**

Subcatchment 3S: PROPOSED



Events for Pond 4P: DETENTION

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 Yr-24 Hr	54.35	2.45	917.20	2.641
10 Yr-24 Hr	98.55	3.41	918.45	5.159
100 Yr-24 Hr	**151.16**	**5.42**	**919.75**	**8.151**

Summary for Pond 4P: DETENTION

Inflow Area = 25.070 ac, 0.00% Impervious, Inflow Depth = 3.63" for 10 Yr-24 Hr event
Inflow = 98.55 cfs @ 12.10 hrs, Volume= 7.580 af
Outflow = 3.41 cfs @ 14.90 hrs, Volume= 7.505 af, Atten= 97%, Lag= 167.8 min
Primary = 3.41 cfs @ 14.90 hrs, Volume= 7.505 af

Routing by Stor-Ind method, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Peak Elev= 918.45' @ 14.90 hrs Surf.Area= 2.150 ac Storage= 5.159 af

Plug-Flow detention time= 873.9 min calculated for 7.505 af (99% of inflow)
Center-of-Mass det. time= 867.4 min (1,648.2 - 780.8)

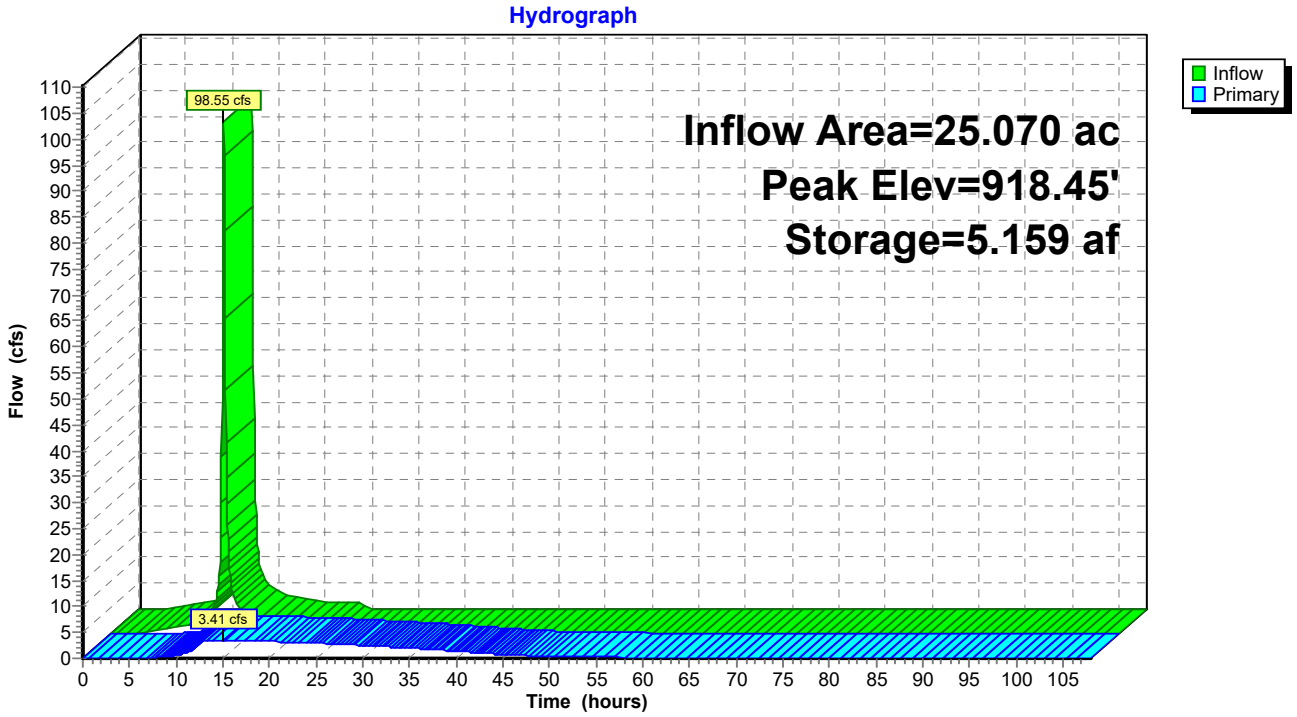
Volume	Invert	Avail.Storage	Storage Description
#1	915.50'	23.177 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
915.50	1.363	0.000	0.000
916.50	1.455	1.409	1.409
916.70	1.773	0.323	1.732
924.80	3.522	21.445	23.177

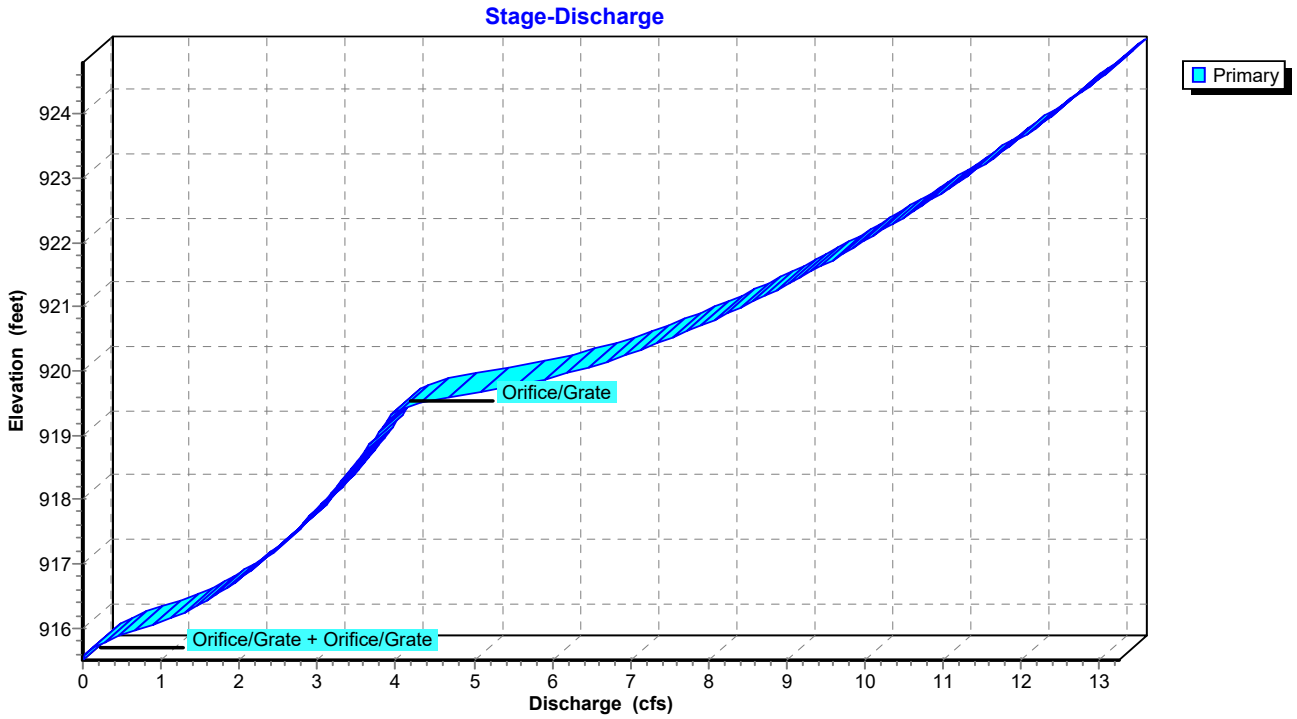
Device	Routing	Invert	Outlet Devices
#1	Primary	915.50'	**30.0" Vert. Orifice/Grate** C= 0.600
#2	Device 1	915.50'	**9.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	919.35'	**18.0" W x 5.0" H Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.41 cfs @ 14.90 hrs HW=918.45' (Free Discharge)
└─**1=Orifice/Grate** (Passes 3.41 cfs of 30.79 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 3.41 cfs @ 7.72 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

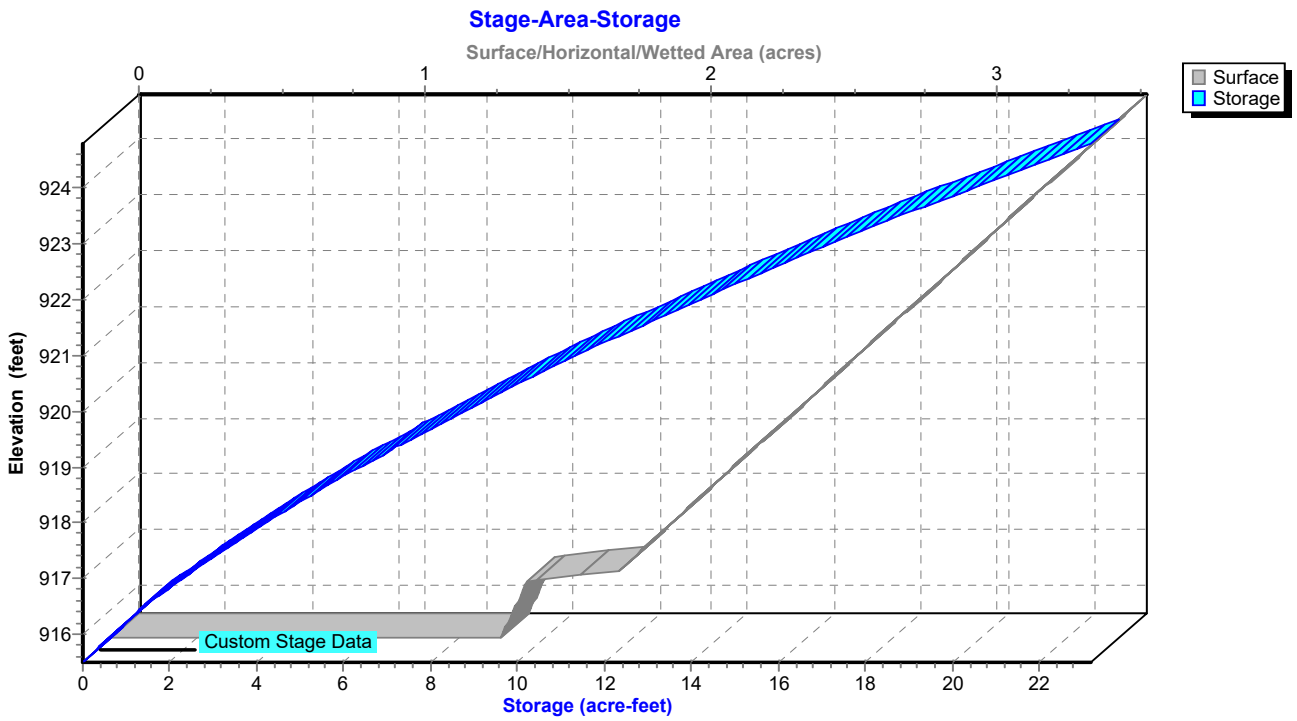
Pond 4P: DETENTION



Pond 4P: DETENTION



Pond 4P: DETENTION



Summary for Pond 4P: DETENTION

Inflow Area = 25.070 ac, 0.00% Impervious, Inflow Depth = 5.70" for 100 Yr-24 Hr event
Inflow = 151.16 cfs @ 12.10 hrs, Volume= 11.908 af
Outflow = 5.42 cfs @ 14.66 hrs, Volume= 11.815 af, Atten= 96%, Lag= 153.7 min
Primary = 5.42 cfs @ 14.66 hrs, Volume= 11.815 af

Routing by Stor-Ind method, Time Span= 0.00-108.00 hrs, dt= 0.05 hrs
Peak Elev= 919.75' @ 14.66 hrs Surf.Area= 2.432 ac Storage= 8.151 af

Plug-Flow detention time= 995.3 min calculated for 11.815 af (99% of inflow)
Center-of-Mass det. time= 990.1 min (1,760.2 - 770.1)

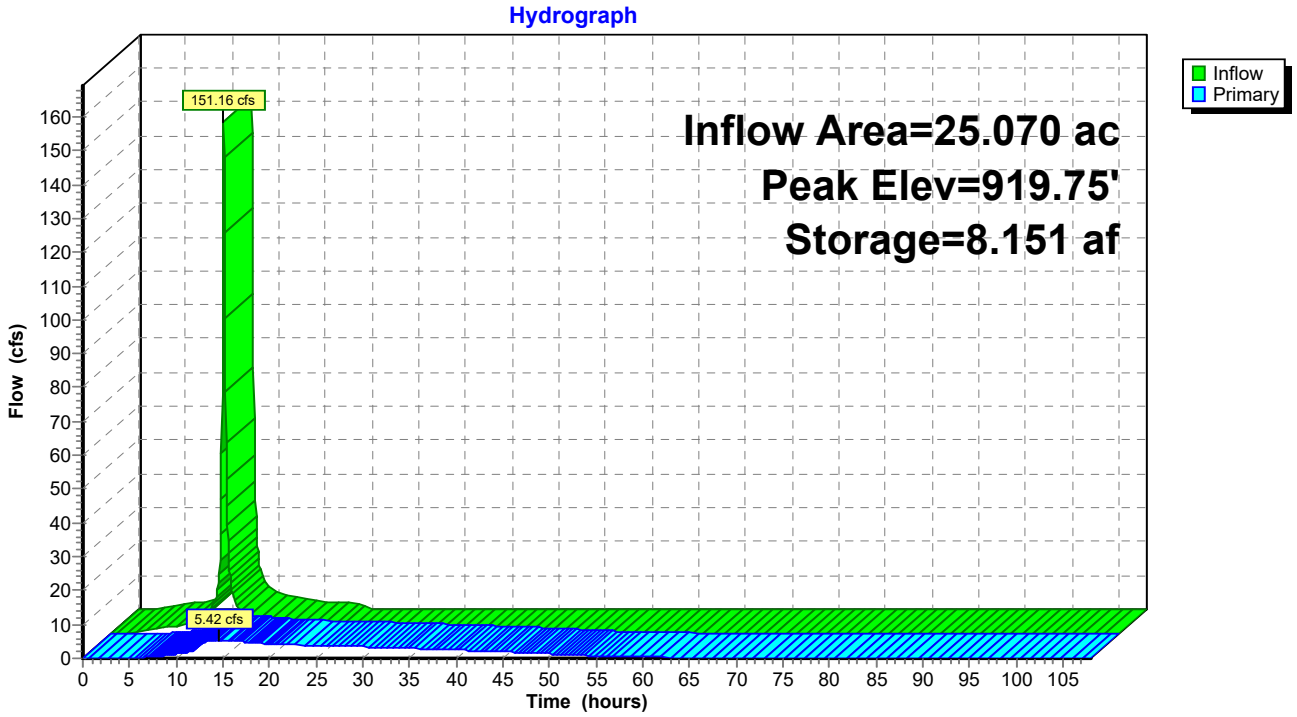
Volume	Invert	Avail.Storage	Storage Description
#1	915.50'	23.177 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
915.50	1.363	0.000	0.000
916.50	1.455	1.409	1.409
916.70	1.773	0.323	1.732
924.80	3.522	21.445	23.177

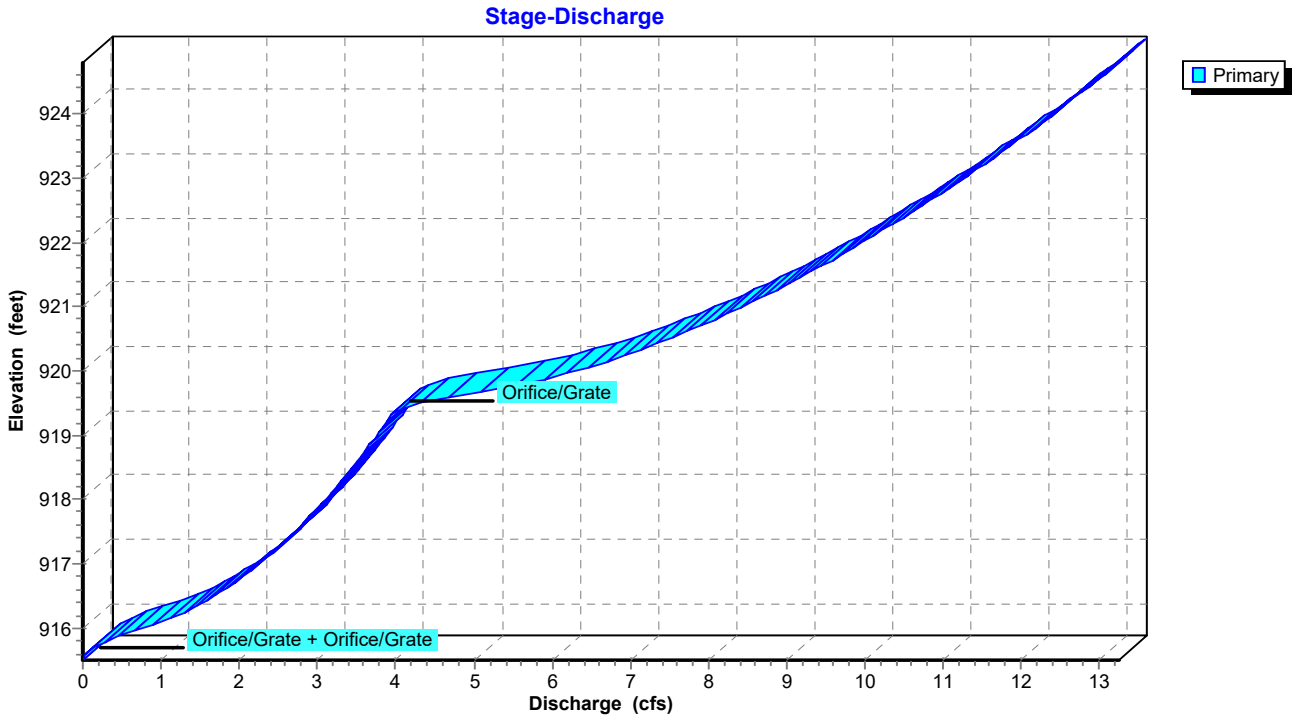
Device	Routing	Invert	Outlet Devices
#1	Primary	915.50'	**30.0" Vert. Orifice/Grate** C= 0.600
#2	Device 1	915.50'	**9.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	919.35'	**18.0" W x 5.0" H Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.42 cfs @ 14.66 hrs HW=919.75' (Free Discharge)
└─**1=Orifice/Grate** (Passes 5.42 cfs of 40.96 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 4.19 cfs @ 9.48 fps)
  └─**3=Orifice/Grate** (Orifice Controls 1.23 cfs @ 2.04 fps)

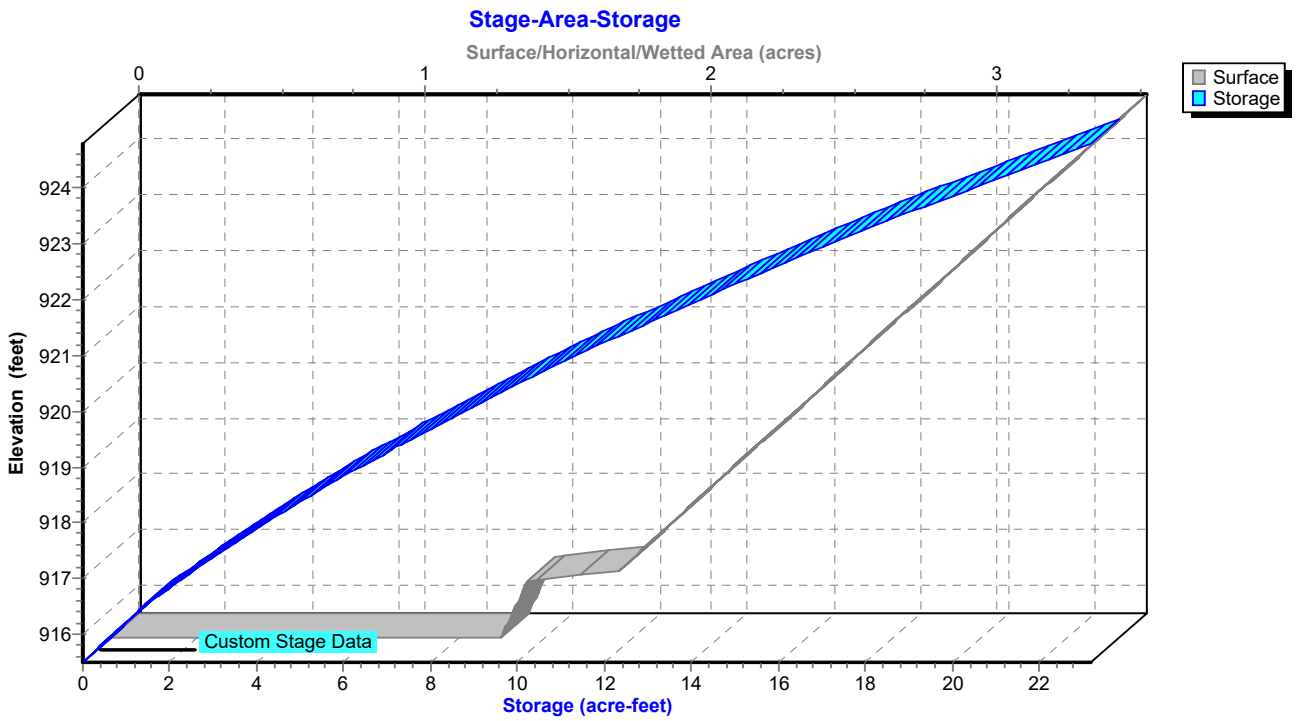
Pond 4P: DETENTION



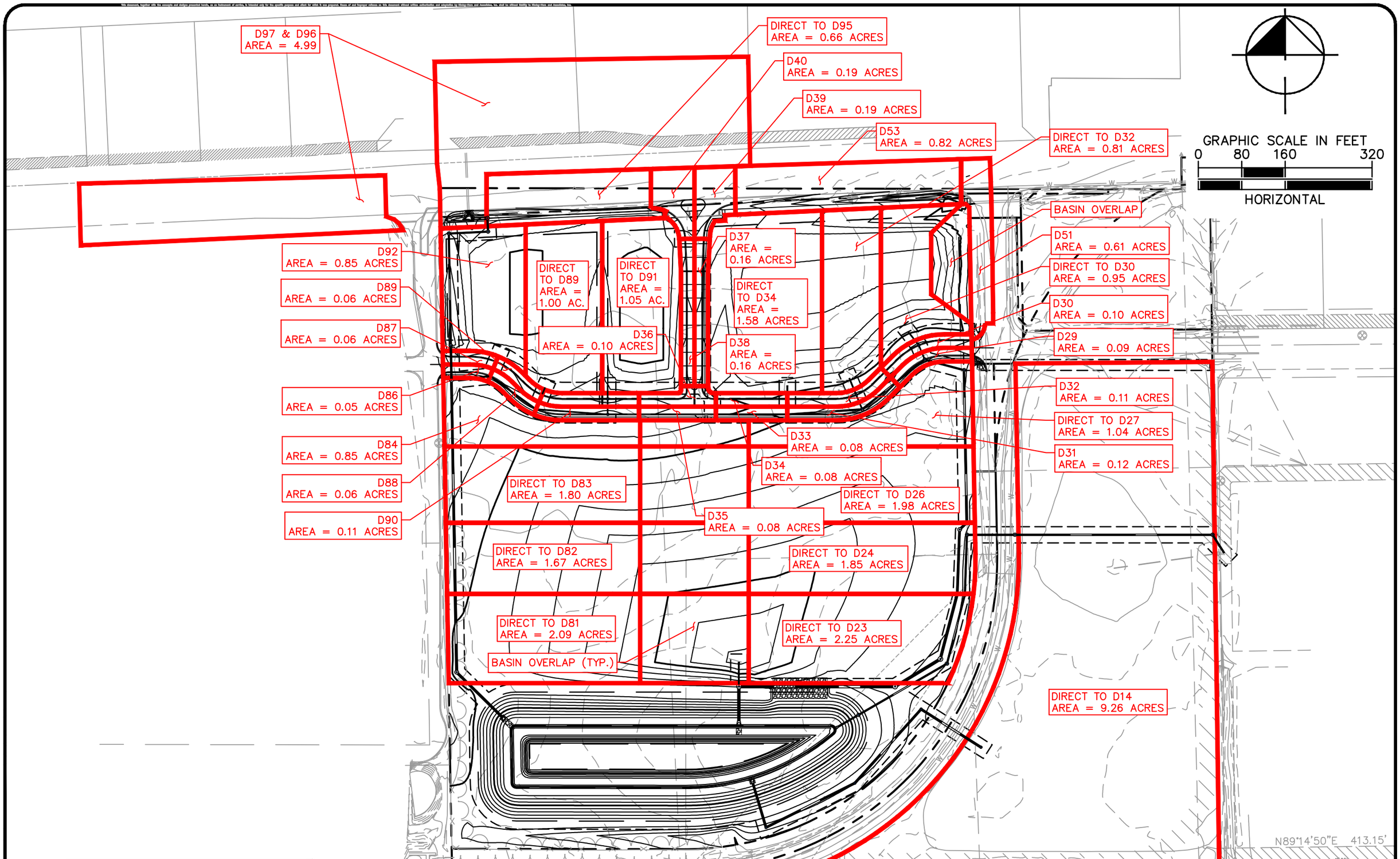
Pond 4P: DETENTION



Pond 4P: DETENTION



Appendix F: Proposed Storm Sewer Design



POCK FARMS
ZIONSVILLE, INDIANA

10/13/2020

PROPOSED STORM BASINS MAP

Kimley»Horn

Kimley»Horn

PROJECT:	**Pock Farm Infrastructure Phase 1**
BY:	**Connor Strege**
DATE:	**13-Oct-20**

Site Soil	
Hydrologic Group	%
A	0.0%
B	61.6%
C	31.3%
D	7.1%
Total	100.0%

Basin	Area (ac)							Weighted C	Weighted CN	Weighted CN
	Row Crops - Good	Pasture - Good	Open Space - Good Condition (>75% Cover)	Impervious - Paved	Impervious - Rooftop	Water - Pond or Lake	Total		Actual Soil Group	Next Less Impervious Soil Group
D97	0.00	0.00	0.67	1.66	0.15	0.00	2.49	0.70	89	**92**
D96	0.00	0.00	0.67	1.66	0.15	0.00	2.49	0.70	89	**92**
D95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D91	0.00	0.00	0.02	0.08	0.00	0.00	0.10	0.74	92	**94**
D90	0.00	0.00	0.02	0.09	0.00	0.00	0.11	0.74	92	**94**
D89	0.00	0.00	0.01	0.05	0.00	0.00	0.06	0.74	92	**94**
D88	0.00	0.00	0.01	0.05	0.00	0.00	0.06	0.74	92	**94**
D87	0.00	0.00	0.01	0.05	0.00	0.00	0.06	0.74	92	**94**
D86	0.00	0.00	0.01	0.04	0.00	0.00	0.05	0.75	92	**94**
D85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D40	0.00	0.00	0.02	0.17	0.00	0.00	0.19	0.80	95	**96**
D39	0.00	0.00	0.02	0.17	0.00	0.00	0.19	0.79	95	**96**
D38	0.00	0.00	0.03	0.13	0.00	0.00	0.16	0.74	92	**94**
D37	0.00	0.00	0.03	0.13	0.00	0.00	0.16	0.74	92	**94**
D36	0.00	0.00	0.02	0.08	0.00	0.00	0.10	0.76	93	**95**
D35	0.00	0.00	0.02	0.06	0.00	0.00	0.08	0.74	92	**94**
D34	0.00	0.00	0.02	0.06	0.00	0.00	0.08	0.74	92	**94**
D33	0.00	0.00	0.02	0.06	0.00	0.00	0.08	0.74	92	**94**
D32	0.00	0.00	0.02	0.09	0.00	0.00	0.11	0.74	92	**94**
D31	0.00	0.00	0.03	0.10	0.00	0.00	0.12	0.74	91	**94**
D30	0.00	0.00	0.02	0.08	0.00	0.00	0.10	0.74	91	**93**
D29	0.00	0.00	0.02	0.07	0.00	0.00	0.09	0.74	92	**94**
D28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
D21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	**0**
DIRECT TO D95	0.00	0.00	0.11	0.55	0.00	0.00	0.66	0.76	93	**94**
DIRECT TO D91 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.16	0.90	0.00	0.00	1.05	0.77	93	**95**
DIRECT TO D89 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.15	0.85	0.00	0.00	1.00	0.77	93	**95**
DIRECT TO D92 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.13	0.72	0.00	0.00	0.85	0.77	93	**95**
DIRECT TO D84 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.13	0.72	0.00	0.00	0.85	0.77	93	**95**
DIRECT TO D83 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.27	1.53	0.00	0.00	1.80	0.77	93	**95**
DIRECT TO D82 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.25	1.42	0.00	0.00	1.67	0.77	93	**95**
DIRECT TO D81 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.31	1.78	0.00	0.00	2.09	0.77	93	**95**
DIRECT TO D34 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.24	1.34	0.00	0.00	1.58	0.77	93	**95**
DIRECT TO D32 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.12	0.69	0.00	0.00	0.81	0.77	93	**95**
DIRECT TO D30 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.14	0.81	0.00	0.00	0.95	0.77	93	**95**
DIRECT TO D27 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.16	0.88	0.00	0.00	1.04	0.77	93	**95**
DIRECT TO D26 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.30	1.69	0.00	0.00	1.98	0.77	93	**95**
DIRECT TO D24 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.28	1.57	0.00	0.00	1.85	0.77	93	**95**
DIRECT TO D23 (85% IMPERVIOUS ASSUMED)	0.00	0.00	0.34	1.91	0.00	0.00	2.25	0.77	93	**95**
DIRECT TO D14 (85% IMPERVIOUS ASSUMED)	0.00	0.00	1.39	7.87	0.00	0.00	9.26	0.77	93	**95**
D53	0.00	0.00	0.16	0.66	0.00	0.00	0.82	0.74	92	**94**
D51	0.00	0.00	0.42	0.19	0.00	0.00	0.61	0.47	76	**83**
D21A	0.00	0.00	11.31	0.00	0.00	0.00	11.31	0.30	66	**76**
D30 COMBINED (HYDRAFLOW INPUT)	0.00	0.00	0.16	0.89	0.00	0.00	1.05	0.76	93	**95**
D31 COMBINED (HYDRAFLOW INPUT)	0.00	0.00	0.14	0.78	0.00	0.00	0.93	0.76	93	**95**
D34 COMBINED (HYDRAFLOW INPUT)	0.00	0.00	0.25	1.40	0.00	0.00	1.66	0.77	93	**95**
D89 COMBINED (HYDRAFLOW INPUT)	0.00	0.00	0.16	0.90	0.00	0.00	1.06	0.77	93	**95**
D91 COMBINED (HYDRAFLOW INPUT)	0.00	0.00	0.18	0.98	0.00	0.00	1.16	0.77	93	**95**

TABLE 2-4

Rainfall Intensities for Various Return Periods and Storm Durations						
Intensity (Inches/Hour)						
Duration	*Return Period (Years)*					
	2	5	10	25	50	100
5 Min.	4.63	5.43	6.12	7.17	8.09	9.12
10 Min.	3.95	4.63	5.22	6.12	6.90	7.78
15 Min.	3.44	4.03	4.55	5.33	6.01	6.77
20 Min.	3.04	3.56	4.02	4.71	5.31	5.99
30 Min.	2.46	2.88	3.25	3.81	4.29	4.84
40 Min.	2.05	2.41	2.71	3.18	3.59	4.05
50 Min.	1.76	2.06	2.33	2.73	3.07	3.47
1 Hr.	1.54	1.80	2.03	2.38	2.68	3.03
1.5 Hrs.	1.07	1.23	1.42	1.63	1.91	2.24
2 Hrs.	0.83	0.95	1.11	1.37	1.60	1.87
3 Hrs.	0.59	0.72	0.84	1.04	1.22	1.42
4 Hrs.	0.47	0.58	0.68	0.84	0.99	1.15
5 Hrs.	0.40	0.49	0.58	0.71	0.83	0.97
6 Hrs.	0.35	0.43	0.50	0.62	0.72	0.85
7 Hrs.	0.31	0.38	0.44	0.55	0.64	0.75
8 Hrs.	0.28	0.34	0.40	0.49	0.57	0.67
9 Hrs.	0.25	0.31	0.36	0.45	0.52	0.61
10 Hrs.	0.23	0.28	0.33	0.41	0.48	0.56
12 Hrs.	0.20	0.24	0.29	0.35	0.41	0.48
14 Hrs.	0.17	0.22	0.25	0.31	0.36	0.42
16 Hrs.	0.16	0.19	0.23	0.28	0.32	0.38
18 Hrs.	0.14	0.17	0.20	0.25	0.29	0.34
20 Hrs.	0.13	0.16	0.19	0.23	0.27	0.31
24 Hrs.	0.11	0.14	0.16	0.20	0.23	0.27

Source: Purdue,A.M., et. al., "Statistical Characteristics of Short Time Incremental Rainfall", Aug., 1992. (Values in this table are based on IDF equation and coefficients provided for Indianapolis, IN.)

Date:	10/12/2020		Project:	170146000_PockFarm							Storm:	10-YR	By:	CVS	Program:	Hydraflow										
Line	To Line	Line Length	Incr.Area	Total Area	Runoff Coeff.	IncrC x A	TotalC x A	Inlet Time	Time Conc	Rnfal Int	Total Runoff	Adnl Flow	Total Flow	Capac Full	Velocity	Full Flow Velocity	Mannings "n" Value	Pipe Size	Pipe Slope	Inv Elev Dn	Inv Elev Up	HGL Dn	HGL Up	Grnd/Rim Dn	Grnd/Rim Up	Line ID
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)		(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	Outfall	124.18	2.1	12.67	0.77	1.61	9.55	6	16.50	4.40	41.84	0	41.84	65.52	5.53	5.24	0.013	48	0.21	917.75	918.01	920.07	920.33	922.25	924.45	D81 TO D80
2	1	144.51	1.7	10.58	0.77	1.29	7.93	6	15.60	4.50	35.53	0	35.53	65.52	4.34	5.24	0.013	48	0.21	918.11	918.41	920.68	920.81	924.45	925.30	D82 TO D81
3	2	130.78	1.8	8.91	0.77	1.39	6.65	6	14.70	4.60	30.46	0	30.46	64.18	4.13	5.11	0.013	48	0.20	918.51	918.77	920.86	920.97	925.30	925.70	D83 TO D82
4	3	140.58	0.9	7.10	0.77	0.65	5.26	6	13.80	4.70	24.67	0	24.67	44.98	4.14	4.68	0.013	42	0.20	918.87	919.15	921.02	921.17	925.70	926.70	D84 TO D83
5	4	122.04	0.0	6.26	0.00	0.00	4.61	0	13.00	4.80	22.13	0	22.13	45.08	4.12	4.68	0.013	42	0.20	919.25	919.50	921.22	921.36	926.70	927.28	D85 TO D84
6	5	64.01	0.9	3.76	0.77	0.65	2.69	6	12.40	4.90	13.13	0	13.13	29.82	2.64	4.22	0.013	36	0.20	919.60	919.72	921.64	921.67	927.28	925.40	D92 TO D85
7	6	206.04	0.0	2.91	0.00	0.00	2.04	0	10.80	5.10	10.42	0	10.42	24.26	4.06	4.94	0.013	30	0.35	920.15	920.88	921.69	922.01	925.40	927.98	D93 TO D92
8	7	72.40	0.0	2.91	0.00	0.00	2.04	0	10.20	5.20	10.59	0	10.59	24.26	4.08	4.94	0.013	30	0.35	920.98	921.23	922.37	922.46	927.98	928.40	D94 TO D93
9	8	24.85	2.9	2.91	0.70	2.04	2.04	10	10.00	5.20	10.65	0	10.65	24.27	3.77	4.94	0.013	30	0.35	921.33	921.42	922.76	922.78	928.40	927.39	D95 TO D94
10	5	71.47	0.1	2.50	0.75	0.04	1.91	5	7.40	5.70	10.85	0	10.85	18.35	2.59	3.74	0.013	30	0.20	919.60	919.74	921.64	921.68	927.28	927.16	D86 TO D85
11	10	28.67	0.1	0.06	0.74	0.04	0.04	5	5.00	6.10	0.26	0	0.26	2.10	1.82	2.68	0.013	12	0.35	923.11	923.21	923.34	923.44	927.16	927.16	D87 TO D86
12	Outfall	36.03	0.8	0.82	0.74	0.61	0.61	5	5.00	6.10	3.71	0	3.71	8.42	5.63	6.86	0.013	15	1.70	922.74	923.35	923.32	924.13	927.82	924.87	D53 TO D52
13	Outfall	71.60	0.0	11.91	0.00	0.00	9.07	0	18.30	4.20	37.96	0	37.96	63.21	4.16	3.91	0.013	54	0.10	915.50	915.57	918.01	918.08	920.54	923.94	D21 TO D20
14	13	287.59	0.0	11.91	0.00	0.00	9.07	0	16.40	4.40	39.74	0	39.74	60.48	4.03	3.71	0.013	54	0.09	915.67	915.95	918.35	918.62	923.94	922.94	D22 TO D21
15	14	97.64	2.3	11.91	0.77	1.73	9.07	6	15.80	4.50	40.37	0	40.37	67.78	4.04	4.28	0.013	54	0.12	916.05	916.16	918.77	918.85	922.94	923.15	D23 TO D22
16	15	124.12	1.9	9.67	0.77	1.43	7.34	6	15.10	4.50	33.31	0	33.31	45.59	3.60	3.61	0.013	48	0.10	916.26	916.39	919.04	919.13	923.15	922.80	D24 TO D23
17	16	118.44	0.0	7.82	0.00	0.00	5.91	0	14.40	4.60	27.30	0	27.30	31.75	3.44	3.31	0.013	42	0.10	916.49	916.61	919.19	919.28	922.80	922.50	D25 TO D24
18	17	18.16	2.0	7.82	0.77	1.53	5.91	6	14.30	4.60	27.38	0	27.38	31.68	3.42	3.31	0.013	42	0.10	916.71	916.72	919.42	919.44	922.50	922.60	D26 TO D25
19	18	140.58	1.0	5.83	0.77	0.80	4.38	6	13.30	4.80	20.87	0	20.87	31.86	2.60	3.31	0.013	42	0.10	916.82	916.96	919.58	919.64	922.60	922.85	D27 TO D26
20	19	140.58	0.0	4.80	0.00	0.00	3.59	0	12.40	4.90	17.50	0	17.50	21.04	2.72	2.98	0.013	36	0.10	917.06	917.20	919.66	919.74	922.85	924.46	D28 TO D27
21	20	74.88	0.1	4.80	0.74	0.07	3.59	5	12.10	4.90	17.66	0	17.66	20.55	3.60	4.18	0.013	30	0.25	917.30	917.49	919.86	919.99	924.46	923.37	D29 TO D28
22	21	147.13	0.1	3.66	0.74	0.09	2.72	5	11.20	5.00	13.72	0	13.72	15.86	2.80	3.24	0.013	30	0.15	917.59	917.81	920.16	920.31	923.37	923.37	D31 TO D29
23	22	138.18	0.1	2.60	0.74	0.06	1.92	5	10.20	5.20	10.01	0	10.01	12.96	2.04	2.64	0.013	30	0.10	917.91	918.05	920.43	920.51	923.37	924.24	D33 TO D31
24	23	131.59	0.1	0.87	0.74	0.06	0.59	5	9.00	5.40	3.19	0	3.19	4.70	2.05	2.66	0.013	18	0.20	919.25	919.51	920.58	920.68	924.24	925.16	D35 TO D33
25	24	28.67	0.1	0.79	0.76	0.07	0.53	5	8.80	5.40	2.88	0	2.88	4.33	2.54	3.53	0.013	15	0.45	919.61	919.74	920.75	920.79	925.16	925.16	D36 TO D35
26	25	34.43	0.2	0.69	0.74	0.12	0.46	5	8.50	5.50	2.51	0	2.51	4.07	2.43	3.33	0.013	15	0.40	919.84	919.98	920.88	920.91	925.16	925.81	D37 TO D36
27	26	270.99	0.2	0.38	0.79	0.15	0.23	5	6.00	5.90	1.34	0	1.34	2.52	3.26	3.21	0.013	12	0.50	920.81	922.17	921.33	922.68	925.81	927.62	D39 TO D37
28	27	34.67	0.2	0.19	0.40	0.08	0.08	5	5.00	6.10	0.46	0	0.46	2.11	2.15	2.68	0.013	12	0.35	922.64	922.76	922.95	923.08	927.62	927.62	D40 TO D39
29	Outfall	60.96	0.3	0.32	0.47	0.15	0.15	5	5.00	6.10	0.93	0	0.93	3.34	3.39	4.26	0.013	12	0.88	922.05	922.59	922.41	922.99	923.30	923.84	D51 TO D50
30	10	104.38	0.1	2.39	0.74	0.04	1.84	5	6.80	5.80	10.57	0	10.57	11.29	3.43	3.60	0.013	24	0.25	919.84	920.10	921.78	921.97	927.16	926.53	D88 TO D86
31	30	132.35	0.1	1.27	0.74	0.08	0.97	5	6.20	5.90	5.73	0	5.73	6.65	3.24	3.76	0.013	18	0.40	920.20	920.73	922.16	922.55	926.53	925.81	D90 TO D88
32	31	28.67	1.2	1.16	0.77	0.89	0.89	6	6.00	5.90	5.28	0	5.28	5.75	2.99	3.26	0.013	18	0.30	920.83	920.92	922.71	922.79	925.81	925.81	D91 TO D90
33	26	28.67	0.2	0.16	0.74	0.12	0.12	5	5.00	6.10	0.71	0	0.71	2.11	2.43	2.68	0.013	12	0.35	920.71	920.81	921.11	921.21	925.81	925.81	D38 TO D37
34	30	28.67	1.1	1.06	0.77	0.82	0.82	6	6.00	5.90	4.84	0	4.84	5.26	2.74	2.97	0.013	18	0.25	920.20	920.27	922.16	922.22	926.53	926.53	D89 TO D88
35	23	28.67	1.7	1.66	0.77	1.28	1.28	6	6.00	5.90	7.55	0	7.55	10.17	2.77	3.22	0.013	24	0.20	918.94	919.00	920.58	920.60	924.24	924.24	D34 TO D33
36	22	28.67	0.9	0.93	0.76	0.70	0.70	6	6.00	5.90	4.17	0	4.17	4.72	2.36	2.66	0.013	18	0.20	917.91	917.97	920.43	920.48	923.37	923.37	D32 TO D31
37	Outfall	92.39	0.0	9.26	0.00	0.00	7.13	0	12.20	4.90	34.94	0	34.94	44.99	5.16	4.68	0.013	42	0.20	915.50	915.68	917.82	918.00	916.75	919.78	D12 TO D11
38	37	182.61	0.0	9.26	0.00	0.00	7.13	0	11.40	5.00	35.77	0	35.77	44.99	4.71	4.68	0.013	42	0.20	915.78	916.15	918.42	918.68	919.78	920.25	103 TO D12
39	38	182.92	0.0	9.26	0.00	0.00	7.13	0	10.60	5.10	36.61	0	36.61	44.99	4.89	4.68	0.013	42	0.20	916.25	916.62	918.83	919.12	920.25	920.72	D13 TO 103
40	39	130.39	9.3	9.26	0.77	7.13	7.13	10	10.00	5.20	37.22	0	37.22	45.00	4.61	4.68	0.013	42	0.20	916.72	916.98	919.5	919.67	920.72	920.98	D14 TO D13
41	21	28.67	1.1	1.05	0.76	0.80	0.80	6	6.00	5.90	4.72	0	4.72	5.23	2.67	2.97	0.013	18	0.25	917.59	917.66	920.16	920.22	923.37	923.37	D30 TO D29

Kimley»Horn

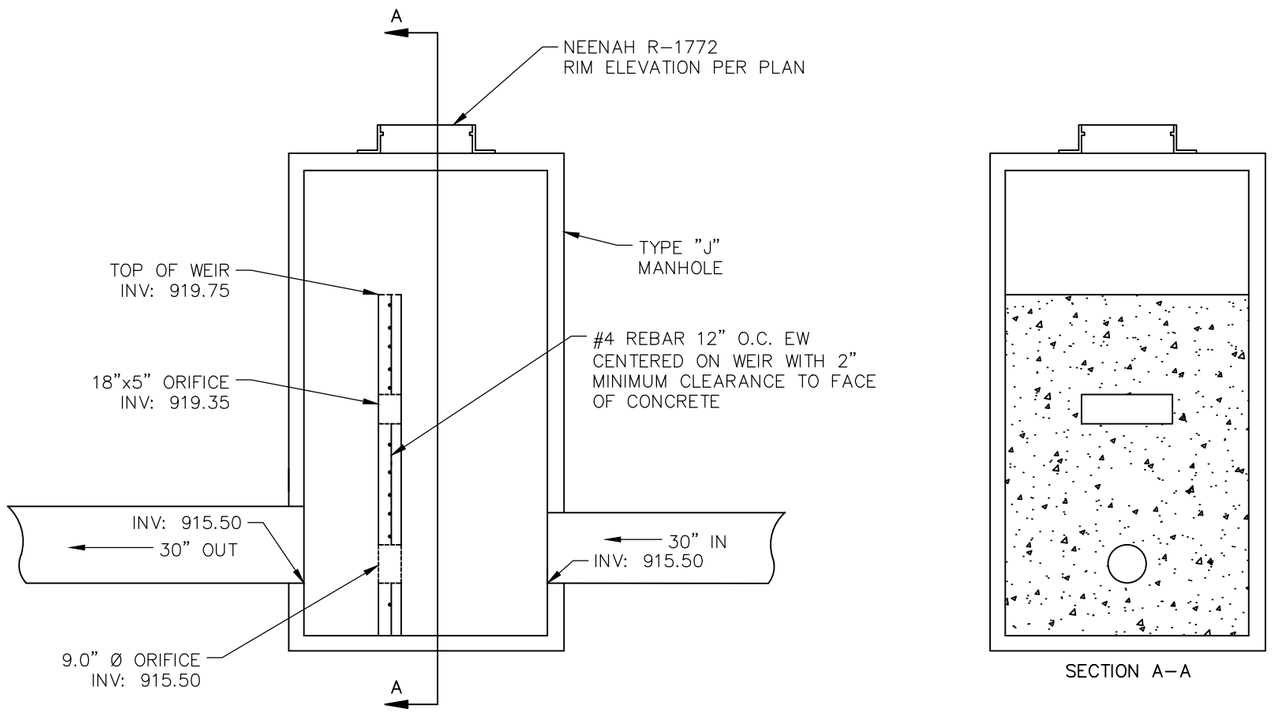
PROJECT:	Pock Farms
BY:	Connor Strege
DATE:	6-Oct-20
Entity:	Town of Zionsville

CASTING CAPACITIES

STORM CASTING DESIGN REQUIREMENTS	
STORM SEWER FREQUENCY	10-Year
HYDRAULIC GRADELINE FREQUENCY	100-Year
INVERT CONNECTIVITY	Invert Drop
INVERT DROP	0.1
MAX INLET DEPTH	5

STORM CASTING DESIGN REQUIREMENTS	
CASTING CAPACITY FREQUENCY	10-Year
MAXIMUM HEAD (ft)	-
CLOGGING (%)	50%

UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	PIPE LENGTH	PIPE MATERIAL	DRAINAGE AREA			c*A			INTENSIT	FLOW	STRUCTURE DATA		CASTING CAPACITY		
				CASTING		Tc	CASTING	INLET	CUMULATIVE	CASTING	CASTING	STRUCTURE	CASTING	ORIFICE	WEIR FLOW	PONDING
				c	AREA					10-Year	10-Year	TYPE	TYPE	FLOW DEPTH	DEPTH	DEPTH
		(ft)			(acres)	(min)				(in/hr)	(cfs)			(ft)	(ft)	(ft)
D97	D95	30.00	RCP	0.70	2.49	10.00	1.75	1.75	1.75	5.22	9.12	CONCRETE END SECTION	-	-	-	0.00
D96	D95	30.00	RCP	0.70	2.49	10.00	1.75	1.75	1.75	5.22	9.12	CONCRETE END SECTION	-	-	-	0.00
D95	D94	24.85	RCP	0.00	0.00	5.00	-	-	3.50	6.12	-	TYPE "C" MANHOLE	R-1772	-	-	0.00
D94	D93	72.40	RCP	0.00	0.00	5.00	-	-	3.50	6.12	-	TYPE "J" MANHOLE	R-1772	-	-	0.00
D93	D92	206.04	RCP	0.00	0.00	5.00	-	-	3.50	6.12	-	TYPE "J" MANHOLE	R-1772	-	-	0.00
D92	D85	64.01	RCP	0.00	0.00	6.00	-	0.65	4.15	5.94	-	TYPE "J" MANHOLE	R-1772	-	-	0.00
D91	D90	28.67	RCP	0.74	0.10	6.00	0.08	0.89	0.89	5.94	0.46	TYPE "C" MANHOLE	R-3010	0.04	0.17	0.17
D90	D88	132.35	RCP	0.74	0.11	5.00	0.08	0.08	0.97	6.12	0.49	TYPE "C" MANHOLE	R-3010	0.04	0.18	0.18
D89	D88	28.67	RCP	0.74	0.06	6.00	0.04	0.81	0.81	5.94	0.27	TYPE "C" MANHOLE	R-3010	0.01	0.12	0.12
D88	D86	104.38	RCP	0.74	0.06	5.00	0.04	0.04	1.83	6.12	0.27	TYPE "C" MANHOLE	R-3010	0.01	0.13	0.13
D87	D86	28.67	RCP	0.74	0.06	5.00	0.04	0.04	0.04	6.12	0.26	TYPE "A" INLET	R-3286-8V	0.02	0.12	0.12
D86	D85	71.47	RCP	0.75	0.05	5.00	0.04	0.04	1.90	6.12	0.23	TYPE "J" MANHOLE	R-3010	0.01	0.11	0.11
D85	D84	122.04	RCP	0.00	0.00	5.00	-	-	6.05	6.12	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D84	D83	140.58	RCP	0.00	0.00	6.00	-	0.65	6.70	5.94	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D83	D82	130.78	RCP	0.00	0.00	6.00	-	1.39	8.08	5.94	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D82	D81	159.51	RCP	0.00	0.00	6.00	-	1.28	9.37	5.94	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D81	D80	119.87	RCP	0.00	0.00	6.00	-	1.61	10.97	5.94	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D40	D39	34.67	RCP	0.80	0.19	5.00	0.15	0.15	0.15	6.12	0.93	TYPE "J" INLET	R-3287-10V	0.03	0.24	0.24
D39	D37	270.99	RCP	0.79	0.19	5.00	0.15	0.15	0.30	6.12	0.92	TYPE "M" INLET	R-3287-10V	0.03	0.24	0.24
D38	D37	28.67	RCP	0.74	0.16	5.00	0.12	0.12	0.12	6.12	0.71	TYPE "J" INLET	R-3287-10V	0.02	0.20	0.20
D37	D36	34.43	RCP	0.74	0.16	5.00	0.12	0.12	0.54	6.12	0.71	TYPE "C" MANHOLE	R-3010	0.09	0.23	0.23
D36	D35	28.67	RCP	0.76	0.10	5.00	0.07	0.07	0.61	6.12	0.45	TYPE "M" INLET	R-3287-10V	0.01	0.15	0.15
D35	D33	131.59	RCP	0.74	0.08	5.00	0.06	0.06	0.67	6.12	0.37	TYPE "M" INLET	R-3287-10V	0.01	0.13	0.13
D34	D33	28.67	RCP	0.74	0.08	6.00	0.06	1.27	1.27	5.94	0.33	TYPE "C" MANHOLE	R-3010	0.02	0.14	0.14
D33	D31	138.18	RCP	0.74	0.08	5.00	0.06	0.06	1.99	6.12	0.34	TYPE "J" MANHOLE	R-3010	0.02	0.14	0.14
D32	D31	28.67	RCP	0.74	0.11	6.00	0.08	0.71	0.71	5.94	0.50	TYPE "C" MANHOLE	R-3010	0.04	0.18	0.18
D31	D29	147.13	RCP	0.74	0.12	5.00	0.09	0.09	2.80	6.12	0.56	TYPE "J" MANHOLE	R-3010	0.05	0.20	0.20
D30	D29	28.67	RCP	0.74	0.10	6.00	0.07	0.80	0.80	5.94	0.44	TYPE "C" MANHOLE	R-3010	0.03	0.17	0.17
D29	D28	74.88	RCP	0.74	0.09	5.00	0.07	0.07	3.66	6.12	0.41	TYPE "J" MANHOLE	R-3010	0.03	0.16	0.16
D28	D27	140.58	RCP	0.00	0.00	5.00	-	-	3.66	6.12	-	TYPE "J" MANHOLE	R-1772	-	-	0.00
D27	D26	140.58	RCP	0.00	0.00	7.00	-	0.79	4.46	5.76	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D26	D25	18.16	RCP	0.00	0.00	7.00	-	1.52	5.98	5.76	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D25	D24	118.44	RCP	0.00	0.00	5.00	-	-	5.98	6.12	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D24	D23	124.12	RCP	0.00	0.00	6.00	-	1.42	7.40	5.94	-	TYPE "K" MANHOLE	R-1772	-	-	0.00
D23	D22	97.64	RCP	0.00	0.00	6.00	-	1.72	9.13	5.94	-	TYPE "L" MANHOLE	R-1772	-	-	0.00
D22	D21	287.59	RCP	0.00	0.00	5.00	-	-	9.13	6.12	-	TYPE "L" MANHOLE	R-1772	-	-	0.00
D21	D20	71.60	RCP	0.00	0.00	5.00	-	-	9.13	6.12	-	TYPE "L" MANHOLE	R-1772	-	-	0.00
D53	D52	36.03	RCP	0.74	0.82	5.00	0.61	0.61	0.61	6.12	3.71	CONCRETE END SECTION	-	-	-	0.00
D51	D50	60.96	RCP	0.47	0.61	5.00	0.28	0.28	0.28	6.12	1.74	CONCRETE END SECTION	-	-	-	0.00
D21A	D21 (INTERIM PIPE)	45.00	RCP	0.30	11.31	10.00	3.39	3.39	3.39	5.22	17.71	CONCRETE END SECTION	-	-	-	0.00



OUTLET CONTROL STRUCTURE - D6

N.T.S.

POCK FARM
ZIONSVILLE, INDIANA

10/13/2020

OUTLET CONTROL STRUCTURE DETAIL

Kimley»Horn

Appendix G: Stormwater Quality Design

PROJECT:	Pock Farm Infrastructure Phase 1
BY:	Connor Strege
DATE:	13-Oct-20

Job Information

Description: Pock Farms
Reviewing Entity: Connor Strege
Job Number: 170194000
Date: 10/13/20

Detention Pond

$$WQv = \frac{(P) * (Rv) * (A)}{12}$$

P = 1" rainfall
Rv = 0.05 + 0.009(I) where I is the percent impervious cover
A = area in acres

PARAMETERS

P =	1	(in)
Pervious Area	3.76	
Impervious Area	21.31	
I =	85.0%	(%)
Rv =	0.815	
A =	25.07	(acres)

CALCULATED WQv

WQv = **1.703 (ac-ft)**
74182.2 (ft^3)

	Micropool				
	Stage	**Area**	**Incremental Volume**	**Volume**	
	(ft)	**(acre)**	**(acre-ft)**	**(acre-ft)**	
Below Normal Pool	907.50	0.439	0	0	
	914.00	0.936	4.47	4.47	
	914.01	1.227	0.01	4.48	
	915.5	1.363	1.93	6.41	
	Total Volume			6.410371	> 5.10897

Appendix H: Excerpts From Previous Drainage Report

755 West Carmel Drive, Suite 207 • Carmel, IN 46032 • Phone: (317) 660 - 4236

Final Drainage Analysis

for

Watermark Stonegate
& Overall Maple Grove Project Pond Model

Whitestown, Indiana 46075

Prepared: September 13, 2013

Revised: November 12, 2013

Prepared for
Watermark Residential
101 West Ohio Street, Suite 1515
Indianapolis, IN 46204
317-454-8018

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Introduction

The Watermark Stonegate is a nineteen acre multifamily residential community proposed along the south side of Whitestown Parkway at Maple Grove Boulevard and within the Town of Whitestown. Two hundred sixty-six living units will be constructed in twenty three buildings. Each building will be a two story structure with a mixture of one, two and three bedrooms.

Just to the east of the site is the Maple Grove single family development. The second of three phases of construction is underway at this time. In the first and second phase of construction a system of ponds will have been constructed. The Watermark will expand this system of ponds with the fifth and final pond.

At the request of the homeowner to the south of the Maple Grove project efforts to increase the amount of water that is discharged to the southern boundary have been made. The system of ponds south of the site has been hydraulically cut off from the upstream drainage basins and as a result the pond normal pool area significantly decreases during periods of dry weather. To help recharge these ponds Pond-3 and Pond-5 have been connected to redirect storm water from the Northeast point of discharge to the southern boundary of Maple Grove. By connecting Pond-3 to Pond-5 an increase in storm water volume discharged to the southern boundary and the downstream ponds. Both the northeast point of discharge and southern boundary point of discharge ultimately discharge to Fishback Creek so the ultimate downstream drainage system will not be significantly impacted but the connection will allow for the downstream pond system to be recharged.

To ensure that the downstream pond system is not overwhelmed the downstream property owner has retained Badger Engineering to perform an independent review of the proposed pond models. IECI has been and will continued to work Badger Engineering to ensure the final design will not created a harmful downstream condition.

Figure 1: Project vicinity map.

Existing Conditions

Before any development occurred the Maple Grove project area was a mixture of agricultural fields, pasture and woodlands. In combination to these onsite basins four offsite basins and two field tiles are included in the existing drainage system. The four offsite basins are a portion of the Kite project located along CR 700 East. These four basins drain via overland flow to the western limits of the Watermark project.

Exhibits A-1 & A-3 show the limits of these areas and the apparent drainage patterns.

Proposed Conditions

The development of the Watermark project will expand on the storm sewer system created with the first two phases of the Maple Grove single family residential development and the primary point of storm water discharge. In addition to the existing detention ponds a dry detention basin,Pond-3, will be completed as a detention basin to aid in storm water detention.

The second point of storm water discharge from phase two of the Maple Grove single family residential project will be the existing wooded ditch along the southeastern boundary of the site. A small area of rear

yards is being proposed to direct discharge to this point (B-2). The existing ground in this area begins to slope away from the existing retention pond to such a degree that transporting storm water back to the dry basin or retention pond is not possible. The area of direct discharge will be minimized to the greatest extent possible but the area will discharge flows in excess of that allowed but still substantial less than the current condition.

With the construction of Pond-5 as apportion of the second phase of the Maple Grove single family residential phase of development the third and final point of discharge for the Maple Grove project will be constructed. To ensure detention requirements are meet this analysis looks at the completed project with respects to pond capacity. So it has been assumed that all of the ponds are being fully constructed and the entire Maple Grove project is being built out. The pond model is therefore base on the entire Maple Grove project and not just a particular section of development. In addition the widening of SR 334 has also been included in this analysis. The proposed widening will require a storm sewer culvert to be installed under SR 334 and connected to the Harmon Legal Drain that was reconstructed in Section I of the Maple Grove single family project. To model the effect of this flow it has been included as an offsite contributing basin.

In accordance with *Chapter Six* of the May 2007 edition of the Stormwater Management Ordinance of Boone County, Indiana the allowable release rate for the proposed development will be limited to the area based discharge rates listed in Table 2 below. Table 3 summarizes the allowable site specific discharge rates for the proposed Maple Grove project.

To meet the requirements of the Stormwater Management Ordinance of Boone County, Indiana a system of interconnected retention ponds has been proposed. Storm sewer will be used to collect storm water runoff from within the project and direct it to the proposed pond. The pond has been sized to meet the requirements of Boone County for the onsite discharge area while allowing the offsite runoff to safely pass through the system without attenuation.

Efforts have also been made to increase the amount of storm water runoff discharged to the southern boundary. While an increase in discharge volume has been desired the rate of runoff has been limited to levels that the downstream pond system will be able to accommodate in a safe manner.

Boone County Allowable Storm Water Discharge Rates	
100 Year 24 Hour Storm Event	0.5 cubic feet per acre
10 Year 24 Hour Storm Event	0.3 cubic feet per acre

Figure 2: Boone County allowable discharge rates.

Allowable discharge rate calculations

B-1 Discharge Point (Str# 131)

Ten Year Storm Event Allowable Discharge Rate Calculation
0.3 cfs/ac × 36.934 ac. = 11.080 cfs

One Hundred Year Storm Event Allowable Discharge Rate Calculation
0.5 cfs/ac × 36.934 ac. = 18.467 cfs

B-2 Discharge Point

Ten Year Storm Event Allowable Discharge Rate Calculation
0.3 cfs/ac × 6.357 ac. = 1.91 cfs

One Hundred Year Storm Event Allowable Discharge Rate Calculation
0.5 cfs/ac × 6.357 ac. = 3.18 cfs

Johnson's Pond (Str #314)

Ten Year Storm Event Allowable Discharge Rate Calculation
0.3 cfs/ac × 15.164 ac. = 4.549 cfs

One Hundred Year Storm Event Allowable Discharge Rate Calculation
0.5 cfs/ac × 15.164 ac. = 7.582 cfs

Since Str#314 collects a small amount of direct discharge the peak discharge from Pond-5 as well as the total flow to this point of discharged will be examined. The direct discharge contribution will surpass the allowable discharge rate but only for a very short time period. Once the direct discharge peak passes the proposed discharge rate will drop down to a rate more in line with allowable discharge rate.

Storm Water Retention

Model #1 – No *Offsite Flows Included*

Two AdICPR Models were developed to examine the effects of the proposed development. The first model includes all of the proposed ponds and only the onsite contributing basins. The offsite Kite and SR 334 basins as well as the offsite flow from the Harmon Legal Drain have been ignored to examine the effectiveness of the proposed system of ponds. The chart below summarizes the estimated storm water runoff to each of the points of discharge.

Onsite Storm Water Discharge Summary			
10-Year Storm Event			
Discharge Point	**Discharge**	**Allowable**	**Difference**
B-1 (NE Corner Str 131)	8.44 cfs	11.08 cfs	-2.64 cfs
B-2[1] (SE Direct)	3.30 cfs	1.91 cfs	+1.39 cfs[1]
Johnsons Pond[2] (S Boundary Str314)	10.63 cfs	4.55 cfs	+6.08 cfs[2]
Pond-5 (S Boundary Str314)	8.26 cfs	4.55 cfs	+4.60 cfs
100 – Year Storm Event			
	Discharge	**Allowable**	**Difference**
B-1 (NE Corner Str 131)	17.64 cfs	18.47 cfs	-0.83 cfs
B-2[1](SE Direct)	6.28 cfs	3.18 cfs	+3.10 cfs[1]
Johnsons Pond[2] (S Boundary Str314)	19.66 cfs	7.58 cfs	+12.08 cfs[2]
Pond-5 (S Boundary Str314)	11.75 cfs	7.58 cfs	+4.17 cfs

Figure 3: Onsite Discharge Summary

1 – Basin discharge from basin SE Direct.

2 – Basin discharge from basin Johnson included.

Reviewing the chart above it can be seen that under the proposed conditions the upstream ponds discharging to point B-1 in the northeast corner of the project will reduce the rate of storm water runoff to a rate less than the maximum required. The discharge points B-2 and Johnson's ponds have discharge rates in excess of the maximum required.

Discharge point B-2 is the point where storm water runoff will enter the down stream pond system belonging to the Johnson's. The Johnson's pond system losses water faster than it can be replaced resulting in significant reduction in pond area during periods of dry weather. At the request of the Johnson's the developer has agreed to discharge more water to the Johnson's. To increase the volume of water discharged to the Johnson's it has been planned to connect a future pond to Pond-5 providing an increase in the upstream drainage basin. To further increase the volume discharged to the Johnsons it has been planned to increase the discharge rate from Pond-5 in order to allow the maximum amount of

storm water from the upstream drainage basin to flow south to the Johnson's The outlet of the upstream pond has already been designed and pond area defined. So to get as much water from the upstream pond the discharge from Pond-5 was increased to provide as much storage as possible in Pond-5 when water from the future pond begins to flow into Pond-5.

The Johnsons have hired a separate engineering firm to review the design and confirm that their pond will be able to handle the increase in flow and volume.

SE Direct Storm Water Discharge Summary			
2 – Year Storm Event			
	Existing	**Proposed**	**Difference**
B-2[1] (SE Direct)	7.10	N/A	N/A
10 – Year Storm Event			
	Existing	**Proposed**	**Difference**
B-2[1] (SE Direct)	12.82	3.30	-9.52 cfs
100 – Year Storm Event			
	Discharge	**Proposed**	**Difference**
B-2[1] (SE Direct)	26.38	6.28	-20.10 cfs

Figure 4: SE Basin Discharge Summary

Figure 3 above also that the discharge point Johnson's Pond receives a peak discharge greater than the allowable. The greatest amount of this flow comes from the basin Johnson included the direct discharge of the rear yards along the southern boundary to storm structure # 314. The peak direct discharge to this area comes as a quick burst near the peak of the storm events. By looking at the time series reports in Appendix B it can be seen that for the vast majority of the storm event the peak discharge to Johnsons pond and structure #314 are below the maximum.

Model #2 - *Offsite Flows Included*

The second model includes not only the entire Maple Grove project area but also the SR 334 widening and the Kite property to the west and the Harmon Legal Drain. These offsite basins were examined to determine the maximum stage of each of the ponds as well as how much additional water might be able to be directed to the Johnson's pond to the south.

The Harmon Legal Drain was been broken into two portions. The first is a 12" tile that drains west to east from the Kite property through the Maple Grove project. The peak gravity flow for a 12" tile was used to create time discharge flow relationship for the main trunk of the Harmon Drain. The second portion of the Harmon Legal Drain is an unnamed tributary the drains under SR 334 from the Westhaven apartment project. With information from the Westhaven drainage report a time discharge relationship was

developed to approximate this discharge. Both flow relationships were entered into the model as a boundary flows.

With all of this information entered into the second AdICPR model the peak stages of each of the ponds was determined. The maximum stages have been summarized in the following chart.

Peak Pond Stages With Offsite			
10 – Year Storm Event			
	MG II Approval	**Proposed**	**Difference**
Pond-1	911.66	911.69	+0.03’
Pond-2	913.50	913.87	+0.47’
Pond-3	916.08	916.16	+0.08’
Dry	913.62	913.62	NC
Pond-5	914.90	914.24	-0.66’
100 – Year Storm Event			
	MG II Approval	**Proposed**	**Difference**
Pond-1	913.86	913.90	+0.04’
Pond-2	914.94	915.23	+0.29’
Pond-3	917.65	917.97	+0.32’
Dry	914.19	914.20	+0.011
Pond-5	916.36	915.88	-0.48’

Figure 5: Proposed Pond Maximum Stages

Examining the proposed elevations and comparing those to the previously approved elevation sit can be seen that for the majority of the ponds there will be an insignificant change in maximum stage. Pond-3 will have an increase. Since the previous plans only called for a portion of the construction that change becomes less substantial. The grades surrounding Pond-3 show that even with the new maximum stage the surrounding area will be sufficiently protected.

The information for both of these models can be found in Appendix B of this analysis.

Storm Sewer Design

The storm sewer proposed as a part of this phase of development have been sized using the *Hydraflow Strom Sewers* program by inteliSolve. The *Hydraflow Storm Sewers* program uses Bernoulli’s energy equation and Manning’s equation to determine the flow characteristics of each segment of the storm sewer system. The flow to each collection point of the storm sewer system has been estimated by the *Hydraflow Storm Sewers* program using the Rational Method. The necessary rainfall intensities used in these calculations have been determined using the data provided in *Table 2-4* of the Boone County

Stormwater Technical Standards Manual. Times of concentration calculations have been determined using the TR-55 program created by the Unit States Department of Agriculture, Natural Resources

Conservation Service with the "Weighted C" values being determined using standard engineering practices and methodologies.

With the engineering properties determined for each contributing drainage basin the data was entered into the *Hydraflow Storm Sewers* program and the resulting storm sewer system refined until it met the requirements of *Chapter Four* of the Boone County Stormwater Technical Standards Manual.

The input data and resulting output of each of these methods of calculation can be found in Appendix "C" of this report.

Storm Sewer Inlet Design

The inlet castings for each of the storm sewer inlets points has been chosen to meet the requirements as listed in Section H of Chapter 4 of the Boone County Stormwater Technical Standards Manual. Weir and orifice calculations for each of the proposed inlets can be found Appendix "C".

100 Year Emergency Flood Routing

The site grading has been design such that should the emergency flooding conditions occur that each building pad will be above the anticipated water surface elevation by at least one foot. The 100-Year peak flow to each inlet has been determined with the rational method and then weir calculations performed to show the depth needed to pass the anticipated flow. The minimum flood protection grade for the lowest adjacent grade was then set one foot above that elevation.

An exhibit showing the ponding limits can be found with the calculations in Appendix "D" of this analysis.

Water Quality

Pond-1 accepts the vast majority of the storm water runoff from the Maple Grove single family project so during the approval of the first phase a storm water bmp was incorporated into the outlet of Pond-1. As a result no additional storm water quality treatment measures proposed for any water that passes through Pond-1. The small areas that are allowed to direct discharge to the wooded area and existing pond will do so with no additional treatment.

The Watermark Stonegate drainage basin discharges to Pond-5 which is not believed to be sufficient to work as a water quality treatment unit. As a result the outlet structure was designed to include a BMP unit during the design and approval process of Maple Grove II.

Similarly Pond-3 will not be sufficient to work as a water quality treatment feature. Similar to Pond-5 a BMP structure has been designed into the outlet structure of the pond. AdICPR was used to model the storm water discharge during the storm water quality event and an appropriate unit chosen using the peak flow from the storm and the approved SQU Selection Chart of the Indianapolis Storm Water Manual.

Calculations to choose the appropriate BMP can be found in Appendix "G"

Additional Volume to Johnson's Pond

To estimate the volume of storm water that currently is discharged to the Johnson pond a Basin Maximum report from the existing conditions model was examined. The total discharge from the basins South and Kite C were then summed to determine an approximate discharge volume.

To estimate the post-development discharge rate the Johnson's pond a time series report for the node STR#314 was examined. The time series report list the total volume of water that passes through a particular node. So by comparing the Node Time Series Report to the Basin Maximum Report it can be seen that a substantial amount of additional water will be directed to the Johnson's pond.

Existing Discharge Volumes

10-Year

Kite-C + South = 26,227 ft^3 + 122,070 ft^3 = 148,297 ft^3 $\rightarrow$ 3.404 ac·ft

Proposed discharge at Str#314 = 10.3 ac·ft

Volume Increase of 6.90 ac·ft

100-Year

Kite-C + South = 54,639 ft^3 + 254,313 ft^3 = 308,952 ft^3 $\rightarrow$ 7.093 ac·ft

Proposed discharge at Str#314 = 15.4 ac·ft

Volume Increase of 8.31 ac·ft

While the increase in volumes of storm water discharged to the Johnson's pond appear to be substantial when compared to the total area of the pond they appear to be less significant. The pond area of the existing Johnson ponds is approximately 8.4 acres. The resulting increase of pond depth during either of these storm events will be approximately 8.3 ac ft ÷ 8.4 ac = 0.98 ft±. With the Johnsons pond losing substantial amounts of water during periods of dry weather the expected increase in water elevations becomes even less of an impact as a result of an increase in available storage volume.

See Appendix E for portions of the Time Series Reports of the AdICPR model with offsite.

Conclusion

The overall Maple Grove drainage system has been designed assuming a use similar to the proposed Watermark Stonegate project. The designed stormwater collection system will safely collect storm water runoff and direct it to one of the approved ponds. At those points the storm water will be attenuated to discharge rates allowed and treated for quality to level approved by the Drainage Board.

Appendix C – Storm Sewer Design

Storm Sewer Inlet Basin Map

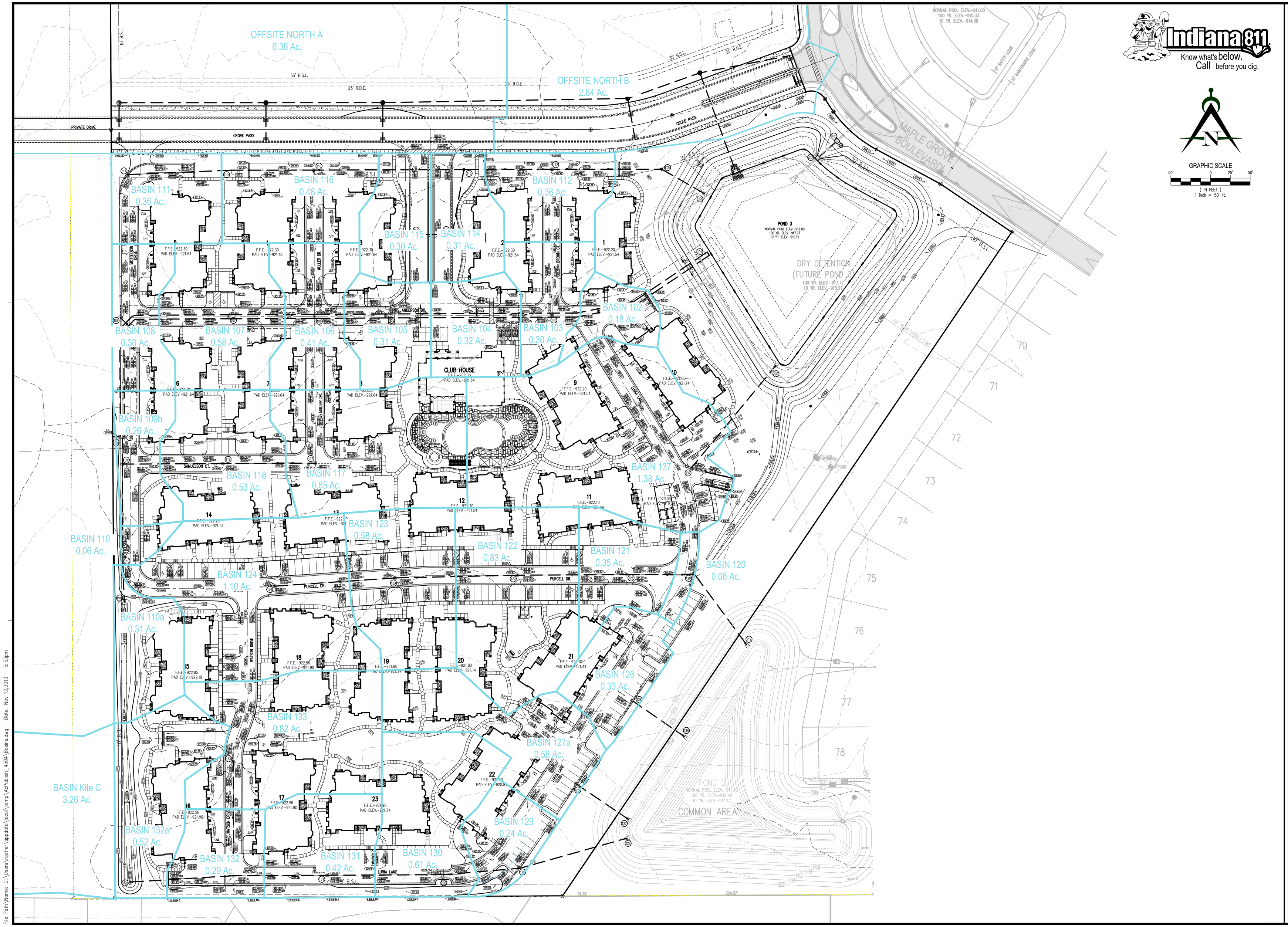
Weighted “C” Calculations

Reach Report

Node Report

Inlet Orifice and Weir Calculations

Gutter Spread Calculations



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REVISIONS:

PREPARED FOR:
Watermark-Residential, LLC
101 West Ohio Street, Suite 1515
Indianapolis, IN 46204
317-454-8029

Watermark Stonegate Apartments
Whitestown, Indiana
Proposed Drainage Basins

PRELIMINARY
PENDING
AGENCY
APPROVAL

DATE:

DATE: 09/05/13	DRAWN BY:
ISSUED:	CHECKED BY:

JOB NUMBER: 13110

SHEET # B-1

11/12/2013

File Path\Name: C:\Users\gafter\appdata\local\temp\AcPublish_4504\Basins.dwg – Date: Nov 12,2013 – 5:53pm

123 of 227

Project Name: Watermark Stonegate Housing Project
Project No. 13110
Designed By: rlg
Date: 10/10/2013
Description: Runoff Coefficients - Grass=0.25, Impervious Pavement(Asphalt, Concrete)=0.82, Impervious Roof= 0.90, 100 Year I=8.85 In/Hr; 109a is also Kite A&B

STR #	A (sq ft)	A(acres)	0.25	0.82	0.9	Area (Sq ft)	C	Q (cfs) (100 Yr)
102	7971	0.18	1594	4755	1622	7971	0.72	1.17
103	12955	0.30	2386	6419	4150	12955	0.74	1.95
104	13833	0.32	2805	7757	3271	13833	0.72	2.03
105	13320	0.31	3867	6025	3428	13320	0.68	1.83
106	17860	0.41	1920	9574	6366	17860	0.79	2.86
107	25219	0.58	6950	9055	9214	25219	0.69	3.55
108	13002	0.30	2813	7007	3182	13002	0.72	1.89
109b	11430	0.26	6046	3793	1591	11430	0.75	1.75
110	2631	0.06	1515	512	604	2631	0.51	0.27
111	15771	0.36	8187	5556	2028	15771	0.64	2.04
112	15618	0.36	3129	8408	4081	15618	0.73	2.31
114	13295	0.31	4726	5275	3294	13295	0.64	1.72
115	12995	0.30	4337	5204	3454	12995	0.65	1.72
116	20989	0.48	8517	8445	4027	20989	0.60	2.58
117	36903	0.85	22186	8336	6381	36903	0.72	5.42
118	23101	0.53	6176	9885	7040	23101	0.70	3.27
120	2826	0.06	0	2826	0	2826	0.79	0.45
121	15052	0.35	5078	7360	2614	15052	0.68	2.06
122	36070	0.83	11863	14097	10110	36070	0.65	4.80
123	25423	0.58	4203	11610	9610	25423	0.71	3.65
124	47799	1.10	33128	10101	4570	47799	0.74	7.17
126	14178	0.33	2312	8379	3487	14178	0.79	2.27
129	10617	0.24	2607	6233	1777	10617	0.69	1.50
130	26506	0.61	18315	5796	2395	26506	0.62	3.31
131	18168	0.42	7729	6456	3983	18168	0.64	2.37
132	12526	0.29	7221	3484	1821	12526	0.57	1.46
133	35736	0.82	30192	2977	2567	35736	0.72	5.21
110a	13363	0.31	8879	1131	3353	13363	0.51	1.38
127a	25151	0.58	9836	10946	4369	25151	0.61	3.12
137	60320	1.38	34361	18325	7634	60320	0.69	8.49
132a	22695	0.52	13483	4034	5178	22695	0.50	4.42
Kite C	142005.6	3.26	10 Year Flow Only				0.40	11.54
Kite A&B	1154340	26.50	10 Year Flow Only				0.50	117.26
Kite A&B	1154340	26.50	100 Year Flow Only				0.85	199.35
Offsite North A	276840	6.36	100 Year Flow Only				0.85	38.65
Kite C	142005.6	3.26	100 Year Flow Only				0.85	24.52

REACH

Line No.	Line ID	Gnd/Rim El Up (ft)	Invert Up (ft)	Cover Up (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Invert Dn (ft)	Cover Dn (ft)	HGL Dn (ft)	Line Length (ft)	Line Size (in)	Line Slope (%)	n-val Pipe	Tc (min)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line ID
1	102-101	919.00	912.22	4.78	913.80	914.25	912.00	0.25	913.64	97.000	24 x 60	0.23	0.012	43.1	44.44	47.12	5.52	102-101
2	na1-102	919.50	912.43	5.07	914.20	919.00	912.22	4.78	914.13	90.000	24 x 60	0.23	0.012	42.8	44.31	47.79	4.83	na1-102
3	103-na1	919.33	912.50	4.83	914.32	919.50	912.43	5.08	914.29	35.000	24 x 60	0.23	0.012	42.7	44.40	47.02	4.83	103-na1
4	104-103	919.20	912.72	4.48	914.62	919.33	912.50	4.83	914.50	93.000	24 x 60	0.23	0.012	42.3	44.05	47.90	4.51	104-103
5	105-104	919.40	912.98	4.42	914.96	919.20	912.72	4.48	914.79	114.000	24 x 60	0.23	0.012	41.9	43.73	47.25	4.39	105-104
6	106-105	919.60	913.19	4.41	915.29	919.40	912.98	4.42	915.11	90.000	24 x 60	0.23	0.012	41.5	43.41	47.79	4.34	106-105
7	107-106	919.40	913.44	3.96	915.64	919.60	913.19	4.41	915.43	108.369	24 x 60	0.23	0.012	41.1	42.83	47.52	4.28	107-106
8	107a-107	920.90	913.71	5.19	915.99	919.40	913.44	3.96	915.78	117.926	24 x 60	0.23	0.012	40.6	42.06	47.34	4.21	107a-107
9	107b-107a	920.30	913.72	4.58	916.12	920.90	913.71	5.19	916.11	3.000	24 x 60	0.23	0.012	40.6	42.07	47.65	4.21	107b-107a
10	107c-107b	920.30	913.75	4.55	916.26	920.30	913.72	4.58	916.24	11.000	24 x 60	0.23	0.012	40.6	42.10	47.19	4.21	107c-107b
11	107d-107c	920.30	913.77	4.53	916.55	920.30	913.75	4.55	916.53	8.000	24 x 60	0.23	0.012	40.6	41.54	46.94	4.15	107d-107c
12	107e-107d	920.30	913.78	4.52	916.67	920.30	913.77	4.53	916.66	3.000	24 x 60	0.23	0.012	40.5	41.55	47.65	4.15	107e-107d
13	109-107e	920.87	914.09	4.78	917.03	920.30	913.78	4.52	916.79	132.981	24 x 60	0.23	0.012	40.0	41.89	47.77	4.19	109-107e
14	109b-109	920.43	914.28	4.15	917.33	920.87	914.19	4.68	917.30	35.048	24	0.25	0.012	7.5	7.71	12.14	2.45	109b-109
15	108-108a	920.33	913.78	5.55	916.54	920.30	913.75	5.55	916.53	10.000	12	0.30	0.012	6.0	1.28	2.11	1.63	108-108a
16	110-109b	921.33	915.28	5.05	917.58	920.43	914.38	5.05	917.47	127.400	12	0.70	0.012	6.0	1.12	3.24	1.42	110-109b
17	110a-110	916.55	915.87	-0.32	917.63	921.33	915.37	4.96	917.60	50.000	12	1.00	0.012	5.0	0.97	3.86	1.23	110a-110
18	109a-109	920.50	914.30	3.70	917.36	920.87	914.18	4.19	917.30	8.000	30	1.50	0.012	40.0	38.19	54.41	7.78	109a-109
19	118-109b	919.50	914.83	3.17	917.80	920.43	914.38	4.55	917.47	128.487	18	0.35	0.012	6.7	5.69	6.73	3.22	118-109b
20	117-118	919.90	915.34	3.31	918.19	919.50	914.93	3.32	917.88	116.485	15	0.35	0.012	6.0	3.62	4.15	2.95	117-118

Project File: Revised Box Culvert.stm | Number of lines: 20 | Date: 11/12/2013

NOTES: ** Critical depth

REACH

Line No.	Line ID	Gnd/Rim El Up (ft)	Invert Up (ft)	Cover Up (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Invert Dn (ft)	Cover Dn (ft)	HGL Dn (ft)	Line Length (ft)	Line Size (in)	Line Slope (%)	n-val Pipe	Tc (min)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line ID
1	112a-112b	919.50	912.68	5.07	913.85	914.75	912.50	0.50	913.43	71.000	21	0.25	0.013	9.5	6.23	7.98	4.23	112a-112b
2	112-112a	919.45	913.13	4.57	914.31	919.50	912.78	4.97	913.96	138.171	21	0.25	0.013	8.9	6.35	7.97	3.68	112-112a
3	113-112	920.90	913.51	5.64	914.58	919.45	913.23	4.47	914.42	111.010	21	0.25	0.013	8.3	5.02	7.96	3.07	113-112
4	116-113	919.60	914.08	4.27	915.10	920.90	913.61	6.04	914.75	189.004	15	0.25	0.013	7.1	2.96	3.22	2.65	116-113
5	111a-116	920.50	914.44	4.81	915.21	919.60	914.18	4.17	915.16	103.000	15	0.25	0.013	5.9	1.37	3.24	1.52	111a-116
6	111-111a	919.84	914.83	4.01	915.54	920.50	914.54	4.96	915.25	132.550	12	0.22	0.013	5.0	1.41	1.67	2.38	111-111a
7	114-113	919.50	913.82	4.68	915.11	920.90	913.61	6.29	914.75	83.058	12	0.25	0.013	5.6	2.36	1.79	3.00	114-113
8	115-114	919.50	914.06	4.44	915.38	919.50	913.92	4.58	915.32	54.001	12	0.25	0.013	5.0	1.19	1.79	1.52	115-114

Project File: 13110_Storm 112 north new.stm | Number of lines: 8 | Date: 11/12/2013

NOTES: ** Critical depth

REACH

Line No.	Line ID	Gnd/Rim El Up (ft)	Invert Up (ft)	Cover Up (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Invert Dn (ft)	Cover Dn (ft)	HGL Dn (ft)	Line Length (ft)	Line Size (in)	Line Slope (%)	n-val Pipe	Tc (min)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line ID
1	120-119	918.33	912.18	4.15	913.72	914.78	911.90	0.88	913.13	112.754	24	0.25	0.012	7.7	11.48	12.21	5.04	120-119
2	121-120	917.90	912.49	3.41	914.26	918.33	912.28	4.05	914.10	85.656	24	0.25	0.012	7.3	11.35	12.13	3.82	121-120
3	122-121	917.80	912.93	2.87	914.57	917.90	912.59	3.31	914.37	137.450	24	0.25	0.012	6.7	10.21	12.19	3.58	122-121
4	123-122	918.00	913.42	2.58	914.80	917.80	913.03	2.77	914.68	154.629	24	0.25	0.012	5.8	7.30	12.30	2.90	123-122
5	124-123	918.10	913.90	2.70	915.12	918.00	913.52	2.98	914.88	151.606	18	0.25	0.012	5.0	4.98	5.70	3.09	124-123

Project File: 124-119_Nathan.stm | Number of lines: 5 | Date: 11/11/2013

NOTES: ** Critical depth

REACH

Line No.	Line ID	Gnd/Rim El Up (ft)	Invert Up (ft)	Cover Up (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Invert Dn (ft)	Cover Dn (ft)	HGL Dn (ft)	Line Length (ft)	Line Size (in)	Line Slope (%)	n-val Pipe	Tc (min)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line ID
1	126-125	920.03	915.23	3.80	915.77 j	913.25	911.90	0.35	912.46	81.000	12	4.11	0.012	5.0	1.60	7.82	3.62	126-125

Project File: 126-125_Nathan.stm | Number of lines: 1 | Date: 11/11/2013

NOTES: ** Critical depth

REACH

Line No.	Line ID	Gnd/Rim El Up (ft)	Invert Up (ft)	Cover Up (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Invert Dn (ft)	Cover Dn (ft)	HGL Dn (ft)	Line Length (ft)	Line Size (in)	Line Slope (%)	n-val Pipe	Tc (min)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line ID
1	127A-127	919.18	915.10	3.08	915.74	915.00	911.90	2.10	912.28	76.932	12	4.16	0.012	5.0	2.24	7.87	6.20	127A-127

Project File: 127-127a_Nathan.stm | Number of lines: 1 | Date: 11/11/2013

NOTES: ** Critical depth

REACH

Line No.	Line ID	Gnd/Rim El Up (ft)	Invert Up (ft)	Cover Up (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Invert Dn (ft)	Cover Dn (ft)	HGL Dn (ft)	Line Length (ft)	Line Size (in)	Line Slope (%)	n-val Pipe	Tc (min)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line ID
1	129-128	918.70	912.40	4.55	913.68	914.46	911.90	0.81	912.96	142.728	21	0.35	0.012	36.4	8.25	10.16	4.88	129-128
2	130-129	919.05	912.79	4.51	914.05	918.70	912.50	4.45	913.83	96.705	21	0.30	0.012	36.0	7.82	9.40	4.11	130-129
3	131-130	919.30	913.33	4.22	914.46	919.05	912.89	4.41	914.19	146.606	21	0.30	0.012	35.3	6.80	9.40	3.84	131-130
4	132-131	919.80	913.78	4.27	914.82	919.30	913.43	4.12	914.60	117.590	21	0.30	0.012	34.8	6.06	9.36	3.81	132-131
5	133-132	920.13	915.50	3.38	916.34	919.80	914.90	3.65	915.74	143.405	15	0.42	0.012	5.0	3.61	4.52	4.09	133-132
6	KiteC-132	917.00	914.27	1.23	915.33	919.80	913.88	4.42	915.21	130.746	18	0.30	0.012	34.0	3.87	6.21	2.62	KiteC-132

Project File: 133-128_Nathan Duke Option.stm | Number of lines: 6 | Date: 11/11/2013

NOTES: ** Critical depth

REACH

Line No.	Line ID	Gnd/Rim El Up (ft)	Invert Up (ft)	Cover Up (ft)	HGL Up (ft)	Gnd/Rim El Dn (ft)	Invert Dn (ft)	Cover Dn (ft)	HGL Dn (ft)	Line Length (ft)	Line Size (in)	Line Slope (%)	n-val Pipe	Tc (min)	Flow Rate (cfs)	Capac Full (cfs)	Vel Ave (ft/s)	Line ID
1	137-138	920.61	915.25	3.86	916.18 j	914.90	912.50	0.90	913.46	169.394	18	1.62	0.012	5.0	5.83	14.50	4.97	137-138

Project File: 137-138_Nathan.stm | Number of lines: 1 | Date: 11/11/2013

NOTES: ** Critical depth

NODE

Line No.	Inlet ID	Gnd/Rim El Up (ft)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Total Area (ac)	Total CxA	Tc (min)	i Sys (in/hr)	Total Runoff (cfs)	Inlet ID
1	102	919.00	0.18	0.72	6.0	5.92	0.77	30.91	16.35	43.1	2.58	42.24	102
2	na1	919.50	0.00	0.00	0.0	0.00	0.00	30.73	16.22	42.8	2.60	42.11	na1
3	103	919.33	0.30	0.74	6.0	5.92	1.31	30.73	16.22	42.7	2.60	42.20	103
4	104	919.20	0.32	0.72	6.0	5.92	1.36	30.43	16.00	42.3	2.62	41.85	104
5	105	919.40	0.31	0.68	6.0	5.92	1.25	30.11	15.77	41.9	2.63	41.53	105
6	106	919.60	0.41	0.79	6.0	5.92	1.92	29.80	15.56	41.5	2.65	41.21	106
7	107	919.40	0.58	0.69	6.0	5.92	2.37	29.39	15.23	41.1	2.67	40.63	107
8	107a	920.90	0.00	0.00	0.0	0.00	0.00	28.81	14.83	40.6	2.69	39.86	107a
9	107b	920.30	0.00	0.00	0.0	0.00	0.00	28.81	14.83	40.6	2.69	39.87	107b
10	108a	920.30	0.00	0.00	0.0	0.00	0.00	28.81	14.83	40.6	2.69	39.90	108a
11	107d	920.30	0.00	0.00	0.0	0.00	0.00	28.51	14.62	40.6	2.69	39.34	107d
12	107e	920.30	0.00	0.00	0.0	0.00	0.00	28.51	14.62	40.5	2.69	39.35	107e
13	109	920.87	0.00	0.00	0.0	0.00	0.00	28.51	14.62	40.0	2.72	39.69	109
14	109b	920.43	0.26	0.75	6.0	5.92	1.15	2.01	1.37	7.5	5.64	7.71	109b
15	108	920.33	0.30	0.72	6.0	5.92	1.28	0.30	0.22	6.0	5.92	1.28	108
16	110	921.33	0.06	0.51	6.0	5.92	0.18	0.37	0.19	6.0	5.92	1.12	110
17	110a	916.55	0.31	0.51	5.0	6.12	0.97	0.31	0.16	5.0	6.12	0.97	110a
18	109a	920.50	26.50	0.50	40.0	2.72	38.19	26.50	13.25	40.0	2.72	35.99	109a
19	118	919.50	0.53	0.70	6.0	5.92	2.20	1.38	0.98	6.7	5.79	5.69	118
20	117	919.90	0.85	0.72	6.0	5.92	3.62	0.85	0.61	6.0	5.92	3.62	117

Project File: Revised Box Culvert.stm | Number of lines: 20 | Date: 11/12/2013

NOTES: Intensity = 337.41 / (Inlet time + 28.70) ^ 1.14 -- Return period = 10 Yrs. ; ** Critical depth

NODE

Line No.	Inlet ID	Gnd/Rim El Up (ft)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Total Area (ac)	Total CxA	Tc (min)	i Sys (in/hr)	Total Runoff (cfs)	Inlet ID
1	112a	919.50	0.00	0.00	0.0	0.00	0.00	1.81	1.17	9.5	5.31	6.23	112a
2	112	919.45	0.36	0.73	5.0	6.12	1.61	1.81	1.17	8.9	5.41	6.35	112
3	113	920.90	0.00	0.00	0.0	0.00	0.00	1.45	0.91	8.3	5.51	5.02	113
4	116	919.60	0.48	0.60	5.0	6.12	1.76	0.84	0.52	7.1	5.72	2.96	116
5	111a	920.50	0.00	0.00	0.0	0.00	0.00	0.36	0.23	5.9	5.93	1.37	111a
6	111	919.84	0.36	0.64	5.0	6.12	1.41	0.36	0.23	5.0	6.12	1.41	111
7	114	919.50	0.31	0.64	5.0	6.12	1.21	0.61	0.39	5.6	6.00	2.36	114
8	115	919.50	0.30	0.65	5.0	6.12	1.19	0.30	0.20	5.0	6.12	1.19	115

Project File: 13110_Storm 112 north new.stm | Number of lines: 8 | Date: 11/12/2013

NOTES: Intensity = 337.41 / (Inlet time + 28.70) ^ 1.14 -- Return period = 10 Yrs. ; ** Critical depth

NODE

Line No.	Inlet ID	Gnd/Rim El Up (ft)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Total Area (ac)	Total CxA	Tc (min)	i Sys (in/hr)	Total Runoff (cfs)	Inlet ID
1	120	918.33	0.06	0.79	5.0	6.12	0.29	2.92	2.05	7.7	5.60	11.48	120
2	121	917.90	0.35	0.68	5.0	6.12	1.46	2.86	2.00	7.3	5.67	11.35	121
3	122	917.80	0.83	0.65	5.0	6.12	3.30	2.51	1.77	6.7	5.78	10.21	122
4	123	918.00	0.58	0.71	5.0	6.12	2.52	1.68	1.23	5.8	5.95	7.30	123
5	124	918.10	1.10	0.74	5.0	6.12	4.98	1.10	0.81	5.0	6.12	4.98	124

Project File: 124-119_Nathan.stm | Number of lines: 5 | Date: 11/11/2013

NOTES: Intensity = 337.41 / (Inlet time + 28.70) ^ 1.14 -- Return period = 10 Yrs. ; ** Critical depth

NODE

Line No.	Inlet ID	Gnd/Rim El Up (ft)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Total Area (ac)	Total CxA	Tc (min)	i Sys (in/hr)	Total Runoff (cfs)	Inlet ID
1	126	920.03	0.33	0.79	5.0	6.12	1.60	0.33	0.26	5.0	6.12	1.60	126

Project File: 126-125_Nathan.stm | Number of lines: 1 | Date: 11/11/2013

NOTES: Intensity = 337.41 / (Inlet time + 28.70) ^ 1.14 -- Return period = 10 Yrs. ; ** Critical depth

NODE

Line No.	Inlet ID	Gnd/Rim El Up (ft)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Total Area (ac)	Total CxA	Tc (min)	i Sys (in/hr)	Total Runoff (cfs)	Inlet ID
1	127a	919.18	0.58	0.61	5.0	6.12	2.16	0.58	0.35	5.0	6.12	2.16	127a

Project File: 127-127a_Nathan.stm | Number of lines: 1 | Date: 11/12/2013

NOTES: Intensity = 337.41 / (Inlet time + 28.70) ^ 1.14 -- Return period = 10 Yrs. ; ** Critical depth

NODE

Line No.	Inlet ID	Gnd/Rim El Up (ft)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Total Area (ac)	Total CxA	Tc (min)	i Sys (in/hr)	Total Runoff (cfs)	Inlet ID
1	129	919.00	0.24	0.69	5.0	6.12	1.01	6.16	2.85	36.2	2.90	8.27	129
2	130	918.83	0.61	0.62	5.0	6.12	2.31	5.92	2.69	35.9	2.91	7.83	130
3	131	918.73	0.42	0.64	5.0	6.12	1.64	5.31	2.31	35.4	2.94	6.79	131
4	132	919.98	0.29	0.57	5.0	6.12	1.01	4.89	2.04	34.8	2.97	6.06	132
5	133	920.13	0.82	0.72	5.0	6.12	3.61	0.82	0.59	5.0	6.12	3.61	133
6	132a and KiteC	917.13	3.78	0.34	34.0	3.01	3.87	3.78	1.29	34.0	3.01	3.87	132a and KiteC

Project File: 133-128_Nathan.stm | Number of lines: 6 | Date: 11/12/2013

NOTES: Intensity = 337.41 / (Inlet time + 28.70) ^ 1.14 -- Return period = 10 Yrs. ; ** Critical depth

NODE

Line No.	Inlet ID	Gnd/Rim El Up (ft)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	i Inlet (in/hr)	Incr Q (cfs)	Total Area (ac)	Total CxA	Tc (min)	i Sys (in/hr)	Total Runoff (cfs)	Inlet ID
1	137	920.61	1.38	0.69	5.0	6.12	5.83	1.38	0.95	5.0	6.12	5.83	137

Project File: 137-138_Nathan.stm | Number of lines: 1 | Date: 11/11/2013

NOTES: Intensity = 337.41 / (Inlet time + 28.70) ^ 1.14 -- Return period = 10 Yrs. ; ** Critical depth