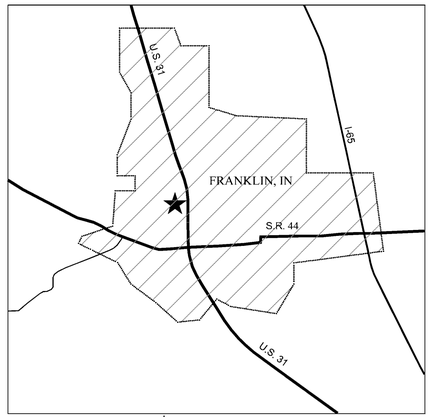
SITE CONSTRUCTION PLANS FOR

KROGER STORE J-979

KROGER MARKETPLACE
970 NORTH MORTON STREET
FRANKLIN, IN 46131

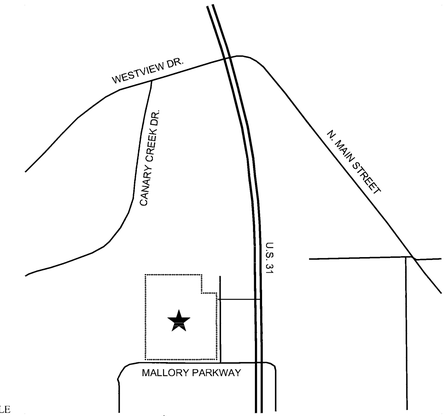
PLANS PREPARED FOR
THE KROGER COMPANY
5960 CASTLEWAY WEST DRIVE
INDIANAPOLIS, IN 46237
TELEPHONE: (317) 579-8393
CONTACT PERSON: ROSS BEYER
EMAIL: ROSS.BEYER@KROGER.COM

PLANS PREPARED BY
WEIHE ENGINEERS, INC.
10505 N. COLLEGE AVE.
INDIANAPOLIS, INDIANA 46280
TELEPHONE: (317) 846-6611
FAX: (317) 843-0546
CONTACT PERSON: JAMIE SHINNEMAN
EMAIL: SHINNEMANJ@WEIHE.NET



★ PROJECT LOCATION
AREA MAP

NO SCALE



★ PROJECT LOCATION
LOCATION MAP

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G1.02	ALTA ACSM LAND TITLE SURVEY
G1.03	ALTA ACSM LAND TITLE SURVEY
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C1.02	SITE PREPARATION AND SWPPP 1
C1.03	STORMWATER POLLUTION PREVENTION PLAN 2
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C1.07	SWPPP SPECIFICATIONS
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C4.01	PAVEMENT PLAN
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C6.02	DRAINAGE PLAN
C6.03	STORM SEWER STRUCTURE DATA TABLES
C6.04	STORM SEWER PLAN AND PROFILE
C6.05	STORM SEWER PLAN AND PROFILE
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C6.08	STORM SEWER PLAN AND PROFILE
C6.09	DRAINAGE DETAILS
C6.10	DRAINAGE DETAILS
C8.01	UTILITY PLAN
C8.02	UTILITY DETAILS
L1.01	LANDSCAPE PLAN
L1.02	LANDSCAPE PLAN
L2.01	LANDSCAPE DETAILS

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING CONSTRUCTION
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY AND COORDINATE CONSTRUCTION WITH ALL RESPECTIVE UTILITIES.
4. ALL QUANTITIES GIVEN ON THESE PRINTS, VERBALLY OR IN THE SCOPE OF WORK SECTION ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.
5. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH.
6. IN ADDITION, EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
7. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THIS PROJECT.
8. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS.
9. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
10. INDIANA STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS LATEST EDITION TO BE USED WITH THESE PLANS.
11. ANY FIELD TILES ENCOUNTERED DURING EXCAVATION SHALL BE REPAIRED AND CONNECTED TO NEW STORM SEWERS AND POSITIVE DRAINAGE PRESERVED.
12. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER THAT ALL LANDSCAPE REQUIREMENTS ARE MET AND CONFORM TO APPLICABLE LOCAL STANDARDS.
13. THE SITE DOES LIE IN A SPECIAL FLOOD HAZARD AREA 'X' AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL FLOOD INSURANCE PROGRAM, WHEN PLOTTED BY SCALE ON FLOOD INSURANCE RATE MAP #18081C0227 D, DATED AUGUST 2, 2007.
14. BEARINGS, DIMENSIONS AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS & PLAT FOR EXACT INFORMATION.
15. THIS SITE DOES NOT CONTAIN ANY WETLANDS AS SHOWN ON THE U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE; ONLINE MAPPER TOOL, NATIONAL WETLANDS INVENTORY MAP DATED 2014.

CITY OF FRANKLIN STANDARD NOTES

1. OWNER OR CONTRACTOR WILL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE. CONTACT THE CITY OF FRANKLIN ENGINEERING AND PLANNING DEPARTMENTS PRIOR TO ANY CONSTRUCTION ON THE SITE BEING STARTED TO SCHEDULE A MEETING TIME AND PLACE. THE INSPECTING ENGINEER WILL BE ASSIGNED AT THIS MEETING. CONTRACTOR ATTENDANCE IS MANDATORY.
2. THE DESIGN & CONSTRUCTION SHALL COMPLY WITH THE CURRENT CITY OF FRANKLIN STORMWATER DESIGN & CONSTRUCTION SPECIFICATIONS AND STANDARD CONSTRUCTION DETAILS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.
3. THESE PLANS COMPLY WITH ALL ADA REQUIREMENTS.

LAND DESCRIPTION

SURVEYED LEGAL DESCRIPTION

ORIGINAL SURVEYED DESCRIPTION

A PART OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 12 NORTH, RANGE 4 EAST OF THE SECOND PRINCIPAL MERIDIAN, CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF SAID QUARTER PROCEED THENCE SOUTH 00 DEGREES 11 MINUTES 50 SECONDS EAST ALONG THE EAST LINE OF SAID QUARTER 766.97 FEET TO THE NORTH LINE OF THE LANDS OF THE NATIONAL BANK OF GREENWOOD AS DESCRIBED IN DEED BOOK 245, PAGE 193 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY; PROCEED THENCE ALONG THE NORTH LINE OF SAID BANK LANDS SOUTH 88 DEGREES 00 MINUTES 40 SECONDS WEST 317.73 FEET TO THE WEST LINE OF SAID BANK LANDS; THENCE SOUTH 05 DEGREES 27 MINUTES 00 SECONDS EAST ALONG SAID WEST LINE 200.35 FEET TO THE NORTHWEST CORNER OF THE LANDS OF CAROLYN ROGERS AS DESCRIBED IN INSTRUMENT NUMBER 2013003799 IN SAID RECORDER'S OFFICE, MARKED BY A REBAR WITH CAP STAMPED ESW LS20200016" (HEREAFTER REFERRED TO AS ESW REBAR) THENCE SOUTH 01 DEGREES 03 MINUTES 40 SECONDS EAST ALONG THE WEST LINE OF SAID ROGERS LANDS 150.02 FEET TO THE SOUTHWEST CORNER OF SAID ROGERS LANDS, MARKED BY AN ESW REBAR; THENCE NORTH 88 DEGREES 11 MINUTES 02 SECONDS EAST ALONG THE SOUTH LINE OF SAID ROGERS LANDS 156.47 FEET TO THE SOUTHWEST CORNER OF LOT 1 OF PRESNELL/MORTON STREET MINOR SUBDIVISION AS RECORDED IN PLAT CABINET C, SLIDE 640 IN SAID RECORDER'S OFFICE; THENCE SOUTH 00 DEGREES 20 MINUTES 13 SECONDS WEST ALONG THE WEST LINE OF LOT 2 OF CANARY CREEK SHOPPING CENTER REPLAT OF LOTS 2 & 3, THE PLAT OF WHICH IS RECORDED IN PLAT CABINET D, SLIDE 324A-B IN SAID RECORDER'S OFFICE 208.08 FEET TO THE POINT OF BEGINNING, MARKED BY A 5/8 INCH DIAMETER REBAR WITH CAP STAMPED "BANNING ENG FIRM #0060" (HEREAFTER REFERRED TO AS BANNING REBAR); THENCE CONTINUE SOUTH 00 DEGREES 20 MINUTES 13 SECONDS WEST 135.06 FEET TO THE SOUTHWEST CORNER OF LOT 3 IN CANARY CREEK SHOPPING CENTER REPLAT OF LOTS 2 & 3 AS RECORDED IN PLAT CABINET D, SLIDE 324A-B, MARKED BY A MAGSPIKE WITH WASHER STAMPED "BANNING ENG FIRM #0060"; THENCE SOUTH 89 DEGREES 38 MINUTES 55 SECONDS EAST ALONG THE SOUTH LINE OF SAID LOT 3 A DISTANCE OF 249.77 FEET TO THE WESTERN RIGHT OF WAY FOR US HIGHWAY 31, MARKED BY A BANNING BEHAR; THENCE SOUTH 00 DEGREES 04 MINUTES 24 SECONDS WEST ALONG SAID RIGHT OF WAY 50.00 FEET TO THE NORTHEAST CORNER OF LOT S IN CANARY CREEK SHOPPING CENTER, SECTION THREE AS RECORDED IN PLAT CABINET B, SLIDE 139A-B, MARKED BY A MAGSPIKE WITH WASHER STAMPED "BANNING ENG FIRM #0060"; THENCE NORTH 89 DEGREES 38 MINUTES 55 SECONDS WEST ALONG THE NORTH LINE OF SAID LOT S A DISTANCE OF 250.00 FEET TO AN IRON REBAR WITH SMASHED CAP; THENCE SOUTH 00 DEGREES 21 MINUTES 05 SECONDS WEST ALONG THE WEST LINE AND ITS EXTENSION OF SAID LOT S A DISTANCE OF 489.94 FEET TO THE NORTHERN RIGHT OF WAY FOR MALLORY PARKWAY; THENCE NORTH 89 DEGREES 39 MINUTES 20 SECONDS WEST ALONG SAID RIGHT OF WAY 726.17 FEET TO THE EASTERN LINE OF THE LANDS OF CC CINEMAS, LLC AS DESCRIBED IN INSTRUMENT NUMBER 2006033562 IN SAID RECORDER'S OFFICE; THENCE NORTH 00 DEGREES 20 MINUTES 45 SECONDS EAST ALONG SAID EAST LINE 675.00 FEET TO A BANNING REBAR; THENCE SOUTH 89 DEGREES 39 MINUTES 20 SECONDS EAST 726.19 FEET TO THE POINT OF BEGINNING, AND CONTAINING 11.540 ACRES OF LAND, MORE OR LESS.

BENCHMARK INFORMATION

BENCHMARK INFORMATION
DNR TBM CD 1, 1988 IN JOHNSON COUNTY, FRANKLIN QUADRANGLE, IN THE NE ¼ OF SECTION 10, TOWNSHIP 12 NORTH, RANGE 4 EAST, 2ND P.M.; AT FRANKLIN; AT THE U.S. 31 BRIDGE OVER CANARY DITCH; SET IN THE TOP OF THE SOUTHEAST CONCRETE WINGWALL OF THE BRIDGE, 25.8 FEET EAST OF THE CENTERLINE OF THE BRIDGE, 0.6 FOOT NORTH OF THE SOUTH END OF THE WINGWALL 1.0 FOOT BELOW THE LEVEL OF THE ROAD; A "PK" NAIL SET IN A DRILL HOLE, INSIDE A CUT CIRCLE.
2ND ORDER ELEVATION
REVISED ELEVATION 229.240 METERS N.G.V.D. 1929
752.099 FEET N.G.V.D. 1929 (751.693 FEET N.A.V.D.1988)

TBM #1 ELEV: 745.81 CUT SQUARE ON TOP ON A CONCRETE LIGHT BASE ON THE WEST EDGE OF CONCRETE, DUE WEST OF THE SOUTHWEST CORNER OF THE SHERWIN WILLIAMS BUILDING SQUARE IS APPROXIMATELY 15 FEET NORTHEAST OF A DRIVE STUB BEHIND THE BUILDING.

TBM #2 ELEV: 747.77 CUT SQUARE IN THE NORTHWEST CORNER OF A CONCRETE WATER VAULT ON THE EAST SIDE OF THE MIDDLE KOHL'S ENTRANCE LOCATED ON THE SOUTH SIDE OF MALLORY PARKWAY.

TBM #3 ELEV: 742.94 CUT SQUARE IN THE SOUTHEAST CORNER OF A CONCRETE WATER VAULT DUE EAST OF THE SOUTHEAST CORNER OF CANARY CREEK CINEMA BUILDING.

OPERATING AUTHORITIES

CITY OF FRANKLIN PLANNING
70 E. MONROE STREET
FRANKLIN, IN 46131
PLANNING DIRECTOR: JOANNA MYERS
BUILDING OFFICIAL: DAVID PARSLEY
P. 317.736.3631

CITY OF FRANKLIN ENGINEERING
70 E. MONROE STREET
FRANKLIN, IN 46131
CITY ENGINEER: TRAVIS UNDERHILL
BUILDING OFFICIAL: DAVID PARSLEY
P. 317.736.3631

CITY OF FRANKLIN BUILDING
70 E. MONROE STREET
FRANKLIN, IN 46131
BUILDING OFFICIAL: DAVID PARSLEY
P. 317.736.3631

CITY OF FRANKLIN - SANITARY DEPT.
796 S. STATE STREET
FRANKLIN, IN 46131
SUPERINTENDENT: RICK LITTLETON
TEL.: 317.736.3640

CITY OF FRANKLIN - STORMWATER DEPT.
2851 N. MORTON STREET
FRANKLIN, IN 46131
MS4 COORDINATOR: RICHARD DEWITT
TEL.: 888.736.3640 X1280

CITY OF FRANKLIN - FIRE DEPT.
1800 THORNBURG LANE
FRANKLIN, IN 46131
TEL.: 317.736.3650

JOHNSON COUNTY SURVEYOR
COURTHOUSE ANNEX BUILDING
86 W. COURT STREET
FRANKLIN, IN 46131
TEL.: 317.7736.3933

JOHNSON COUNTY HIGHWAY DEPT
1051 HOSPITAL ROAD
FRANKLIN, IN 46131
TEL.: 317.346.4630

JOHNSON COUNTY SOIL & WATER
550 E. JEFFERSON STREET
FRANKLIN, IN 46131
TEL.: 317.736.9540

JOHNSON COUNTY HEALTH DEPARTMENT
COURTHOUSE ANNEX BUILDING
86 W. COURT STREET
FRANKLIN, IN 46131
TEL.: 317.346.4365

DUKE ENERGY
TROY BURTON
TEL.: 317.736.2017

INDIANA AMERICAN WATER
TROY BRYANT
TEL.: 317.881.3385 X2

COMCAST
SCOTT CRIPE
TEL.: 812.355.7814

VECTREN GAS
DAVE CATRON
317.736.2925

EMBARQ
LARRY TALBOT
TEL.: 317.736.4863

DEPARTMENT OF PUBLIC WORKS
70 EAST MONROE STREET
FRANKLIN, IN 46131
(317) 736-3631

INDIANA STATE DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS LATEST EDITION TO BE USED
WITH THESE PLANS.

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

811 Know what's below. Call before you dig.
Within Indiana Call
811 or 800-382-5544
24 Hours a Day, 7 Days a Week.
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	SJS

PROJECT NO. W14-0460
DWG NAME: w14046-C001 title.dwg
DESIGNED BY: RJW/SAM
DRAWN BY: RJW/SAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
TITLE SHEET
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
G0.01
PROJECT NO.
W14-0460

LOCK ON: 10/1/2014\W14046\Engineering\design\cones\w140460-C001 title.dwg
LAYOUT: G0.01
LAST TIME: February 12, 2015 - 7:25am
LAYTIME: 0 days
LAYTIP BY: sdhoffb

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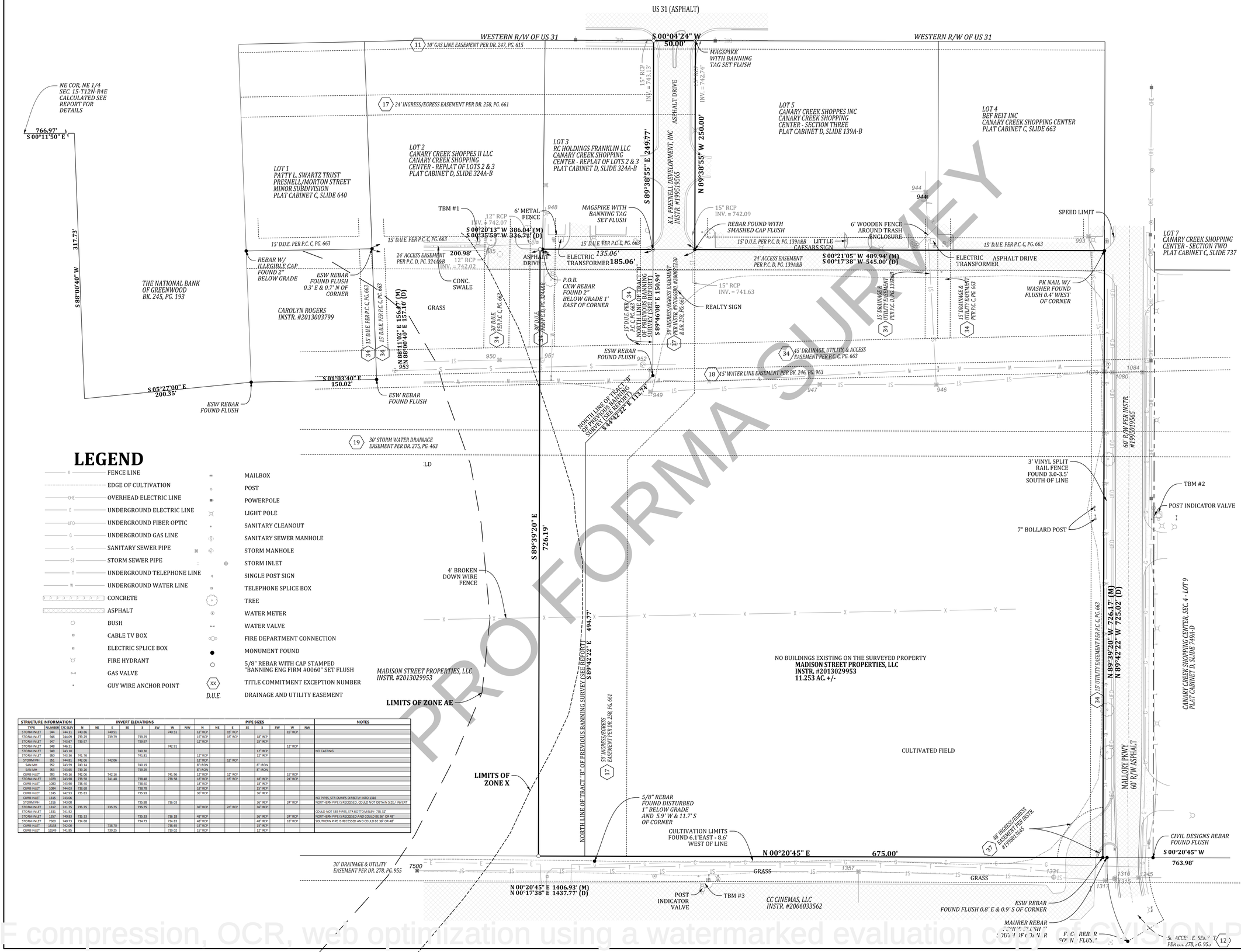


LEGEND

FENCE LINE	MAILBOX
EDGE OF CULTIVATION	POST
OVERHEAD ELECTRIC LINE	POWERPOLE
UNDERGROUND ELECTRIC LINE	LIGHT POLE
UNDERGROUND FIBER OPTIC	SANITARY CLEANOUT
UNDERGROUND GAS LINE	SANITARY SEWER MANHOLE
SANITARY SEWER PIPE	STORM MANHOLE
STORM SEWER PIPE	STORM INLET
UNDERGROUND TELEPHONE LINE	SINGLE POST SIGN
UNDERGROUND WATER LINE	TELEPHONE SPLICE BOX
CONCRETE	TREE
ASPHALT	WATER METER
BUSH	WATER VALVE
CABLE TV BOX	FIRE DEPARTMENT CONNECTION
ELECTRIC SPLICE BOX	MONUMENT FOUND
FIRE HYDRANT	5/8" REBAR WITH CAP STAMPED "BANNING ENG FIRM #0060" SET FLUSH
GAS VALVE	TITLE COMMITMENT EXCEPTION NUMBER
GUY WIRE ANCHOR POINT	D.U.E. DRAINAGE AND UTILITY EASEMENT

STRUCTURE INFORMATION			INVERT ELEVATIONS								PIPE SIZES							NOTES
TYPE	NUMBER	T/C ELEV	N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	NW	
STORM INLET	944	744.11	740.86		740.51				740.51		12" RCP		15" RCP				15" RCP		
STORM INLET	946	744.09	739.29		739.79		739.29				15" RCP		15" RCP		18" RCP				
STORM INLET	947	743.67	739.97				739.97				12" RCP				15" RCP				
STORM INLET	948	746.31							742.91								12" RCP		
STORM INLET	949	743.10				740.30									12" RCP				NO CASTING
STORM INLET	950	743.36	741.76				741.81				12" RCP				12" RCP				
STORM MH	951	744.81	742.06		742.06						12" RCP		12" RCP						
SAN MH	952	743.59	740.14				740.19				8" IRON				8" IRON				
SAN MH	953	743.65	739.26				739.29				8" IRON				8" IRON				
CURB INLET	993	745.16	742.06		742.16				741.96		12" RCP		12" RCP				15" RCP		
STORM INLET	1079	743.98	738.58		741.48		738.48		738.58		18" RCP		15" RCP		18" RCP		24" RCP		
CURB INLET	1080	743.90	738.40				738.40				18" RCP				18" RCP				
CURB INLET	1084	744.03	738.68				738.78				18" RCP				15" RCP				
CURB INLET	1245	742.93	735.83				735.93				36" RCP				36" RCP				
CURB INLET	1315	743.06																	NO PIPES, STR DUMPS DIRECTLY INTO 1316
STORM MH	1316	743.08					735.88		736.03						36" RCP		24" RCP		NORTHERN PIPE IS RECESSED, COULD NOT OBTAIN SIZE / INVERT
STORM INLET	1317	741.75	736.75		736.75		736.75				36" RCP		24" RCP		36" RCP				
STORM INLET	1331	741.52																	COULD NOT SEE PIPES, STR BOTTOM ELEV. 736.32
STORM INLET	1357	740.83	735.93				735.93		736.18		48" RCP				36" RCP		24" RCP		NORTHERN PIPE IS RECESSED AND COULD BE 36" OR 48"
STORM INLET	7500	740.73	734.68				734.73		734.83		48" RCP				48" RCP		18" RCP		SOUTHERN PIPE IS RECESSED AND COULD BE 36" OR 48"
CURB INLET	15138	742.00			738.70				738.65		15" RCP				15" RCP				
CURB INLET	15149	741.85			739.25				739.02		15" RCP				12" RCP				

PROFORMA SURVEY

PDF compression, OCR, web optimization using a watermarked evaluation copy of CVISION PDFCompressor

Sym.	Revisions	Date

Designed:
Drawn: JTH
Checked: BLH
Scale: 1"=40'
Date: 1-9-2015

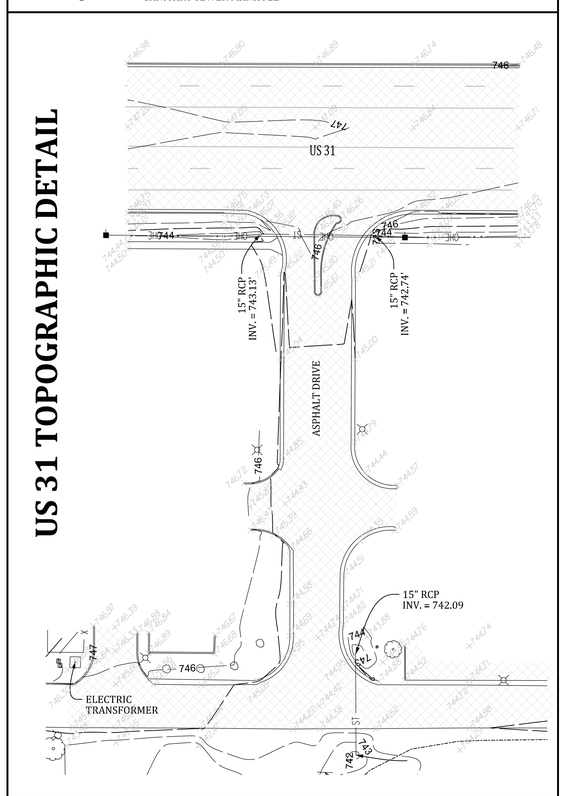
ALTA SURVEY PREPARED FOR KROGER CO
BOUNDARY PAGE
SEC. 15-T12N-R4E
FRANKLIN, JOHNSON COUNTY, INDIANA

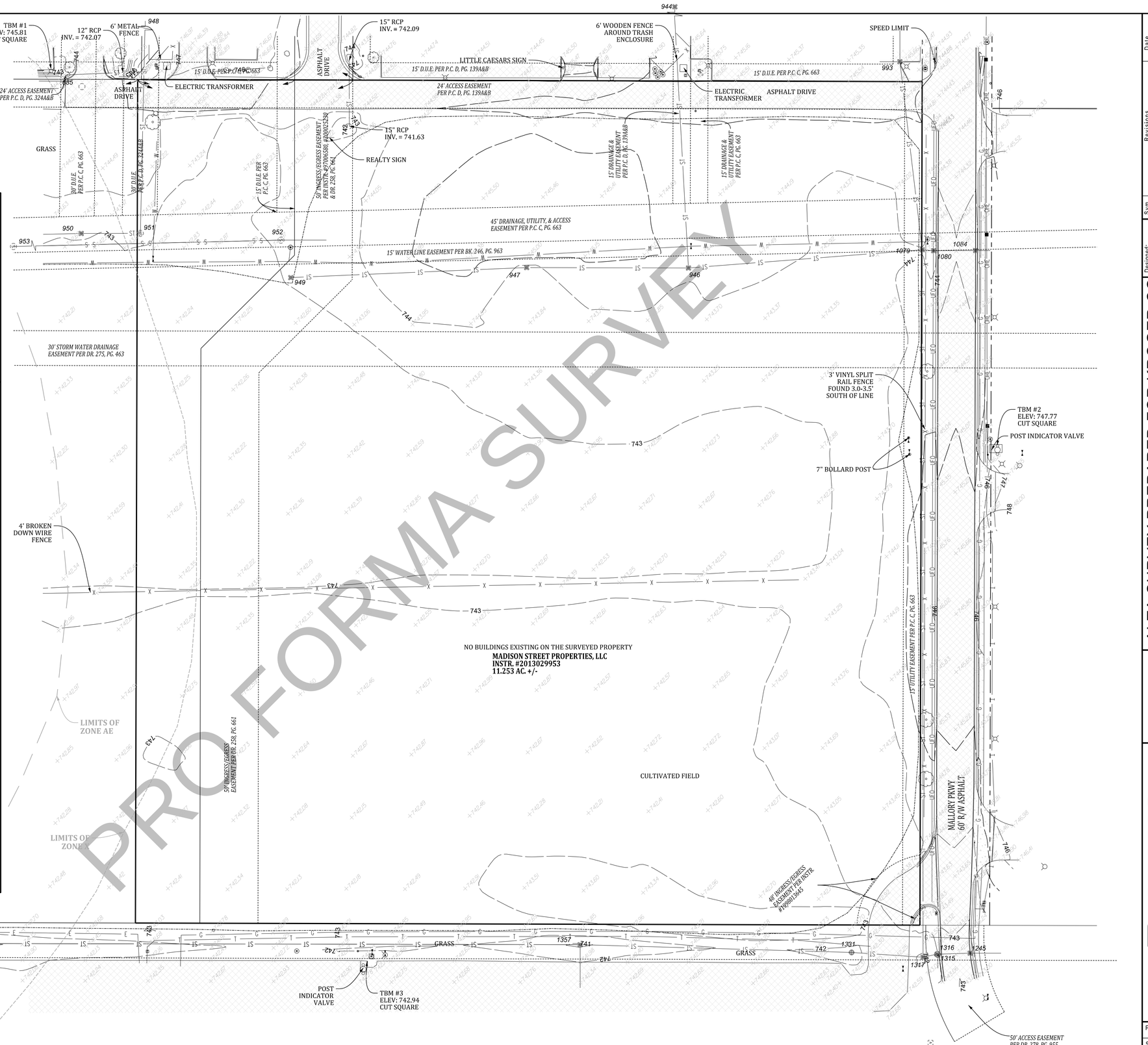
BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46168
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

Project No: 14250K
Sheet No:

LEGEND

- FENCE LINE
- EDGE OF CULTIVATION
- OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND GAS LINE
- SANITARY SEWER PIPE
- STORM SEWER PIPE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND WATER LINE
- CONCRETE
- ASPHALT
- BUSH
- CABLE TV BOX
- ELECTRIC SPLICE BOX
- FIRE HYDRANT
- GAS VALVE
- GUY WIRE ANCHOR POINT
- MAILBOX
- POST
- POWERPOLE
- LIGHT POLE
- SANITARY CLEANOUT
- SANITARY SEWER MANHOLE
- D.U.E. DRAINAGE AND UTILITY EASEMENT
- STORM MANHOLE
- STORM INLET
- SINGLE POST SIGN
- TELEPHONE SPLICE BOX
- TREE
- WATER METER
- WATER VALVE
- FIRE DEPARTMENT CONNECTION
- SPOT ELEVATION





PRO FORMA SURVEY

SEE SHEET 1 FOR STRUCTURE DATA TABLE

Revisions	Sym.	Date

Designed:
Drawn: JTH
Checked: BLH
Scale: 1"=40'
Date: 1-1-2015

ALTA SURVEY PREPARED FOR KROGER CO
EXISTING TOPOGRAPHY PAGE
SEC. 15-T12N-R4E
FRANKLIN, JOHNSON COUNTY, INDIANA

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
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WEB: www.BanningEngineering.com

Project No: 14250K
Sheet No: 2 OF 3

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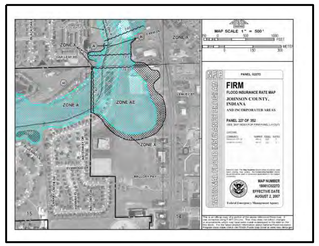

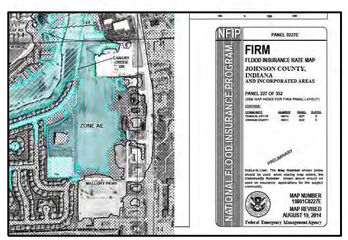

Parcel Legal Description
Per Title Work

PARCEL I:

A part of the Northeast Quarter of Section 15, and a part of the Northwest Quarter of Section 14, all in Township 12 North, Range 4 East of the Second Principal Meridian, City of Franklin, Johnson County, Indiana, more particularly described as follows:

Commencing at the Northeast corner of said quarter section; thence South 0 degrees 11 minutes 50 seconds East on and along the east line thereof a distance of 766.97 feet; thence South 88 degrees 00 minutes 40 seconds West a distance of 317.73 feet to the point of beginning of this description; thence South 05 degrees 27 minutes 00 seconds East a distance of 200.35 feet; thence North 88 degrees 00 minutes 40 seconds East a distance of 157.10 feet; thence South 0 degrees 03 minutes 40 seconds East a distance of 150.02 feet; thence South 0 degrees 35 minutes 59 seconds West a distance of 336.71 feet; thence South 0 degrees 17 minutes 38 seconds West a distance of 545.00 feet to a point on the North right-of-way line of Mallory Parkway; thence North 89 degrees 42 minutes 22 seconds West a distance of 725.02 feet; thence North 0 degrees 17 minutes 38 seconds East a distance of 1437.77 feet; thence North 88 degrees 00 minutes 40 seconds East a distance of 525.63 feet; thence South 05 degrees 27 minutes 00 seconds East a distance of 210.00 feet to the point of beginning, containing 22.66 acres, more or less.

LESS AND EXCEPT, that portion of the above-described property conveyed to S|SK Corporation, an Indiana corporation, by Corporate Warranty Deed dated July 26, 1994 and recorded July 26, 1994 as Instrument No. 94017262, in Deed Record 277, page 744, described as follows:

Part of the Northeast Quarter of Section 15, Township 12 North, Range 4 East of the Second Principal Meridian, Franklin Township, Johnson County, Indiana, described as follows: Commencing at the Northeast corner of the said Quarter Section; thence South 00 degrees 11 minutes 50 seconds East on and along the East line thereof 967.05 feet; thence South 88 degrees 00 minutes 40 seconds West 142.28 feet to the Point of Beginning of this described tract; thence continuing South 88 degrees 00 minutes 40 seconds West 157.10 feet to the Southwest corner of a tract described in Deed Record No. 245, page 193; in the Office of the Recorder of Johnson County, Indiana; thence South 01 degrees 03 minutes 40 seconds East 150.02 feet; thence North 88 degrees 00 minutes 40 seconds East 157.10 feet; thence North 01 degree 03 minutes 40 seconds West 150.02 feet to the Point of Beginning.

PARCEL III:

A part of the Northeast Quarter of Section 15, and a part of the Northwest Quarter of Section 14, all in Township 12 North, Range 4 East of the Second Principal Meridian, City of Franklin, Johnson County, Indiana, more particularly described as follows:

Commencing at the Northeast corner of said quarter section; thence South 0 degrees 11 minutes 50 seconds East on and along the east line thereof a distance of 766.97 feet; thence South 88 degrees 00 minutes 40 seconds West a distance of 317.73 feet; thence South 05 degrees 27 minutes 00 seconds East a distance of 200.35 feet; thence North 88 degrees 00 minutes 40 seconds East a distance of 405.10 feet to a point on the West right-of-way of U.S. Highway Number 31; thence Southerly on and along said West right-of-way being a curve to the right with a radius of 6,303.32 feet an arc distance of 224.07 feet and subtended by a chord bearing South 0 degrees 42 minutes 55 seconds East a distance of 224.07 feet; thence South 0 degrees 17 minutes 38 seconds West on and along said West right-of-way a distance of 272.53 feet to the Point of Beginning of this description; thence continuing along said West right-of-way South 0 degrees 17 minutes 38 seconds West a distance of 50.00 feet; thence North 89 degrees 42 minutes 22 seconds West a distance of 400.00 feet; thence North 0 degrees 17 minutes 38 seconds East a distance of 50.00 feet; thence South 89 degrees 42 minutes 22 seconds East a distance of 400.00 feet to the Point of Beginning,

EXCEPT THEREFROM any part lying with Parcel I described herein.

Surveyed Legal Description
Original Surveyed Description

A part of the Northeast Quarter of Section 15, Township 12 North, Range 4 East of the Second Principal Meridian, City of Franklin, Johnson County, Indiana, more particularly described as follows:

Commencing at the northeast corner of said quarter proceed thence South 00 degrees 11 minutes 50 seconds East along the east line of said quarter 766.97 feet to the north line of the lands of The National Bank of Greenwood as described in Deed Book 245, Page 193 in the Office of the Recorder of Johnson County; proceed thence along the north line of said Bank lands South 88 degrees 00 minutes 40 seconds West 317.73 feet to the west line of said Bank lands; thence South 05 degrees 27 minutes 00 seconds East along said west line 200.35 feet to the northwest corner of the lands of Carolyn Rogers as described in Instrument Number 2013003799 in said recorder's office, marked by a rebar with cap stamped "ESW LS2020001б" (hereafter referred to as ESW rebar); thence South 01 degrees 03 minutes 40 seconds East along the west line of said Rogers lands 150.02 feet to the southwest corner of said Rogers lands, marked by an ESW rebar; thence North 88 degrees 11 minutes 02 seconds East along the south line of said Rogers lands 156.47 feet to the southwest corner of Lot 1 of Presnell/Morton Street Minor Subdivision as recorded in Plat Cabinet C, Slide 640 in said recorder's office; thence South 00 degrees 20 minutes 13 seconds West along the west line of Lot 2 of Canary Creek Shopping Center Replat of Lots 2 & 3, the plat of which is recorded in Plat Cabinet D, Slide 324A-B in said recorder's office 200.98 feet to the POINT OF BEGINNING, marked by a 5/8 inch diameter rebar with cap stamped "Banning Eng Firm #0060" (hereafter referred to as Banning Rebar); thence continue South 00 degrees 20 minutes 13 seconds West 135.06 feet to the southwest corner of Lot 3 in Canary Creek Shopping Center Replat of Lots 2 & 3 as recorded in Plat Cabinet D, Slide 324A-B, marked by a magspike with washer stamped "Banning Eng Firm #0060"; thence South 89 degrees 38 minutes 55 seconds East along the south line of said Lot 3 a distance of 249.77 feet to the western right of way for US Highway 31, marked by a Banning Rebar; thence South 00 degrees 04 minutes 24 seconds West along said right of way 50.00 feet to the northeast corner of Lot 5 in Canary Creek Shopping Center, Section Three as recorded in Plat Cabinet D, Slide 139A-B, marked by a magspike with washer stamped "Banning Eng Firm #0060"; thence North 89 degrees 38 minutes 55 seconds West along the north line of said Lot 5 a distance of 250.00 feet to an iron rebar with smashed cap; thence South 00 degrees 21 minutes 05 seconds West along the west line and its extension of said Lot 5 a distance of 489.94 feet to the northern right of way for Mallory Parkway; thence North 89 degrees 39 minutes 20 seconds West along said right of way 726.17 feet to the eastern line of the lands of CC Cinemas, LLC as described in Instrument Number 2006033562 in said recorder's office; thence North 00 degrees 20 minutes 45 seconds East along said east line 675.00 feet to a Banning Rebar; thence South 89 degrees 39 minutes 20 seconds East 726.19 feet to the POINT OF BEGINNING, and containing 11.540 acres of land, more or less

Zoning Standards
Mixed-Use: Community Center (MXC)

Minimum Lot Area:	10,000 sq. ft.
Maximum Lot Area:	10 Acres
Minimum Lot Width (at setback):	80 feet
Maximum Lot Depth:	N/A
Maximum Lot Coverage (all hard surfaces):	75%
Minimum Front Yard Primary Structure Setback:	50 feet (US 31) 20 feet (Mallory Parkway)
Minimum Side Yard Primary Street Setback:	15 feet
Minimum Rear Yard Primary Street Setback:	20 feet
Minimum Living Area per Dwelling (primary structures):	650 sq. ft.
Minimum Ground Floor Living Area (primary structures):	N/A
Maximum Primary Structures per Lot:	1
Maximum Height (primary structures):	45 feet
Maximum Height (accessory structures):	25 feet

Benchmark Information:

DNR TBM CD 1, 1988
In Johnson County, Franklin Quadrangle, in the NE ¼of Section 10, Township 12 North, Range 4 East, 2nd P.M.; at Franklin; at the U.S. 31 bridge over Canary Ditch; set in the top of the southeast concrete wingwall of the bridge, 25.8 feet east of the centerline of the bridge, 0.6 foot north of the south end of the wingwall, 1.0 foot below the level of the road; a "PK"nail set in a drill hole, inside a cut circle.
2nd Order Elevation
REVISED ELEVATION
229.240 meters N.G.V.D. 1929
752.099 feet N.G.V.D. 1929 **(751.693 feet N.A.V.D.1988)**

TBM #1
ELEV: 745.81
Cut square on top on a concrete light base on the west edge of concrete, due west of the southwest corner of the Sherwin Williams Building. Square is approximately 15 feet northeast of a drive stub behind the building.

TBM #2
ELEV: 747.77
Cut square in the northwest corner of a concrete water vault on the east side of the middle Kohl's entrance located on the south side of Mallory Parkway.

TBM #3
ELEV: 742.94
Cut square in the southeast corner of a concrete water vault due east of the southeast corner of Canary Creek Cinema building.

NOTES:

A portion of the subject parcel appears to be classified as "Floodway Areas in Zone AE" and "Special Flood Hazard Areas Subject by the 1% Annual Chance Flood" (base flood elevations determined) per the Flood Insurance Rate Map (FIRM) for the Johnson County, Indiana, community panels 18081C0227D, effective date August 2, 2007, Federal Emergency Management Agency, Federal Insurance Administration. Per said FIRM, a portion of the property does lie within the boundary of a Special Flood Hazard Area. The limits of the floodplain and its floodway are shown on the survey plat as scaled from said FIRM. The accuracy of any flood hazard statement and the plotting of its limits is subject to map scale uncertainty. It should also be noted that during research for this survey a preliminary FIRM numbered 18081C0227E, revised August 19, 2014, showed the majority of the site classified as "Floodway Areas in Zone AE". This map is not approved and is subject to possible revisions.

Surveyed Acreage: 11.540 Ac. +/-

In providing this survey no attempt has been made to obtain or show data concerning the existence, size, depth, condition, capacity or location of any utility existing on the site, whether private, municipal or public owned except as shown otherwise.

Subsurface and environmental conditions were not surveyed, examined, or considered as part of this survey. No evidence or statement is made concerning the existence of underground or overhead conditions, containers or facilities that may affect the use or development of this property.

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As used herein, the word "certify"shall mean an expression of the Consultant's professional opinion to the best of its information, knowledge and belief, and does not constitute a warranty or guarantee by the Consultant.

This instrument was prepared by Brian L. Haggard, Banning Engineering, 853 Columbia Road, Suite 101, Plainfield, IN 46168.

I affirm, under the penalties of perjury, that I have taken a reasonable care to redact each Social Security number in the document, unless required by law. Brian L. Haggard

SURVEYOR'S REPORT

In accordance with Title 865, Article 1, Chapter 12 of the Indiana Administrative Code ("Rule 12"), the following observations, opinions, and comments are declared regarding the various uncertainties in the locations of lines and corners found or established this survey as a result of the uncertainties in reference monumentation; in record description and plats; in lines of occupation; and as introduced by random errors in measurements ("Relative Positional Accuracy"). There may be unwritten rights associated with these uncertainties. The client should assume there is an amount of uncertainty along any title line equal in magnitude to the discrepancy in the location of the lines of possession from the surveyed lines.

The purpose of this survey was to perform an ALTA survey on an original tract being a part of the parcel owned by Madison Street Properties and recorded as 2013029953 in the Office of the Recorder of Johnson County. Information and data used to perform this survey includes, but is not limited to, the following: the deeds and/or plats of the subject property and adjoining properties, and monuments and physical evidence found as shown on the plat of the survey.

Reference documents recovered, analyzed and used in this survey consisted of the following:

An ALTA/ACSM Land Title Survey for K.L. Presnell Development, Inc., performed on the surveyed property by Steven B. Williams Engineering and Surveying, certified by Eric Steven Williams, dated November 18, 2013, and having a project number of SW-520.

An ALTA/ACSM Survey for CC Cinemas, LLC., performed on the movie theater adjoining the surveyed property on the west by Maurer Surveying, Inc, certified by Paul Maurer, dated September 8, 2014, and having a project number of 1776-ALTA.

The plat for Presnell/Morton Street Minor Subdivision, performed and certified by Steven B. Williams, dated April 19, 1994, and recorded as Instrument Number 1994017260 in the Office of the Recorder of Johnson County.

The plat for Canary Creek Shopping Center, performed and certified by Steven B. Williams, dated November 4, 1994, and recorded as Instrument Number 1994024814 in the Office of the Recorder of Johnson County.

The plat for Canary Creek Shopping Center, Section Three, performed and certified by Steven B. Williams, dated August 10, 1998, and recorded as Instrument Number 1998022920 in the Office of the Recorder of Johnson County.

An ALTA/ACSM Land Title Situation Survey for Donato's Pizza, performed on Lot 3 of Canary Creek Shopping Center by The Schneider Corporation, certified by Richard H. Miller, dated October 4, 2000, and having a project number of 3282.001.

The replat for Canary Creek Shopping Center Lots 2 and 3, performed by Franklin Engineering Company, certified by Steven B. Williams, dated October 2, 2000, and recorded as Instrument Number 2000023358 in the Office of the Recorder of Johnson County.

The plat for Canary Creek Shopping Center, Section Four-Lot 9, performed by Civil Designs, certified by Bradley P. Ott, dated February 8, 2008, and recorded as Instrument Number 2008003841 in the Office of the Recorder of Johnson County.

The plat for Canary Creek Estates, Section Three, performed by Franklin Engineering Company, certified by Steven B. Williams, dated February 23, 1999, and recorded as Instrument Number 1999007428 in the Office of the Recorder of Johnson County.

An ALTA Survey on the parent tract performed by Banning Engineering, certified by Brian L. Haggard, dated _____, 2015, and recorded as Instrument Number _____ in the Office of the Recorder of Johnson County.

The surveyed deed bearing on the east line of the Northeast Quarter of Section 15, Township 12 North Range 4 East was held as a deed basis of bearing. The bearing was set as South 00 degrees 11 minutes 50 seconds East. This survey has been performed in US Survey Feet. All measurements on this survey are derived from grid coordinates. The elevations shown hereon were derived from GPS observation using NAVD 88 Datum from the VRS (Virtual Reference Station) Control Network established by Seiler Company. The elevations were established for this network by continuously streaming data through fixed reference stations ((CORS)-Continuously Operating Reference Station) distributed throughout the network area to a central server running Trimble GPSNet and RTKNet software. The system was also verified by locating DNR Benchmark T1988 which the published elevation matched the measured elevation within 0.2 feet. Differential leveling was performed between the control points prior to data collection to ensure vertical tolerances were met. All data collection was obtained using standard radial surveying techniques. All elevations shown hereon are relative to each other and should be used as such. Elevations on hard surfaces, natural surfaces, and structures are accurate to within 0.1 +/- feet. The contours shown were plotted based upon interpolation of spot elevations and other topographic information and are accurate to within one half of a contour interval.

There may be differences of deed dimensions versus measured dimensions along the title lines shown hereon and, likewise, survey markers may be found near, but not precisely at, some title corners. In cases where the magnitude of this difference is less than the Relative Positional Accuracy (stated below) and/or less than the uncertainty identified for the reference monumentation (discussed below), the difference may be considered insignificant and is shown only for the purposes of mathematical closure. Such differences that are greater than the Relative Positional Accuracy and/or the uncertainty in reference monumentation shall be considered worthy of notice and are therefore discussed further below.

The Relative Positional Accuracy (due to random errors in measurement) of the corners of the subject tract established this survey is within the specification for an Urban Survey (+/- 0.07 feet + 50 parts per million) as defined in IAC 865.

Various inconsistencies between the description and reference surveys, plats, and adjoining deeds were found as outlined in this report. The uncertainties as stated in this report led the undersigned to believe that a corrected description be prepared for this property to be used in future transfers of land.

The corners of the Northeast quarter of Section 15, Township 12 North, Range 4 East were used to perform this survey. A stone with a cut "X"on top was found 6 inches above grade at the center of section. A 1 inch diameter iron pin in concrete was found 4 inches below grade at the southwest corner of said section. A 1 inch diameter iron pin in concrete was found flush with the ground at the southwest corner of said section. These monuments were found in good, stable condition and per the references of the Johnson County Surveyor's Office and have an estimated uncertainty of 0.3 feet. No monument was found at the northeast corner of the Section and the County Surveyor did not have any perpetuation information on the corner. The Williams survey stated that a nail was found at the corner per common report, the Canary Creek Shopping Center plats did not call for a monument at the corner, and the WMT deed called for a spike found at the corner. The corner's location was reestablished by holding the geometry of the Williams survey and differed from holding the geometry of the Canary Creek Shopping Center Plats by 1 foot. The Williams survey location matched the adjoining deeds and surveyed deeds better than holding the location from the Canary Creek Shopping Center Plats. The estimated uncertainty of this corner is 2 feet. No information was recovered on the east quarter corner of the section and no monument was recovered in its area. The south line of the northeast quarter was established by holding the south line of the plat for Canary Creek Shopping Center, Section 4 and seemed to match the deed calls in the area. The east line of said quarter was established by holding the location of the line as shown on the Williams survey.

The location of the lines and corners of the subject tract are dependent upon the geometric data shown and the monuments found, accepted, and/or located with this survey. Those monuments shown with no variation were found to be within 0.3 feet of the computed position and it is my opinion that their variations do not need to be addressed. Additional monuments were located during the course of this survey that aided in the establishment of the parcel lines and were recovered as shown on the plat of survey.

Various FECO rebars and Maurer rebars were recovered along the corners of the CC Cinemas property and were found to measure within 0.2 feet of their locations shown on the survey. All corners found as shown on the Maurer survey were held this survey. The monuments found at the northeast, northwest, and southeast corners of Lot 1 of Presnell/Morton Street Minor Subdivision were found as shown on the above referenced plat. The plat states that iron reinforcing bars were set at the corners and the monuments found measured within 0.2 feet of their locations shown on the plat. The monuments were held as original monuments during this survey. The rebar found with a smashed cap at the northwest corner of Lot 5 of Canary Creek Shopping Center, Section Three is believed to be the same as shown on the above referenced plat. The plat states that a rebar was located at the corner and the Schneider survey held this rebar as an original monument. The rebar was also held this survey as an original monument. The Schneider survey found at the northeast corner of Lot 3 measured within 0.3 feet of the north line of Lot 3, but was found 1 foot east of the northeast corner. The Schneider rebar also agreed with the CKW rebar found at the northwest corner of the lot. The Schneider survey used original monuments found at the corners of Lot 5 and projected the lines up to fine Lot 3's corners. We used original monuments found on Lots 1 and 5 and projected between the two lots to recreate the corners. If the line between the CKW pin and the northwest corner of Lot 5 been extended it would have shortened the south line of Lot 1 by 2.2 feet. The Schneider and CKW pins were not held during this survey, however they lent credence to the north-south location of the lot lines. The Civil Designs capped rebar was set during the platting of Canary Creek Shopping Center, Section 4. Several additional monuments were recovered along the south side of the Civil Designs plat and all monuments measured within their locations shown on the plat within 0.1 feet. The rebar was held as an original monument and was used to establish the southern right of way for Mallory Parkway. The Hahn rebar shown on the Civil Designs plat was also held and used to establish the south line of the quarter section. The ESW rebars found near the corners of the surveyed property were measured within their locations shown on the Williams survey within 0.3 feet unless otherwise noted. The Williams survey also called for a 5/8 inch iron pin found at the northeast corner of the property that was recovered during this survey. The iron pin was measured 0.5 feet southwest of the corner as shown on the Williams survey and there was no history of the monument shown on the survey. None of the reference documents used during this survey showed the iron pin at the corner so the origin of this pin is unknown at this time. The pk nail shown near the southeast corner of the surveyed property was held as the corner on the Williams survey. The Williams survey stated that the pk nail was found at the corner but gives no history of the monument. No other reference surveys or plats showed this nail at the corner so the origin of this nail is unknown at this time. The ESW rebar found near the southwest corner of the surveyed property was not called for on the Williams survey, however it is the opinion of the undersigned that it was set as part of the Williams survey. A 5/8 inch disturbed rebar was found near the southwest corner of Tract "A" of the Williams survey. The survey states that a 5/8 inch iron pin with cap was set at the corner, however the rebar measured 13 feet southwest of the location shown on the Williams survey. The ESW monument found along the line between Tracts A and B were treated as original monuments and were held, while all other ESW monuments were not original and were treated as additional pieces of evidence in determining the boundaries of the surveyed property as described below.

The southern, eastern, and western lines were all established per the previous Banning Survey. For a more complete breakdown of how all of these lines were establish see said reference survey. The lines around the eastern extension of the property to the western right of way of US 31 were found to lie along the lot lines shown on the plats as established on the previous survey. The north line is an original line and was placed at the client's direction.

The Title Commitment description was found to not close by 25 feet. The title description contained only one controlling call to the north right of way for Mallory Parkway. All other calls were bearing and distance calls.

A gap of 2-3 feet was found between the surveyed deed and the Canary Creek Shopping Center plats. An overlap of 3.1-1.9 feet was found between the west line of the surveyed description and the east line of the adjoining deeds.

Fences, drives and utilities were found at, along, and near the lines of the surveyed parcel. Several fences were found near the west and south lines with the closest part of the fences being 1.8 feet and the farthest being 3.5 feet off of the line. The edge of cultivation was found to lie between 6 and 9 feet west of the west line. See the plat of survey for further information about evidence of possession.

The uncertainties of the survey are shown as follows:

Availability and condition of reference monuments: 4 feet
Occupation or possession lines: 9 feet
Clarity or ambiguity of record descriptions and/or adjoin descriptions: 25 feet

Evidence of source of title for the subject tract was provided in the form of Fidelity National Title Insurance Company Commitment Number 14-008234, effective November 25, 2014. Part of the items shown thereon may have been depicted on the survey and are identified by their recording data. Should any additional items need to be depicted on the survey please advise and provide the appropriate documents. The within plat and survey were prepared without benefit of current evidence of source of title for the adjoiners to the subject tract and are therefore subject to any statement of facts revealed by examination of such documents.

Title Work Special Exceptions:

Item 11 The surveyed property is subject to the terms and conditions relating to a gas line easement to the Indiana Gas Company, Inc. as recorded March 10, 1988 in Deed Record 247, page 615. The easement is located 10 feet west of and parallel to the west right of way line of US 31.

Item 12 The surveyed property is subject to easements called out in a Declaration of Easement dated October 12, 1994 and recorded October 13, 1994 in Deed Record 278, Page 955. The easements called for in the declaration were shown on the plat of survey per their geometry.

Item 13 The surveyed property is not subject to the terms and conditions relating to a Purchase Agreement Addendum and Agreement Surviving Warranties of Title recorded March 8, 1994 in Miscellaneous Record 66, page 907. The document concerns a tract currently occupied by Wendy's and is located 500 feet +/- south of the surveyed tracts.

Item 14 The surveyed property may be subject to terms and provisions called out in a Purchase Agreement Addendum and Agreement Surviving Warranties of Title recorded March 8, 1994 in Miscellaneous Record 67, page 798. Exhibits A and B of the document describe land directly west of and adjacent to the surveyed tracts. The north line of the portion of Exhibit C described as "North Half Tract A" was found to lie along the north line of Tract "B" as shown on a previous Banning Engineering Survey. The line was labeled on this plat of survey as "NORTH LINE OF TRACT "B" OF PREVIOUS SURVEY (SEE REPORT)".

Item 15 The surveyed property is not subject to the terms and conditions relating to an Agreement for Construction of Sanitary Sewer under Private Contract recorded March 24, 1994 in Miscellaneous Record 66, page 964. The sewer described in the document is located 500 feet +/- south of the surveyed tracts.

Item 16 The surveyed property is subject to terms and conditions called out in a Declaration of Easements and Restrictions from Presnell Development, Inc. dated February 19, 2008 and recorded February 20, 2008, as Instrument No. 2008-003840. Tract 3 as shown on the document corresponds to the surveyed property.

Item 17 The surveyed property is subject to covenants, easements, conditions and restrictions set forth in Warranty Deed recorded August 31, 1990 in Deed Record 258, page 661. Exhibit B of the document corresponds to an easement that is partially located on the surveyed property near the western right of way of US 31. Exhibits C and D of the document were found to partially lie within the boundary of the surveyed property. The easement was shown on the plat of survey by holding the north line of previously surveyed Tract B and holding the geometry stated in the document.

Item 18 The surveyed property is subject to terms and conditions set forth in a Right of Way and Easement Grant recorded December 28, 1987 in Deed Record 246, page 963 granted to Indiana Cities Water Corporation. The easement was placed on the plat of survey based upon the south line of the National Bank of Greenwood parcel.

Item 19 The surveyed property is subject to terms and conditions set forth in an Easement Grant for Sanitary and Storm Sewers recorded March 8, 1994 in Deed Record 275, page 463 to Hurricane Food, Inc. Exhibits A, B, and C were all found to be south of the surveyed property, however Exhibit D was found to lie within the surveyed parcel. The easement was shown on the plat of survey based upon its geometry.

Item 20 The surveyed property is subject to terms, provisions, easements as contained in the Declaration of Covenants, Restrictions for Canary Creek Phase I, a commercial subdivision dated November 11, 1994 in Miscellaneous Record 67, page 913 and re- recorded in Miscellaneous Record 68, page 249, as modified by Affidavit of Scrivener's Error dated February 21, 1997 and recorded March 7, 1997 as Instrument No. 97004341. The land described in Exhibit A was found to be the same as Lot 1 of Presnell/Morton Street Minor Subdivision and Lot 4 of Canary Creek Shopping Center. The document states that the enforcement of the covenants as specifically assigned by the Developer shall also be for the benefit and run with any other land that the Developer now owns or may acquire in the future located within 1,000 feet of the property described in Exhibit A. The surveyed property is located with the specified distance from the lands described in Exhibit A.

Item 21 The surveyed property is not subject to terms, provisions and easements recorded in Deed Record 249, page 793. The easements were found to lie outside of the bounds of the surveyed property.

Item 22 The surveyed property may be subject to terms and conditions found in a Right of Way easement granted recorded November 16, 1994 in Deed Record 279, page 489 granted to Indiana Cities Water Corporation. The easement described in the document is the same as a 15' Utility Easement as shown on the plat for Canary Creek Shopping Center Lots 2, 3, and 4 so the easement was not shown on the plat of survey.

Item 23 The surveyed property is not subject to terms and conditions found in an Easement for Water Main and Incidental Purposes in favor of Indiana Cities Water Corporation, an Indiana corporation recorded March 2, 1988 in Deed Record 247, page 541. The easement was found to lie north of the surveyed property.

Item 24 The surveyed property is not subject to terms and conditions found in an Easement for Water Main and Incidental Purposes in favor of Indiana Cities Water Corporation, an Indiana corporation recorded October 28, 1987, in Deed Record 246, page 261. The easement was found to be north of the surveyed property.

Item 25 The surveyed property is not subject to terms and provisions found in an Easement for Sanitary Sewer and Storm Water Drainage Lines, Mains, Pipes, Valves and Other Related Facilities and Appurtenances and Incidental Purposes in favor of The City of Franklin recorded December 7, 1987 in Deed Record 246, page 740. The easement described in the document was found to be north of the surveyed property.

Item 26 The surveyed property may be subject to covenants, conditions and restrictions set out in Agreement Surviving Warranties of Title recorded February 5, 1991 in Miscellaneous Record 63, page 225. The land described in Exhibit A was found to contain the portion of the surveyed property north of the previously surveyed Tract B line, the land described in Exhibit B was found to lie east of the surveyed property, the land described in Exhibits C and D corresponded to a 50' ingress/egress easement recorded in DR. 258, Pg. 661 and DR. 258, Pg. 661.

Item 27 The surveyed property is not subject to covenants, conditions and restrictions set out in Warranty Deed recorded July 28, 1987 in Deed Record 245, page 34. The easements shown in the deed were found to lie outside of the bounds of the surveyed property.

Item 28 The surveyed property is subject to terms and provisions found in a Mutual Non-Exclusive Access Easement by and between K.L. Presnell, Inc. and System Capital Realty Corporation, dated October 10, 2000 and recorded October 19, 2000, as Instrument No. 2000-25230. The easement described in the document is the same as described in Deed Record 258, page 661 (exception number 17) and is shown on the plat of survey.

Item 29 The surveyed property is subject the terms and conditions found in a Grant of Easement to Johnson County dated October 27, 1995 and recorded November 8, 1995 as Instrument No. 95020812. The easement was found to lie along the west line of both surveyed tracts and is labeled on the plat of survey as per DR. 278, PG 955 (exception 12).

Item 30 The surveyed property may be subject the terms and conditions found in a Mutual Non-Exclusive Access Easement by and between K.L. Presnell, Inc. and Canary Creek Shoppes II LLC, an Indiana limited liability company, dated December 22, 2005 and recorded December 29, 2005, as Instrument No. 2005-36049. The generally described easement as shown on Exhibit B of the document does not match the legal description as shown on Exhibit C. The description only corresponds to an easement shown on the plat of survey per DR 258, Pg. 661 (exception 17) and does not include the portion of the exhibit that runs north-south along the west line of said Lot 2. The width of the north-south portion is not stated in the document and is not shown on the exhibit so that portion of the easement was not plotted.

Item 31 The surveyed property is subject the terms and conditions found in a Mutual Non-Exclusive Access Easement by and between K.L. Presnell, Inc. and Canary Creek Shoppes LLC, an Indiana limited liability company, dated April 1, 1997 and recorded April 3, 1997, as Instrument No. 97006580. The easement was shown on the plat of survey per DR 258, Pg. 661 (exception 17).

Item 32 The surveyed property is subject the terms and conditions found in Easements granted to Frisch's Restaurants Inc., an Ohio corporation dated November 10, 1994 and recorded November 16, 1994 in Deed Record 279, page 491. The easements contained within the document all corresponded to easements on the plat for Canary Creek Shopping Center Lots 2, 3, and 4 so the easements were shown as per the platted location (exception 34).

Item 33 The surveyed property is subject the easements as set forth in the Warranty Deed to K.L. Presnell Development, Inc. dated November 3, 1994 and recorded November 16, 1994 in Deed record 279, page 490. The easements contained within the document all corresponded to easements on the plat for Canary Creek Shopping Center Lots 2, 3, and 4 so the easements were shown as per the platted location (exception 34).

Item 34 The surveyed property is subject to the easements for access, drainage & utilities as shown on the plats of Canary Creek Shopping Center Lots 2, 3 & 4 recorded in Plat Cabinet C page 663; Canary Creek Shopping Center Replat of Lots 2 & 3 recorded in Plat Cabinet D, pages 324 A & B; and Canary Creek Shopping Center Section Three, a Plat of Lot 5 recorded in Plat Cabinet D, pages 139 A & B. The easements are all shown on the plat of survey per their locations as shown on their corresponding plats.

Item 35 The surveyed property is not subject to the terms, conditions and easements set out in Agreement by and between Johnson County, Indiana by its Commissioner, Eleanore Green Clement, Jack Williams Clement and Eleanore Green Clement, Trustee, Eleanore Green Clement as Personal Representative of the Estate of Eunice Green Vandiver and K.L. Presnell Development, Inc. dated October 12, 1994 and recorded October 12, 1994, in Deed record 278, page 953, as Instrument No. 94022602. The exhibits attached to the document are all located outside of the boundaries of the surveyed property.

Item 36 The surveyed property may be subject to terms and provisions of Non-Exclusive Access and Easement Agreement by K.L. Presnell Development, Inc., an Indiana corporation as set out in instrument, dated April 17, 1998, and recorded May 13, 1998, as Instrument No. 98013644. One of the easements called for in the document was the same as an easement recorded as Instrument Number 98013645 (exception 37). The additional easements were found to lie outside of the boundaries of the surveyed property.

Item 37 The surveyed property is subject to terms and provisions of Non-Exclusive Access and Easement Agreement by K.L. Presnell Development, Inc., an Indiana corporation as set out in instrument, dated April 17, 1998, and recorded May 13, 1998, as Instrument No. 98013645. The easement is shown on the plat of survey per its geometry.

Item 38 The surveyed property may be subject to the terms and provisions of Grant of Non-Exclusive Easement by K.L. Presnell Development, Inc., an Indiana corporation as set out in instrument, dated April 17, 1998, and recorded May 13, 1998, as Instrument No. 98013646.

Item 39 The surveyed property is not subject to terms and provisions of a Grant of Non-Exclusive Easement by K.L. Presnell Development, Inc., an Indiana corporation as set out in instrument, dated April 17, 1998, and recorded May 13, 1998, as Instrument No. 98013647. The exhibits attached to the document are all located outside of the boundaries of the surveyed property.

No addresses for the surveyed property were disclosed in the record documents or observed while conducting the survey.

No parking spaces were observed within the bounds of the surveyed property.

All utilities shown on the plat of survey are shown as marked per utility locate requests made to Indiana811.

The City of Franklin Comprehensive Plan does not show any proposed changes in street right of way lines for Mallory Parkway or Canary Creek Drive.

SURVEYOR'S CERTIFICATE

To: Kroger Co; Madison Street Properties, LLC; 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 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6(b), 8, 9, 11(b), 13, 17, 18, & 21 ($1,000,000) of Table A thereof. The field work was completed on 12/30/2014.

Date: _____

_____
Prepared by: Brian L. Haggard
PS No. LS29800001
State of Indiana

Sym.	Revisions	Date

Designed:
Drawn: JTH
Checked: BLH
Scale: 1"=60'
Date: 1-1-2015

ALTA SURVEY PREPARED FOR KROGER CO
SURVEYOR REPORT
SEC. 15-T12N-R4E
FRANKLIN, JOHNSON COUNTY, INDIANA

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46168
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com

Project No: 14250K
Sheet No: 3 OF 3

PROPERTY OF BANNING ENGINEERING
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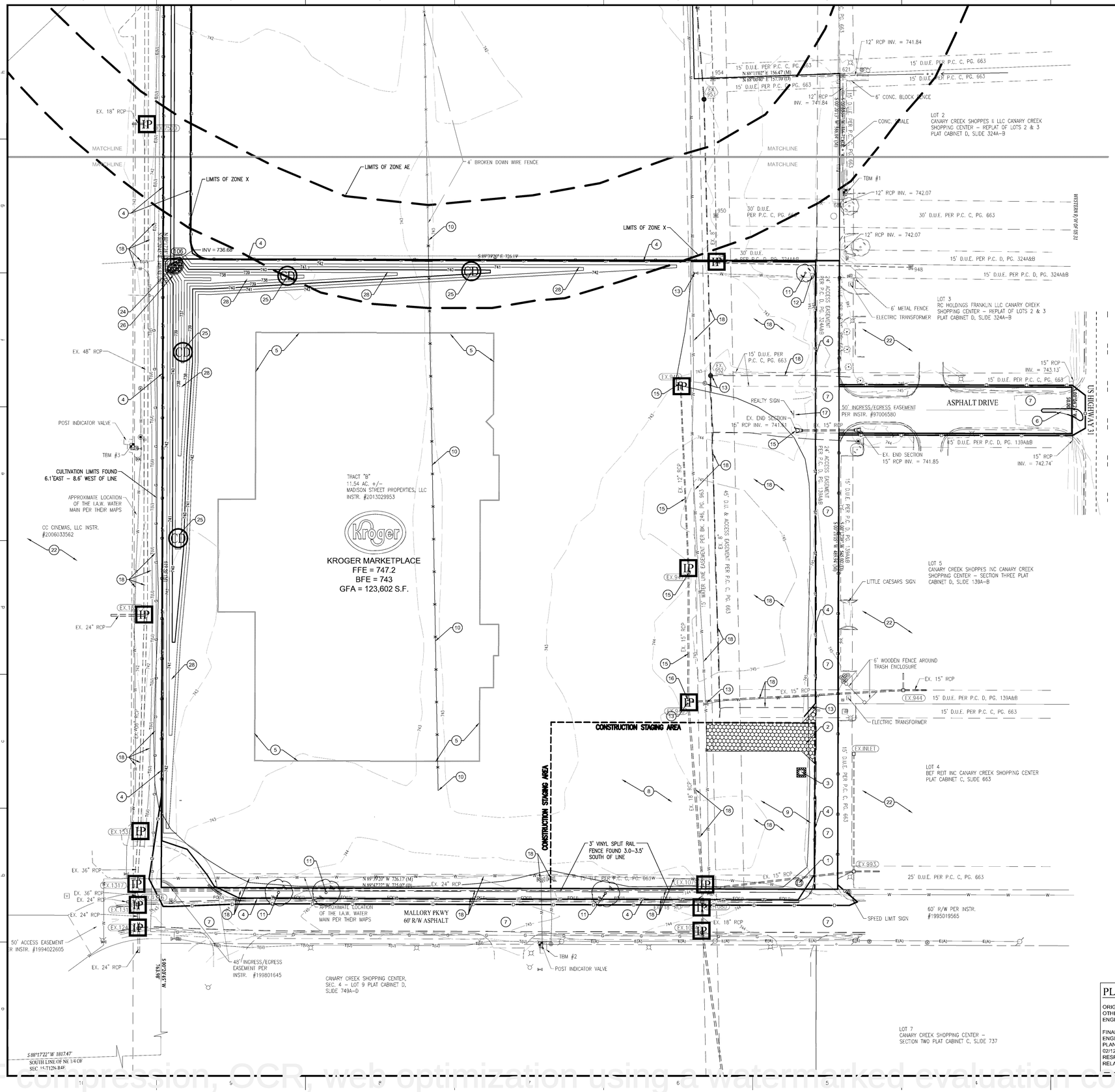

SITE PREPARATION / SWPPP PHASE I NOTES

1. INSTALL PERMIT POSTING AREA. 4" PVC TUBE WITH END CAPS ATTACHED TO PROJECT CONSTRUCTION SIGN TO CONTAIN APPROVED CONSTRUCTION DRAWINGS AND PERMITS FOR INSPECTORS.
2. INSTALL CONSTRUCTION ENTRANCE. REFER TO DETAIL ON SHEET C1.08
3. INSTALL CONCRETE WASHOUT. REFER TO DETAIL ON SHEET C1.08
4. INSTALL SILT FENCE. REFER TO DETAIL ON SHEET C1.08
5. LIMITS OF PROPOSED BUILDING
6. SAWCUT AND REMOVE EXISTING CONCRETE ISLAND.
7. EXISTING ASPHALT DRIVES TO BE KEPT CLEAN AT ALL TIMES
8. CONSTRUCTION STAGING AREA
9. CONSTRUCTION DUMPSTER, FUELING AREA, FUEL TANK AND PORT-O-LET TO BE LOCATED AND NOTED ONSITE BY CONTRACTOR
10. REMOVE EXISTING FENCE LINE WHERE SHOWN
11. REMOVE EXISTING TREES
12. EXISTING FIRE HYDRANT FIRE HYDRANT TO BE REMOVED AND RELOCATED. REFER TO SHEET C8.01 FOR NEW LOCATION.
13. FRAME AND GRATE TO BE ADJUSTED TO THE PROPOSED PAVEMENT GRADES
14. SAWCUT AND REMOVE PAVEMENT AND CURBS FOR PIPE REMOVAL. PROVIDE TEMPORARY ACCESS OVER TRENCH UNTIL FINAL PAVING IS COMPLETE
15. REMOVE STORM SEWER PIPE, END SECTION AND STRUCTURE WHERE SHOWN
16. GROUT NORTH PIPE PENETRATION CLOSED ONCE THE STORM SEWER PIPE HAS BEEN REMOVED
17. REMOVE SIGN
18. UTILITIES EXIST WITHIN THE LIMITS OF DISTURBANCE. UTILITIES SHOWN WERE LOCATED BY THE UTILITY COMPANY AND A PRIVATE LOCATE SERVICE. ADDITIONAL UTILITIES MAY EXIST WITHIN THIS CORRIDOR THAT COULD NOT BE TRACED AND LOCATED. PROCEED WITH CAUTION.
19. REMOVE EXISTING BOARD FENCE. PLACE BACK WITH LIKE MATERIAL AND SIZE
20. REMOVE EXISTING WHITE VINYL FENCE. PLACE BACK WITH LIKE MATERIAL AND SIZE
21. REMOVE PEAR TREES FOR INSTALLATION OF THE NEW STORM SEWER OUTFALL. REPLACE WITH SPECIES AS LISTED ON SHEET L1.02
22. CONTRACTOR TO NOTIFY THE ADJOINER(S) AND CITY ENGINEER 1 WEEK PRIOR TO COMMENCING WITH WORK IN CLOSE PROXIMITY OF THE EXISTING BUILDINGS.
23. INSTALL OUTFALL PIPE, TEMPORARY SEDIMENT BASIN, AND STORM SEWER EXTENSION
24. RIPRAP PAD
25. ROCK CHECK DAM
26. ROCK HORSESHOE CHECK DAM
27. COIR LOG
28. DIVERSION SWALE
29. TEMPORARY SEDIMENT BASIN
30. PROVIDE THE PROPOSED CONTROL STRUCTURE AND ASSOCIATED PIPING FOR THE OUTFALL.
31. PROVIDE A POND SKIMMER AS AN ALTERNATE TO RIPRAP PROTECTION

GENERAL NOTES

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WEIHE ENGINEERS, INC.
10505 NORTH COLLEGE AVENUE
INDIANAPOLIS, INDIANA 42680
(317) 846-6611 OR
TOLL FREE 1-800-452-6408

CONTACT PERSON FOR EROSION CONTROL & SEDIMENT PRACTICES

WEIHE ENGINEERS, INC.
10505 N. COLLEGE AVE.
INDIANAPOLIS, IN 46268
TELEPHONE: (317) 846-6611
FAX: (317) 843-0546
EMAIL: SHINNEMANJ@WEIHE.NET
CONTACT PERSON: JAMIE SHINNEMAN

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SWPPP 1 LEGEND

- IP — INLET PROTECTION - USE SUBSURFACE INLET PROTECTION WITH OVERFLOW CAPABILITY (DANDY SAC)
- CONSTRUCTION ENTRANCE
- STAGING AREA
- POSTING AREA - 4" PVC TUBE WITH END CAPS ATTACHED TO PROJECT CONSTRUCTION SIGN TO CONTAIN APPROVED CONSTRUCTION DRAWINGS AND PERMITS FOR INSPECTORS.
- INSTALL COIR LOGS AS SHOWN. CONTRACTOR TO ADD ADDITIONAL MEASURES AS CONSTRUCTION PHASING AND SITE CONDITIONS DICTATE
- CONCRETE WASHOUT
- STOCKPILE AREA (TEMPORARY SEEDING REQUIRED)
- SILT FENCE
- TREE PROTECTION
- CD — ROCK CHECK DAM
- LIMITS OF DISTURBANCE

LEGEND

FH	=	EXIST. FIRE HYDRANT
WM	=	EXIST. WATER METER/VALVE
	=	EXIST. SIGN
	=	EXIST. MONITOR WELL
PKF	=	EXIST. IRON PIN & OR PK (SET/FOUND)
GM	=	EXIST. GAS METER
	=	EXIST. GAS VALVE
	=	EXIST. STORM INLET
	=	EXIST. STORM/SAN./TELE. MANHOLE
EM	=	EXIST. ELECTRIC METER
	=	EXIST. POWER POLE/POWER POLE w/ LIGHT
GA	=	EXIST. GUY ANCHOR
T.Ped.	=	EXIST. TELEPHONE PEDESTAL
AC	=	HVAC UNIT
CO	=	CLEANOUT
MB	=	MAILBOX
	=	LIGHT POLE
BOL	=	EXIST. BOLLARD
	=	EXIST. SANITARY SEWER LINE
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882	=	EXIST. CONTOURS
	=	CONCRETE END SECTION (C.E.S.)
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
	=	DRAINAGE FLOW ARROW
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F.F.E.	=	FINISH FLOOR ELEVATION
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OHU	=	OVERHEAD UTILITY LINE
T	=	TELEPHONE LINE
E	=	ELECTRIC LINE
TBM	=	TEMPORARY BENCHMARK
XX	=	PARKING COUNT

EXISTING AREAS

TOTAL SITE	=	15.00	AC.
DISTURBED	=	15.00	AC.
PERVIOUS	=	14.25	AC.
IMPERVIOUS	=	0.75	AC.

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SCALE: 1" = 50

811 Know what's below. Call before you dig.
Within Indiana Call 811 or 800-382-5544
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PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

		BY
PROJECT NO.	W14.0460	
DWG NAME:	w140460-C100 swppp1.dwg	
DESIGNED BY:	R.L/W/SAM	
DRAWN BY:	R.L/W/SAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SITE PREPARATION AND SWPPP 1
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.01
PROJECT NO.
W14.0460

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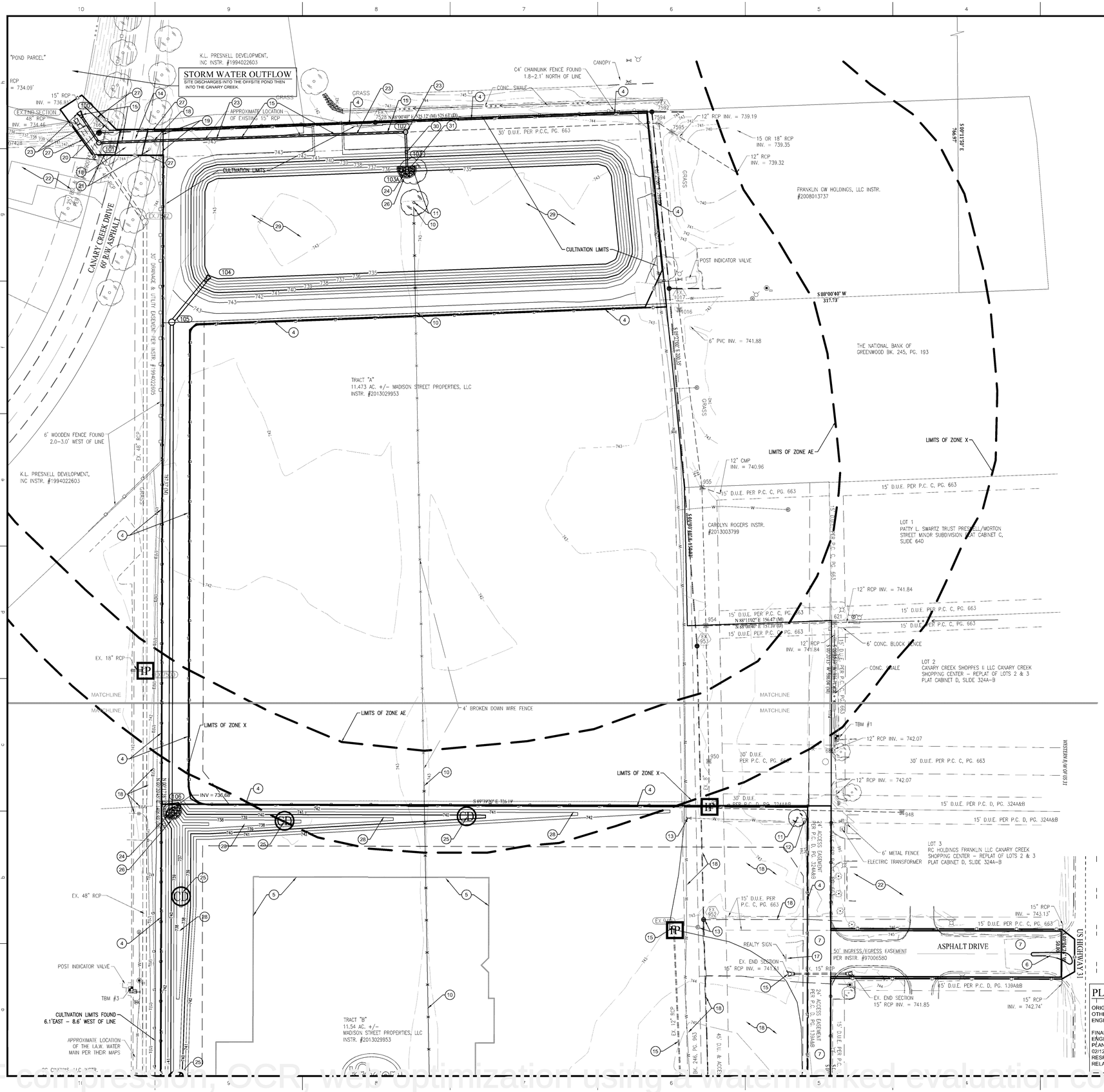

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10505 NORTH COLLEGE AVENUE
INDIANAPOLIS, INDIANA 42680
(317) 846-6611 OR
TOLL FREE 1-800-452-6408

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CONTACT PERSON FOR EROSION CONTROL & SEDIMENT PRACTICES

WEIHE ENGINEERS, INC.
10505 N. COLLEGE AVE.
INDIANAPOLIS, IN 46268
TELEPHONE: (317) 846-6611
FAX: (317) 843-0546
EMAIL: SHINNEMANJ@WEIHE.NET
CONTACT PERSON: JAMIE SHINNEMAN

PLAN CERTIFICATE NOTE:

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317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO. W14.0460
DWG NAME: w14046j-C100 swppp1.dwg
DESIGNED BY: RJW/BAM
DRAWN BY: RJW/BAM
CHECKED BY: JKS
DATE: 02.12.2015

STATE OF INDIANA JAMES K. SHINNEMAN 10200392 REGISTERED PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

SITE PREPARATION AND SWPPP 1
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.02
PROJECT NO.
W14.0460

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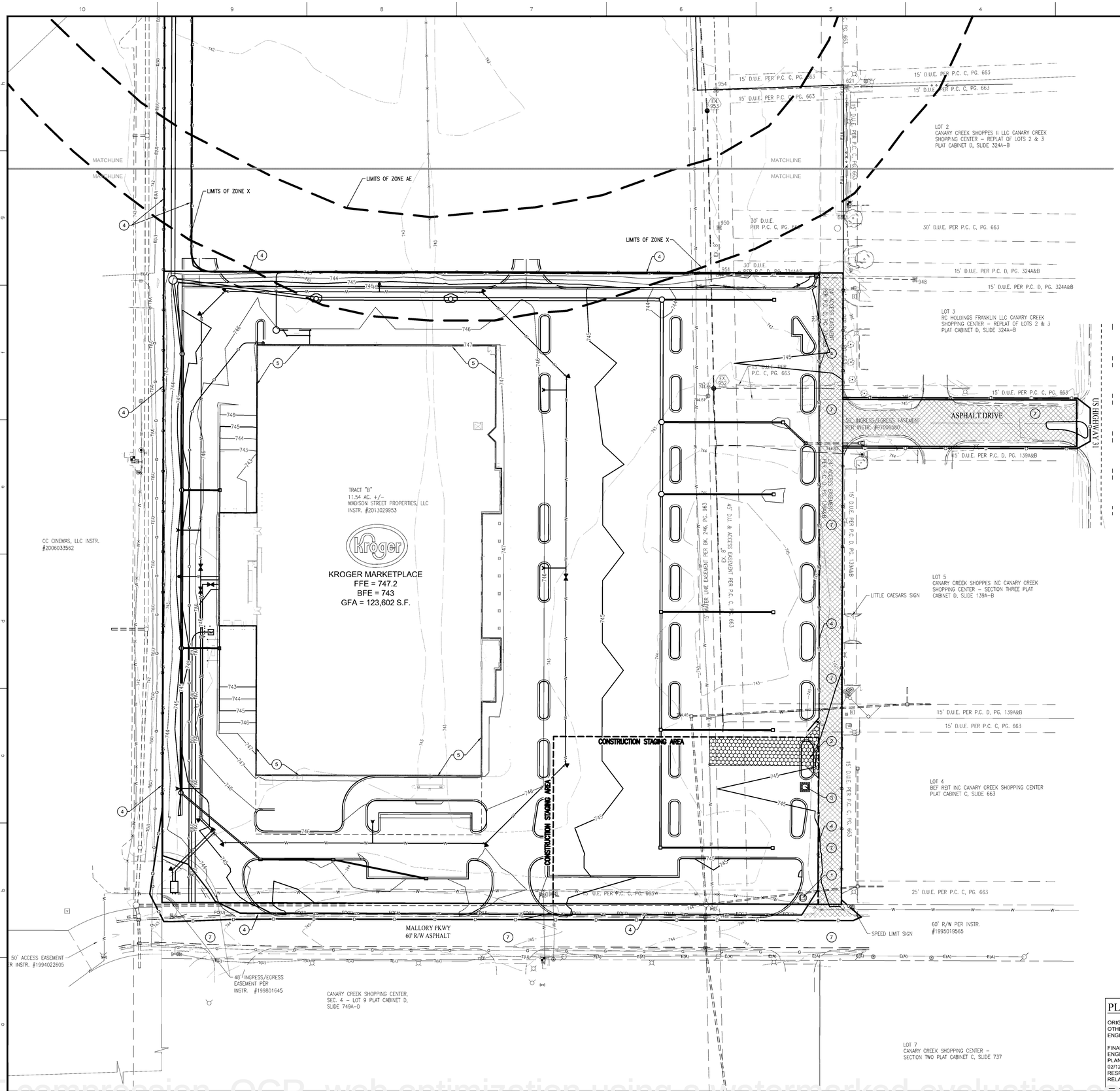

SWPPP PHASE II NOTES

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3. INSTALL CONCRETE WASHOUT. REFER TO DETAIL ON SHEET C1.08
4. INSTALL SILT FENCE. REFER TO DETAIL ON SHEET C1.08
5. LIMITS OF PROPOSED BUILDING
6. COIR LOG
7. MILL AND RESURFACE THE EXISTING DRIVES

SWPPP II LEGEND

- IP - INLET PROTECTION - USE SUBSURFACE INLET PROTECTION WITH OVERFLOW CAPABILITY (DANDY SAC)
- CONSTRUCTION ENTRANCE
- STAGING AREA
- POSTING AREA - 4" PVC TUBE WITH END CAPS ATTACHED TO PROJECT CONSTRUCTION SIGN TO CONTAIN APPROVED CONSTRUCTION DRAWINGS AND PERMITS FOR INSPECTORS.
- INSTALL COIR LOGS AS SHOWN. CONTRACTOR TO ADD ADDITIONAL MEASURES AS CONSTRUCTION PHASING AND SITE CONDITIONS DICTATE
- CONCRETE WASHOUT
- STOCKPILE AREA (TEMPORARY SEEDING REQUIRED)
- SILT FENCE
- TREE PROTECTION
- CD - ROCK CHECK DAM
- LIMITS OF DISTURBANCE

LEGEND

FH	=	EXIST. FIRE HYDRANT
WM	=	EXIST. WATER METER/VALVE
	=	EXIST. SIGN
	=	EXIST. MONITOR WELL
PKF	=	EXIST. IRON PIN & OR PK (SET/FOUND)
GM	=	EXIST. GAS METER
	=	EXIST. GAS VALVE
	=	EXIST. STORM INLET
	=	EXIST. STORM/SAN./TELE. MANHOLE
EM	=	EXIST. ELECTRIC METER
	=	EXIST. POWER POLE/POWER POLE w/ LIGHT
GA	=	EXIST. GUY ANCHOR
T.Ped.	=	EXIST. TELEPHONE PEDESTAL
AC	=	HVAC UNIT
CO	=	CLEANOUT
MB	=	MAILBOX
	=	LIGHT POLE
BOL	=	EXIST. BOLLARD
	=	EXIST. SANITARY SEWER LINE
	=	EXIST. STORM SEWER LINE
282	=	EXIST. CONTOURS
	=	CONCRETE END SECTION (C.E.S.)
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
	=	DRAINAGE FLOW ARROW
	=	EXISTING TREE LINE
F.F.E.	=	FINISH FLOOR ELEVATION
TC	=	TOP OF (MANHOLE / INLET) CASTING
INV	=	INVERT ELEVATION
RCP	=	REINFORCED CONCRETE PIPE
CMP	=	CORRUGATED METAL PIPE
PVC	=	POLYVINYL CHLORIDE PIPE
HDPE	=	HIGH DENSITY POLYETHYLENE
	=	FLOW LINE
STR.	=	STRUCTURE
TOW OR TW	=	TOP OF WALL
SSD	=	SUB-SURFACE DRAINAGE
TOC	=	TOP OF CURB
GUT	=	GUTTER
W	=	WATER LINE
G	=	GAS LINE
OHU	=	OVERHEAD UTILITY LINE
T	=	TELEPHONE LINE
E	=	ELECTRIC LINE
TBM	=	TEMPORARY BENCHMARK
	=	PARKING COUNT

GENERAL NOTES

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WITH THE OWNER DURING BIDDING AND DURING CONSTRUCTION ACTIVITIES ALL ITEMS TO BE REMOVED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY MATERIALS AND/OR STRUCTURES NOT LOCATED ON THIS SURVEY FOR THE INSTALLATION OF THE NEW WORK.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PERTAINING TO THEIR PHASE OF WORK, AND TO VERIFY WHICH UTILITIES WILL BE REMOVED BY UTILITY COMPANY. ANY AND ALL UTILITIES NOT REMOVED BY THE UTILITY COMPANY SHALL BE REMOVED BY THE CONTRACTOR.
3. UTILITIES ARE SHOWN TO BE APPROXIMATE AND SHALL BE RELOCATED AND/OR CAPPED AND ABANDONED BEFORE CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. ALL DEMOLITION MATERIAL AND SALVAGEABLE MATERIAL IS THE PROPERTY OF THE DEMOLITION CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF THE SITE.
5. SLABS ON GRADE MUST BE REMOVED COMPLETELY AND TAKEN OFF THE SITE.
6. ALL UTILITIES MUST REMAIN ACTIVE FOR AREA TENANTS THAT ARE REMAINING. NO UTILITY SERVICE SHALL BE INTERRUPTED DURING THE CONSTRUCTION PROCESS.
7. BEARINGS, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS AND PLATS FOR EXACT INFORMATION.
8. IF THERE ARE ANY QUESTIONS CONCERNING THIS DEMOLITION PLAN, PLEASE CONTACT THE ENGINEER BEFORE CONTINUING WORK.

WEIHE ENGINEERS, INC.
10505 NORTH COLLEGE AVENUE
INDIANAPOLIS, INDIANA 42680
(317) 846-6611 OR
TOLL FREE 1-800-452-6408

EXISTING AREAS

TOTAL SITE	=	15.00	AC.
DISTURBED	=	15.00	AC.
PERVIOUS	=	14.25	AC.
IMPERVIOUS	=	0.75	AC.

EROSION CONTROL NOTES

1. ALL DISTURBED AREAS SHALL BE SODDED OR SEEDED, EXCEP BUILDING PAD AND LANDSCAPE BEDS. SEE LANDSCAPE PLANS FOR LOCATION OF LANDSCAPE BEDS.
2. INSTALL SILT FENCE ALONG ALL DOWNSTREAM SLOPES. SILT FENCE TO FOLLOW CONTOUR.
3. THERE SHALL BE NO DIRT, DEBRIS OR STORAGE OF MATERIAL IN THE STREET.
4. CONTRACTOR TO COORDINATE THE SWPPP PROGRAM WITH SPECIFICATION SECTION 312500.
5. ANY EXISTING TREE(S) THAT MAY REQUIRE REMOVAL BUT ARE NOT SHOWN ON THE PLAN AS BEING REMOVED MAY BE DONE SO, AS LONG AS THE TREE(S) ARE RELOCATED TO AN APPROVED ALTERNATIVE LOCATION ON SITE.

CONTACT PERSON FOR EROSION CONTROL & SEDIMENT PRACTICES

WEIHE ENGINEERS, INC.
10505 N. COLLEGE AVE.
INDIANAPOLIS, IN 46268
TELEPHONE: (317) 846-6611
FAX: (317) 843-0546
EMAIL: SHINNEMANJ@WEIHE.NET
CONTACT PERSON: JAMIE SHINNEMAN

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

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24 Hours a Day, 7 Days a Week.
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14.0460	
DWG NAME:	w140460-C101 swppp2.dwg	
DESIGNED BY:	R.L/R.B.M	
DRAWN BY:	R.L/R.B.M	
CHECKED BY:	J.K.S	
DATE:	02.12.2015	

REVISIONS AND INSERTS SUBMITTED FOR INITIAL REVIEW	DATE 02.12.2015	BY R.B.S

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

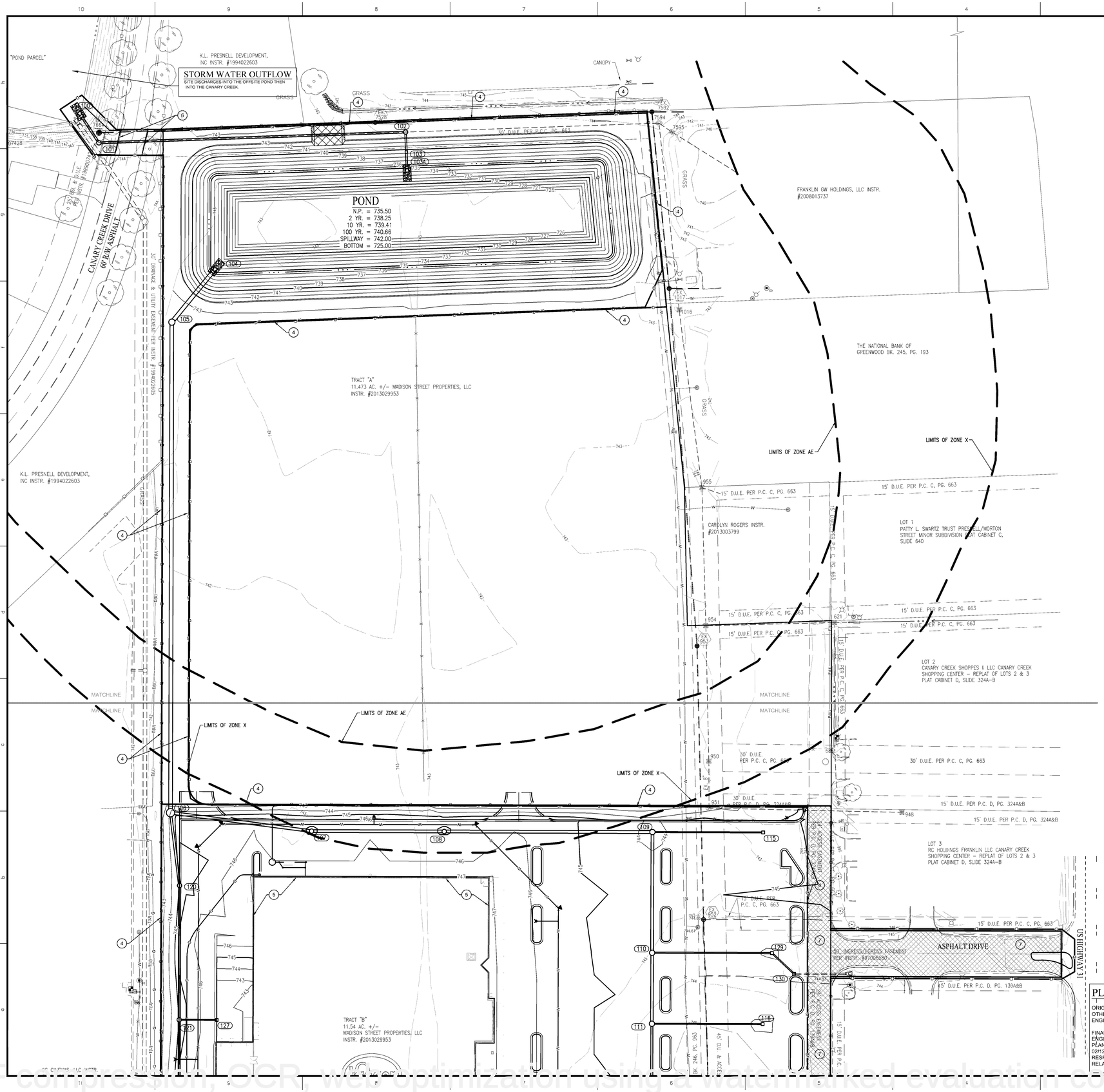
STORMWATER POLLUTION PREVENTION PLAN 2

Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.03

PROJECT NO.
W14.0460

PDF compression, OCR, web optimization using a watermarked evaluation copy of CVISION PDFCompressor



SWPPP PHASE II NOTES

1. INSTALL PERMIT POSTING AREA. 4" PVC TUBE WITH END CAPS ATTACHED TO PROJECT CONSTRUCTION SIGN TO CONTAIN APPROVED CONSTRUCTION DRAWINGS AND PERMITS FOR INSPECTORS.
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6. COIR LOG
7. MILL AND RESURFACE THE EXISTING DRIVES

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TOLL FREE 1-800-452-6408

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ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14-0460	
DWG NAME:	w14046-C101 swppp2.dwg	
DESIGNED BY:	R.L/WRAM	
DRAWN BY:	R.L/WRAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.B.

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
STORMWATER POLLUTION PREVENTION PLAN 2
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.04
PROJECT NO.
W14-0460

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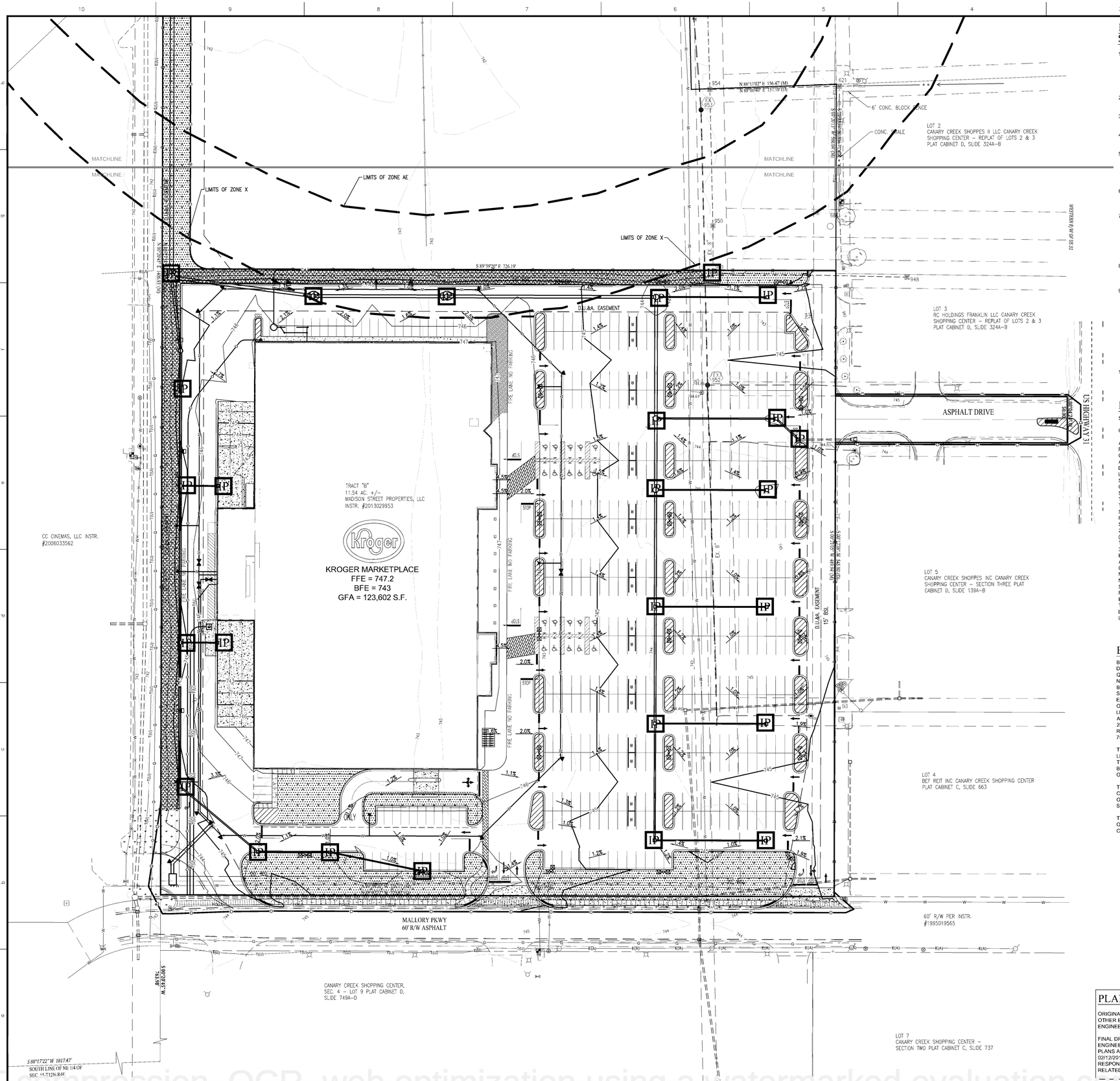

EROSION CONTROL SPECIFICATIONS

1. THIS PLAN IS DESIGNED AS AN ATTEMPT TO PREVENT ANY AND ALL SEDIMENT FROM LEAVING THE CONSTRUCTION SITE BY WAY OF EROSION. IF EROSION OF SEDIMENT FROM THE SITE IS TAKING PLACE, THE CONTRACTOR AND/OR OWNER SHALL TAKE PREVENTATIVE ACTION IMMEDIATELY. THE ENGINEER SHALL BE CONSULTED IN THE EVENT THIS HAPPENS.
2. TEMPORARY SEEDING IS TO BE APPLIED TO ANY DISTURBED AREA THAT WILL REMAIN UNALTERED IN EXCESS OF 15 DAYS.
3. PERMANENT SEEDING IS TO BE APPLIED IMMEDIATELY TO AREAS THAT HAVE ACHIEVED FINAL AND FINISHED GRADE.
4. PRESERVE EXISTING VEGETATION ON THE SITE WHENEVER AND WHEREVER POSSIBLE TO PREVENT TOPSOIL EROSION.
5. ALL SEDIMENT CAPTURING MEASURES SHALL BE IMPLEMENTED PRIOR TO THE DISTURBANCE OF THE CONSTRUCTION AREA THEY ARE INTENDED TO SERVICE. ALL EROSION CONTROL MEASURES PROPOSED ARE TO BE PROPERLY MAINTAINED TO CONTINUE THEIR EFFECTIVENESS.
6. IF GRADING OCCURS DURING THE MONTHS OF DECEMBER, JANUARY OR FEBRUARY DORMANT SEEDING PROCEDURES SHALL BE USED.
7. DURING DRY WEATHER, KEEP LAWNS WATERED WITH SPRINKLERS OR OTHER APPROVED METHODS. RESEED ANY AREAS NOT GERMINATING OR DAMAGED AT INTERVALS AS MAY BE REQUIRED ACCORDING TO SEASONAL CONDITION AND/OR CONSTRUCTION ACTIVITY. WATER GRASS AND EXECUTE NECESSARY WEEDING UNTIL FULL STAND OF GRASS HAS BEEN OBTAINED.
8. THE IMPLEMENTATION AND MAINTENANCE OF THE EROSION CONTROL IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR OWNER.
9. IT SHALL BE THE CONTRACTOR'S AND/OR OWNER'S RESPONSIBILITY TO MINIMIZE SEDIMENTATION (FROM ON-SITE CONSTRUCTION ACTIVITIES) FROM BEING DEPOSITED ONTO ADJACENT PROPERTIES AND RECEIVING STREAMS/DITCHES IN STRICT COMPLIANCE WITH "RULE 5" (327 IAC 15-5, CONSTRUCTION ACTIVITY STORM WATER RUNOFF CONTROL). IT SHALL ALSO BE THE CONTRACTOR'S AND/OR OWNER'S RESPONSIBILITY TO OBTAIN ANY APPROVALS REQUIRED FROM THE LOCAL AUTHORITY AND TO SUBMIT A COMPLETE NOTICE OF INTENT LETTER TO THE OFFICE OF WATER MANAGEMENT, INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT PRIOR TO ANY CONSTRUCTION ACTIVITY.
10. FOR SEASONAL VARIATIONS - SEE SEASONAL SOIL PROTECTION CHART IN THESE PLANS.

SWPPP III LEGEND

- IP - INLET PROTECTION - USE SUBSURFACE INLET PROTECTION WITH OVERFLOW CAPABILITY (DANDY SAC)
- PERMANENT/TEMPORARY SEEDING USE PLANTING CHART
- EROSION CONTROL BLANKET - USE S150BN BIO-NET AS SUPPLIED BY NORTH AMERICAN GREEN OR APPROVED EQUAL. AREA MUST ALSO BE SEEDED.
- MULCHED AREA
- TURF REINFORCEMENT MAT (PYRAMAT) BY PROPEX, OR EQUAL AT THE POND SPILLWAY
- LIMITS OF DISTURBANCE (CONSTRUCTION LIMITS)
- SITE DISCHARGE POINT

DISTURBED ACREAGE
= 15.000± AC.

-WARNING-
THIS PLAN TO BE USED FOR EROSION CONTROL PURPOSES ONLY. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.

LAND DESCRIPTION

SURVEYED LEGAL DESCRIPTION

ORIGINAL SURVEYED DESCRIPTION

A PART OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 12 NORTH, RANGE 4 EAST OF THE SECOND PRINCIPAL MERIDIAN, CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA, MORE PARTICUARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF SAID QUARTER PROCEED THENCE SOUTH 00 DEGREES 11 MINUTES 50 SECONDS EAST ALONG THE EAST LINE OF SAID QUARTER 766.97 FEET TO THE NORTH LINE OF THE LANDS OF THE NATIONAL BANK OF GREENWOOD AS DESCRIBED IN DEED BOOK 245, PAGE 193 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY; PROCEED THENCE ALONG THE NORTH LINE OF SAID BANK LANDS SOUTH 88 DEGREES 00 MINUTES 40 SECONDS WEST 317.73 FEET TO THE WEST LINE OF SAID BANK LANDS; THENCE SOUTH 05 DEGREES 27 MINUTES 00 SECONDS EAST ALONG SAID WEST LINE 200.35 FEET TO THE NORTHWEST CORNER OF THE LANDS OF CAROLYN ROGERS AS DESCRIBED IN INSTRUMENT NUMBER 2013003799 IN SAID RECORDER'S OFFICE, MARKED BY A REBAR WITH CAP STAMPED ESW LS20200016" (HEREAFTER REFERRED TO AS ESW REBAR) THENCE SOUTH 01 DEGREES 03 MINUTES 40 SECONDS EAST ALONG THE WEST LINE OF SAID ROGERS LANDS 150.02 FEET TO THE SOUTHWEST CORNER OF SAID ROGERS LANDS, MARKED BY AN ESW REBAR; THENCE NORTH 88 DEGREES 11 MINUTES 02 SECONDS EAST ALONG THE SOUTH LINE OF SAID ROGERS LANDS 156.47 FEET TO THE SOUTHWEST CORNER OF LOT 1 OF PRESNELL/MORTON STREET MINOR SUBDIVISION AS RECORDED IN PLAT CABINET C, SLIDE 640 IN SAID RECORDER'S OFFICE; THENCE SOUTH 00 DEGREES 20 MINUTES 13 SECONDS WEST ALONG THE WEST LINE OF LOT 2 OF CANARY CREEK SHOPPING CENTER REPLAT OF LOTS 2 & 3, THE PLAT OF WHICH IS RECORDED IN PLAT CABINET D, SLIDE 324A-B IN SAID RECORDER'S OFFICE 200.98 FEET TO THE POINT OF BEGINNING, MARKED BY A 5/8 INCH DIAMETER REBAR WITH CAP STAMPED "BANNING ENG FIRM #0060" (HEREAFTER REFERRED TO AS BANNING REBAR); THENCE CONTINUE SOUTH 00 DEGREES 20 MINUTES 13 SECONDS WEST 135.06 FEET TO THE SOUTHWEST CORNER OF LOT 3 IN CANARY CREEK SHOPPING CENTER REPLAT OF LOTS 2 & 3 AS RECORDED IN PLAT CABINET D, SLIDE 324A-B, MARKED BY A MAGSPIKE WITH WASHER STAMPED "BANNING ENG FIRM #0060"; THENCE SOUTH 89 DEGREES 38 MINUTES 55 SECONDS EAST ALONG THE SOUTH LINE OF SAID LOT 3 A DISTANCE OF 249.77 FEET TO THE WESTERN RIGHT OF WAY FOR US HIGHWAY 31, MARKED BY A BANNING BEHAR; THENCE SOUTH 00 DEGREES 04 MINUTES 24 SECONDS WEST ALONG SAID RIGHT OF WAY 50.00 FEET TO THE NORTHEAST CORNER OF LOT S IN CANARY CREEK SHOPPING CENTER, SECTION THREE AS RECORDED IN PLAT CABINET I), SLIDE 139A-B, MARKED BY A MAGSPIKE WITH WASHER STAMPED "BANNING ENG FIRM #0060"; THENCE NORTH 89 DEGREES 38 MINUTES 55 SECONDS WEST ALONG THE NORTH LINE OF SAID LOT S A DISTANCE OF 250.00 FEET TO AN IRON REBAR WITH SMASHED CAP; THENCE SOUTH 00 DEGREES 21 MINUTES 05 SECONDS WEST ALONG THE WEST LINE AND ITS EXTENSION OF SAID LOT 5 A DISTANCE OF 489.94 FEET TO THE NORTHERN RIGHT OF WAY FOR MALLORY PARKWAY; THENCE NORTH 89 DEGREES 39 MINUTES 20 SECONDS WEST ALONG SAID RIGHT OF WAY 726.17 FEET TO THE EASTERN LINE OF THE LANDS OF CC CINEMAS, LLC AS DESCRIBED IN INSTRUMENT NUMBER 2006033562 IN SAID RECORDER'S OFFICE; THENCE NORTH 00 DEGREES 20 MINUTES 45 SECONDS EAST ALONG SAID EAST LINE 675.00 FEET TO A BANNING REBAR; THENCE SOUTH 89 DEGREES 39 MINUTES 20 SECONDS EAST 726.19 FEET TO THE POINT OF BEGINNING, AND CONTAINING 11.540 ACRES OF LAND, MORE OR LESS.

BENCHMARK INFORMATION

BENCHMARK INFORMATION
DNR TBM CD 1, 1988 IN JOHNSON COUNTY, FRANKLIN QUADRANGLE, IN THE NE ¼ OF SECTION 10, TOWNSHIP 12 NORTH, RANGE 4 EAST, 2ND P.M.; AT FRANKLIN: AT THE U.S. 31 BRIDGE OVER CANARY DITCH; SET IN THE TOP OF THE SOUTHEAST CONCRETE WINGWALL OF THE BRIDGE, 25.8 FEET EAST OF THE CENTERLINE OF THE BRIDGE, 0.6 FOOT NORTH OF THE SOUTH END OF THE WINGWALL 1.0 FOOT BELOW THE LEVEL OF THE ROAD; A "PK" NAIL SET IN A DRILL HOLE, INSIDE A CUT CIRCLE.
2ND ORDER ELEVATION
REVISED ELEVATION 229.240 METERS N.G.V.D. 1929
752.099 FEET N.G.V.D. 1929 (751.693 FEET N.A.V.D.1988)

TBM #1 ELEV: 745.81 CUT SQUARE ON TOP ON A CONCRETE LIGHT BASE ON THE WEST EDGE OF CONCRETE. DUE WEST OF THE SOUTHWEST CORNER OF THE SHERWIN WILLIAMS BUILDING SQUARE IS APPROXIMATELY 15 FEET NORTHEAST OF A DRIVE STUB BEHIND THE BUILDING.

TBM #2 ELEV: 747.77 CUT SQUARE IN THE NORTHWEST CORNER OF A CONCRETE WATER VAULT ON THE EAST SIDE OF THE MIDDLE KOHL'S ENTRANCE LOCATED ON THE SOUTH SIDE OF MALLORY PARKWAY.

TBM #3 ELEV: 742.94 CUT SQUARE IN THE SOUTHEAST CORNER OF A CONCRETE WATER VAULT DUE EAST OF THE SOUTHEAST CORNER OF CANARY CREEK CINEMA BUILDING.

CONTACT PERSON FOR EROSION CONTROL & SEDIMENT PRACTICES

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INDIANAPOLIS, IN 46268
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EMAIL: SHINNEMANJ@WEIHE.NET
CONTACT PERSON: JAMIE SHINNEMAN

EROSION CONTROL NOTES

1. ALL DISTURBED AREAS SHALL BE SODDED OR SEEDED, EXCEPT BUILDING PAD AND LANDSCAPE BEDS. SEE LANDSCAPE PLANS FOR LOCATION OF LANDSCAPE BEDS.
2. INSTALL SILT FENCE ALONG ALL DOWNSTREAM SLOPES. SILT FENCE TO FOLLOW CONTOUR.
3. THERE SHALL BE NO DIRT, DEBRIS OR STORAGE OF MATERIAL IN THE STREET.
4. CONTRACTOR TO COORDINATE THE SWPPP PROGRAM WITH SPECIFICATION SECTION 312500.
5. THIS PLAN INDICATES EROSION CONTROL MEASURES REQUIRED AFTER SOIL STRIPPING AND PAD BUILDING HAS TAKEN PLACE. COORDINATE WITH DEVELOPER FOR MEASURES REQUIRED UNTIL PROPERTY TURNED OVER FOR DEVELOPMENT. COORDINATE WITH SOIL CONSERVATION DISTRICT REPRESENTATIVE FOR ANY OTHER MEASURES REQUIRED DUE TO SITE CONDITIONS.

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

Know what's below. Call before you dig.
Within Indiana Call 811 or 800-382-5544
24 Hours a Day, 7 Days a Week
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 | 846 - 6611
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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO. W14.0460
DWG NAME: w140460-C102 swppp2.dwg
DESIGNED BY: RJWRAM
DRAWN BY: RJWRAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORMWATER POLLUTION PREVENTION PLAN 3

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.05
PROJECT NO.
W14.0460

LOCK ON: H:\2014\W140460\Engineering\design\conset\w140460 - C102 swppp2.dwg
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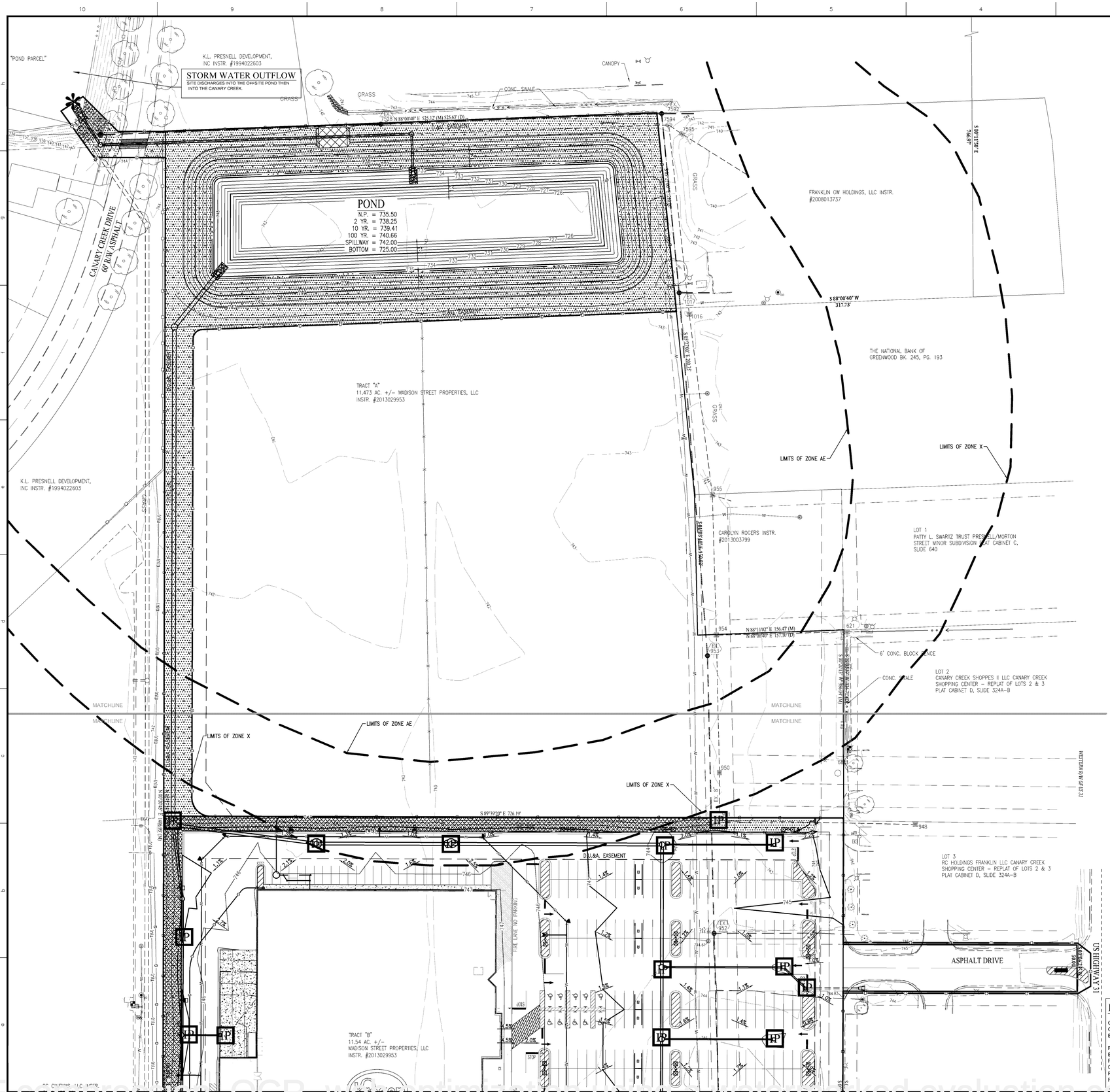

EROSION CONTROL SPECIFICATIONS

1. THIS PLAN IS DESIGNED AS AN ATTEMPT TO PREVENT ANY AND ALL SEDIMENT FROM LEAVING THE CONSTRUCTION SITE BY WAY OF EROSION. IF EROSION OF SEDIMENT FROM THE SITE IS TAKING PLACE, THE CONTRACTOR AND/OR OWNER SHALL TAKE PREVENTATIVE ACTION IMMEDIATELY. THE ENGINEER SHALL BE CONSULTED IN THE EVENT THIS HAPPENS.
2. TEMPORARY SEEDING IS TO BE APPLIED TO ANY DISTURBED AREA THAT WILL REMAIN UNALTERED IN EXCESS OF 15 DAYS.
3. PERMANENT SEEDING IS TO BE APPLIED IMMEDIATELY TO AREAS THAT HAVE ACHIEVED FINAL AND FINISHED GRADE.
4. PRESERVE EXISTING VEGETATION ON THE SITE WHENEVER AND WHEREVER POSSIBLE TO PREVENT TOPSOIL EROSION.
5. ALL SEDIMENT CAPTURING MEASURES SHALL BE IMPLEMENTED PRIOR TO THE DISTURBANCE OF THE CONSTRUCTION AREA THEY ARE INTENDED TO SERVICE. ALL EROSION CONTROL MEASURES PROPOSED ARE TO BE PROPERLY MAINTAINED TO CONTINUE THEIR EFFECTIVENESS.
6. IF GRADING OCCURS DURING THE MONTHS OF DECEMBER, JANUARY OR FEBRUARY DORMANT SEEDING PROCEDURES SHALL BE USED.
7. DURING DRY WEATHER, KEEP LAWNS WATERED WITH SPRINKLERS OR OTHER APPROVED METHODS. RESEED ANY AREAS NOT GERMINATING OR DAMAGED AT INTERVALS AS MAY BE REQUIRED ACCORDING TO SEASONAL CONDITION AND/OR CONSTRUCTION ACTIVITY. WATER GRASS AND EXECUTE NECESSARY WEEDING UNTIL FULL STAND OF GRASS HAS BEEN OBTAINED.
8. THE IMPLEMENTATION AND MAINTENANCE OF THE EROSION CONTROL IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR OWNER.
9. IT SHALL BE THE CONTRACTOR'S AND/OR OWNER'S RESPONSIBILITY TO MINIMIZE SEDIMENTATION (FROM ON-SITE CONSTRUCTION ACTIVITIES) FROM BEING DEPOSITED ONTO ADJACENT PROPERTIES AND RECEIVING STREAMS/DITCHES IN STRICT COMPLIANCE WITH "RULE 5" (327 IAC 15-5, CONSTRUCTION ACTIVITY STORM WATER RUNOFF CONTROL). IT SHALL ALSO BE THE CONTRACTOR'S AND/OR OWNER'S RESPONSIBILITY TO OBTAIN ANY APPROVALS REQUIRED FROM THE LOCAL AUTHORITY AND TO SUBMIT A COMPLETE NOTICE OF INTENT LETTER TO THE OFFICE OF WATER MANAGEMENT, INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT PRIOR TO ANY CONSTRUCTION ACTIVITY.
10. FOR SEASONAL VARIATIONS - SEE SEASONAL SOIL PROTECTION CHART IN THESE PLANS.

SWPPP III LEGEND

- IP — INLET PROTECTION - USE SUBSURFACE INLET PROTECTION WITH OVERFLOW CAPABILITY (DANDY SAC)
- PERMANENT/TEMPORARY SEEDING USE PLANTING CHART
- EROSION CONTROL BLANKET - USE S150BN BIO-NET AS SUPPLIED BY NORTH AMERICAN GREEN OR APPROVED EQUAL. AREA MUST ALSO BE SEEDED.
- MULCHED AREA
- TURF REINFORCEMENT MAT (PYRAMAT) BY PROPEX, OR EQUAL AT THE POND SPILLWAY
- LIMITS OF DISTURBANCE (CONSTRUCTION LIMITS)
- SITE DISCHARGE POINT

DISTURBED ACREAGE
= 15.000± AC.

-WARNING-
THIS PLAN TO BE USED FOR EROSION CONTROL PURPOSES ONLY. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.

LAND DESCRIPTION

SURVEYED LEGAL DESCRIPTION

ORIGINAL SURVEYED DESCRIPTION

A PART OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 12 NORTH, RANGE 4 EAST OF THE SECOND PRINCIPAL MERIDIAN, CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHEAST CORNER OF SAID QUARTER PROCEED THENCE SOUTH 00 DEGREES 11 MINUTES 50 SECONDS EAST ALONG THE EAST LINE OF SAID QUARTER 766.97 FEET TO THE NORTH LINE OF THE LANDS OF THE NATIONAL BANK OF GREENWOOD AS DESCRIBED IN DEED BOOK 245, PAGE 193 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY; PROCEED THENCE ALONG THE NORTH LINE OF SAID BANK LANDS SOUTH 88 DEGREES 00 MINUTES 40 SECONDS WEST 317.73 FEET TO THE WEST LINE OF SAID BANK LANDS; THENCE SOUTH 05 DEGREES 27 MINUTES 00 SECONDS EAST ALONG SAID WEST LINE 200.35 FEET TO THE NORTHWEST CORNER OF THE LANDS OF CAROLYN ROGERS AS DESCRIBED IN INSTRUMENT NUMBER 2013003799 IN SAID RECORDER'S OFFICE, MARKED BY A REBAR WITH CAP STAMPED ESW LS20200016" (HEREAFTER REFERRED TO AS ESW REBAR) THENCE SOUTH 01 DEGREES 03 MINUTES 40 SECONDS EAST ALONG THE WEST LINE OF SAID ROGERS LANDS 150.02 FEET TO THE SOUTHWEST CORNER OF SAID ROGERS LANDS, MARKED BY AN ESW REBAR; THENCE NORTH 88 DEGREES 11 MINUTES 02 SECONDS EAST ALONG THE SOUTH LINE OF SAID ROGERS LANDS 156.47 FEET TO THE SOUTHWEST CORNER OF LOT 1 OF PRESNELL/MORTON STREET MINOR SUBDIVISION AS RECORDED IN PLAT CABINET C, SLIDE 640 IN SAID RECORDER'S OFFICE; THENCE SOUTH 00 DEGREES 20 MINUTES 13 SECONDS WEST ALONG THE WEST LINE OF LOT 2 OF CANARY CREEK SHOPPING CENTER REPLAT OF LOTS 2 & 3, THE PLAT OF WHICH IS RECORDED IN PLAT CABINET D, SLIDE 324A-B IN SAID RECORDER'S OFFICE 200.98 FEET TO THE POINT OF BEGINNING, MARKED BY A 5/8 INCH DIAMETER REBAR WITH CAP STAMPED "BANNING ENG FIRM #0060" (HEREAFTER REFERRED TO AS BANNING REBAR); THENCE CONTINUE SOUTH 00 DEGREES 20 MINUTES 13 SECONDS WEST 135.06 FEET TO THE SOUTHWEST CORNER OF LOT 3 IN CANARY CREEK SHOPPING CENTER REPLAT OF LOTS 2 & 3 AS RECORDED IN PLAT CABINET D, SLIDE 324A-B, MARKED BY A MAGSPIKE WITH WASHER STAMPED "BANNING ENG FIRM #0060"; THENCE SOUTH 89 DEGREES 38 MINUTES 55 SECONDS EAST ALONG THE SOUTH LINE OF SAID LOT 3 A DISTANCE OF 249.77 FEET TO THE WESTERN RIGHT OF WAY FOR US HIGHWAY 31, MARKED BY A BANNING BEHAR; THENCE SOUTH 00 DEGREES 04 MINUTES 24 SECONDS WEST ALONG SAID RIGHT OF WAY 50.00 FEET TO THE NORTHEAST CORNER OF LOT 5 IN CANARY CREEK SHOPPING CENTER, SECTION THREE AS RECORDED IN PLAT CABINET I), SLIDE 139A-B, MARKED BY A MAGSPIKE WITH WASHER STAMPED "BANNING ENG FIRM #0060"; THENCE NORTH 89 DEGREES 38 MINUTES 55 SECONDS WEST ALONG THE NORTH LINE OF SAID LOT 5 A DISTANCE OF 250.00 FEET TO AN IRON REBAR WITH SMASHED CAP; THENCE SOUTH 00 DEGREES 21 MINUTES 05 SECONDS WEST ALONG THE WEST LINE AND ITS EXTENSION OF SAID LOT 5 A DISTANCE OF 489.94 FEET TO THE NORTHERN RIGHT OF WAY FOR MALLORY PARKWAY; THENCE NORTH 89 DEGREES 39 MINUTES 20 SECONDS WEST ALONG SAID RIGHT OF WAY 726.17 FEET TO THE EASTERN LINE OF THE LANDS OF CC CINEMAS, LLC AS DESCRIBED IN INSTRUMENT NUMBER 2006033562 IN SAID RECORDER'S OFFICE; THENCE NORTH 00 DEGREES 20 MINUTES 45 SECONDS EAST ALONG SAID EAST LINE 675.00 FEET TO A BANNING REBAR; THENCE SOUTH 89 DEGREES 39 MINUTES 20 SECONDS EAST 726.19 FEET TO THE POINT OF BEGINNING, AND CONTAINING 11.540 ACRES OF LAND, MORE OR LESS.

BENCHMARK INFORMATION
DNR TBM CD 1, 1988 IN JOHNSON COUNTY, FRANKLIN QUADRANGLE, IN THE NE ¼ OF SECTION 10, TOWNSHIP 12 NORTH, RANGE 4 EAST, 2ND P.M.; AT FRANKLIN; AT THE U.S. 31 BRIDGE OVER CANARY DITCH; SET IN THE TOP OF THE SOUTHEAST CONCRETE WINGWALL OF THE BRIDGE, 25.8 FEET EAST OF THE CENTERLINE OF THE BRIDGE, 0.6 FOOT NORTH OF THE SOUTH END OF THE WINGWALL 1.0 FOOT BELOW THE LEVEL OF THE ROAD; A "PK" NAIL SET IN A DRILL HOLE, INSIDE A CUT CIRCLE.
2ND ORDER ELEVATION
REVISED ELEVATION 229.240 METERS N.G.V.D, 1929
752.099 FEET N.G.V.D. 1929 (751.693 FEET N.A.V.D.1988)

TBM #1 ELEV: 745.81 CUT SQUARE ON TOP ON A CONCRETE LIGHT BASE ON THE WEST EDGE OF CONCRETE, DUE WEST OF THE SOUTHWEST CORNER OF THE SHERWIN WILLIAMS BUILDING SQUARE IS APPROXIMATELY 15 FEET NORTHEAST OF A DRIVE STUB BEHIND THE BUILDING.

TBM #2 ELEV: 747.77 CUT SQUARE IN THE NORTHWEST CORNER OF A CONCRETE WATER VAULT ON THE EAST SIDE OF THE MIDDLE KOHL'S ENTRANCE LOCATED ON THE SOUTH SIDE OF MALLORY PARKWAY.

TBM #3 ELEV: 742.94 CUT SQUARE IN THE SOUTHEAST CORNER OF A CONCRETE WATER VAULT DUE EAST OF THE SOUTHEAST CORNER OF CANARY CREEK CINEMA BUILDING.

CONTACT PERSON FOR EROSION CONTROL & SEDIMENT PRACTICES

WEIHE ENGINEERS, INC.
10505 N. COLLEGE AVE.
INDIANAPOLIS, IN 46268
TELEPHONE: (317) 846-6611
FAX: (317) 843-0546
EMAIL: SHINNEMANJ@WEIHE.NET
CONTACT PERSON: JAMIE SHINNEMAN

EROSION CONTROL NOTES

1. ALL DISTURBED AREAS SHALL BE SODDED OR SEEDED, EXCEPT BUILDING PAD AND LANDSCAPE BEDS. SEE LANDSCAPE PLANS FOR LOCATION OF LANDSCAPE BEDS.
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4. CONTRACTOR TO COORDINATE THE SWPPP PROGRAM WITH SPECIFICATION SECTION 312500.
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ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

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		BY
REVISIONS AND ISSUES SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO: W14-0460
DWG NAME: w140460-C102 swppp2.dwg
DESIGNED BY: RJWRAM
DRAWN BY: RJWRAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT VALID UNLESS PRINTED ON RED SEAL PAPER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORMWATER POLLUTION PREVENTION PLAN 3

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.06

PROJECT NO.
W14.0460

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LAYOUT TAB: C102
PLOTTED: February 12, 2015 - 7:27am
PLOTTED BY: scholette

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SECTION A - CONSTRUCTION PLAN ELEMENTS

A1 PLAN INDEX - SEE BELOW
A2 11"x17" PLAT (REDUCTIONS OF STORMWATER POLLUTION PREVENTION PLAN TO BE SUBMITTED WITH FULL SIZE PLAN)
A3 PROJECT NARRATIVE - THIS IS A PROPOSED COMMERCIAL DEVELOPMENT ON APPROXIMATELY 15.00 ACRES. THE CONSTRUCTION SHALL CONSIST OF 1 BUILDING, ASPHALT PARKING, AND ENTRY DRIVES.
A4 VICINITY MAP - SEE BOTTOM RIGHT SIDE OF THIS SHEET
A5 LEGAL DESCRIPTION - SEE RIGHT SIDE OF SHEETS CC1.05 AND C1.06, LAT: 39°29'19"N LONG: 86°03'59"W
A6 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS - SEE STORMWATER POLLUTION PREVENTION PLAN
A7 HYDROLOGIC UNIT CODE (12-DIGIT) - EAST SIDE: 051202040090030 WEST SIDE: 051202040090030
A8 NOTATION OF ANY STATE OR FEDERAL WATER QUALITY PERMITS - NOT APPLICABLE
A9 SPECIFIC POINTS WHERE STORMWATER DISCHARGE LEAVES SITE - THE SITE IS RATHER FLAT AND SEEKS ITS COURSE TO THE EXISTING INFRASTRUCTURE. THE FINAL PRODUCT CAPTURES THE WATERSHED AND PIPES IT UNDERGROUND TO AN ONSITE POND, THEN EVENTUALLY INTO CANARY CREEK WEST OF THE SITE.
A10 LOCATION AND NAME OF WETLANDS, LAKES AND WATER COURSES ON AND ADJACENT TO SITE - CANARY CREEK IS OFFSITE AND TO THE WEST OF THE SITE
A11 IDENTIFICATION OF ALL RECEIVING WATERS - CANARY CREEK
A12 IDENTIFICATION OF THE POTENTIAL DISCHARGE TO GROUND WATER - NOT APPLICABLE
A13 100 YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGES - THE 100 YEAR ELEVATION WAS ESTABLISHED AT THE 743 ELEVATION FOR CANARY CREEK.
A14 PRE-CONSTRUCTION AND POST-CONSTRUCTION ESTIMATE OF PEAK DISCHARGE (10 YEAR) -
Q10pre = 5.48 cfs Q10post = 2.14 cfs
A15 ADJACENT LANDUSE INCLUDING UPSTREAM WATERSHED - SEE STORMWATER POLLUTION PREVENTION PLAN
A16 CONSTRUCTION LIMITS - SEE STORMWATER POLLUTION PREVENTION PLAN
A17 IDENTIFICATION OF EXISTING VEGETATIVE COVER - ROW CROPS
A18 SOILS MAP W/ SOIL DESCRIPTIONS AND LIMITATIONS - SEE BOTTOM RIGHT SIDE OF THIS SHEET
A19 LOCATIONS, SIZE & DIMENSIONS OF PROPOSED STORMWATER SYSTEMS - GRADING PLANS (C3.01 TO C3.02) AND DRAINAGE PLANS (C6.01 TO C6.02)
A20 PLANS FOR OFF-SITE CONSTRUCTION ACTIVITIES - NOT APPLICABLE
A21 LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL AREAS - N/A AT THIS TIME. IF STOCKPILES ARE USED, THEY MUST BE RINGED WITH SILT FENCE AND STABILIZED IF LEFT UNDISTURBED FOR MORE THAN 14 DAYS.
A22 EXISTING SITE TOPOGRAPHY - THE SITE IS BASICALLY SITTING AT THE 743 ELEVATION ON ALL SIDES. THE SITE IS RATHER FLAT.
A23 PROPOSED FINAL TOPOGRAPHY - THE PROPOSED GRADES WILL FOLLOW THE SAME WATERSHED PATTERN BASED OFF OF THE EXISTING CONDITIONS. THE SITE WILL DRAIN FROM THE SOUTH TO THE NORTH PART OF THE COMBINED TRACT.

SECTION B - SWPPP - CONSTRUCTION PHASE

B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES - POTENTIAL POLLUTANTS FROM CONSTRUCTION ACTIVITY SUCH AS ASPHALT FROM PAVING; CONCRETE FROM CURBING, SIDEWALKS, OIL, GREASE, ANTIFREEZE, GASOLINE AND DIESEL FUEL FROM CONSTRUCTION EQUIPMENT; SOIL EROSION; FERTILIZER AND PESTICIDES FROM LANDSCAPING AND TRASH SHOULD BE PROPERLY ATTENDED TO TO REDUCE THE CONTAMINANTS FROM ENTERING THE STORM SYSTEM. TRASH SHOULD BE CLEANED UP TO REDUCE CLOGGING OF STORM SYSTEMS AND REDUCE POTENTIAL BACTERIA AND/OR OTHER BIOLOGICAL AGENTS FROM ENTERING IN THE STORM SYSTEM.
B2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES -
1. A PRE-CONSTRUCTION MEETING WITH THE CITY OF FRANKLIN IS REQUIRED PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK. ADDITIONALLY, IDEM IS REQUIRED TO BE CONTACTED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
2. CONSTRUCTION ENTRANCE - REMOVE TOPSOIL AND PLACE STONE AT ACCESS POINT ALONG MALLORY PARKWAY.
3. INSTALL SILT FENCING AND ALL OTHER EROSION CONTROL MEASURES PRIOR TO ANY EARTH MOVING.
4. POST ALL APPLICABLE SIGNS, INCLUDING THE NOTICE OF INTENT (NOI), AND THE SWPPP WITH EROSION AND SEDIMENT CONTROL PLANS AT THE SITE FOR CONTINUAL USE AND MODIFICATION. (SEE ATTACHED "CONSTRUCTION SITE NOTICE" (FOR POSTING AT THE CONSTRUCTION ENTRANCE).
5. PHASING OF WORK TO ALLOW EXISTING VEGETATIVE AREAS OR BUFFERS TO REMAIN AS LONG AS POSSIBLE IS ENCOURAGED.
6. EROSION CONTROLS MUST BE INSPECTED AS SPECIFIED IN SECTION VIA AND PER THE ATTACHED INSPECTION CHECKLIST.
7. INSTALL ANY SEDIMENT BASINS PER THE SITE DRAWINGS, AS SOON AS POSSIBLE, DURING THE CLEARING AND EXCAVATION OF THE SITE. PROVIDE TEMPORARY GRADING TO DIRECT WATER TO BASINS.
8. EARTHWORK - STRIP TOPSOIL, BEGIN ROUGH GRADING AND PREPARE BUILDING PAD AND ROUGH GRADE.
9. STORM SEWER - INSTALL STORM SEWER SYSTEM, UNDERGROUND DETENTION, AND CORRESPONDING INLET PROTECTION.
10. SANITARY SEWER - INSTALL SANITARY SEWER SYSTEMS
11. REMOVE ACCUMULATED SEDIMENT FROM EROSION CONTROLS AS NECESSARY.
12. CONTINUE INSTALLING/MODIFYING EROSION CONTROLS AS THE CONSTRUCTION OF SITE UTILITIES, FOUNDATIONS, AND STRUCTURES CHANGE THE TOPOGRAPHY OF THE SITE.
13. ESTABLISH TEMPORARY STABILIZATION/SEEDING ON ALL AREA THAT ARE TO REMAIN UNDISTURBED PER THE ATTACHED WEEKLY INSPECTION CHECKLIST.
14. FINISH GRADING AND MODIFY EROSION CONTROL - FINISH GRADE AND PERMANENTLY SEED ALL PROPERTY PERIMETER AREAS.
15. UTILITIES - COORDINATE INSTALLATION OF ALL UTILITIES.
16. PAVEMENT - INSTALL STONE, BASE COURSES AND FINISHED GRADES FOR ENTRY DRIVE.
17. CLEANUP - CONTRACTOR SHALL SPOIL ALL EXCESS MATERIALS, RE-GRADE AND STABILIZE ALL AREAS DISTURBED BY UTILITY INSTALLATIONS AND RESEED.
18. FINAL LANDSCAPING - INSTALL FINAL LANDSCAPING.
19. THE GENERAL CONTRACTOR WILL KEEP WRITTEN DOCUMENTATION OF MAJOR EARTHMOVING ACTIVITIES USING THE ATTACHED SITE LOG INDICATING START AND STOP DATES FOR DEFINED AREAS OF THE SITE. NOTE THESE AREAS ON THE SITE DRAWINGS WHEN POSSIBLE
20. PROVIDE FINAL STABILIZATION IMMEDIATELY AS AREAS ARE MADE AVAILABLE. FINAL STABILIZATION, 70 PERCENT COVERAGE OF TURF GRASS, IS SPECIFIED IN THE TEXT OF THE APPLICABLE PERMIT.
21. REMOVE TEMPORARY OR SEDIMENT CONTROL PRACTICES ONCE FINAL STABILIZATION/ VEGETATION HAS BEEN ESTABLISHED.
22. FILE THE APPROPRIATE NOTICE OF TERMINATION (NOT) WHEN THE ENTIRE PROJECT IS COMPLETE.
23. KEEP ALL SWPPP DOCUMENTS, INCLUDING INSPECTION CHECKLISTS, ON FILE FOR THREE YEARS FROM TERMINATION.
B3 CONSTRUCTION ENTRANCE - SEE STORMWATER POLLUTION PREVENTION PLANS AND SEE DETAIL ON SHEET C1.08.
B4 SEDIMENT CONTROL PLAN FOR CONCENTRATED FLOW AREAS - SEE STORMWATER POLLUTION PREVENTION PLANS AND THE VARIOUS DETAILS TO BE USED SUCH AS SILT FENCE, DIVERSION SWALES, TEMPORARY SEDIMENT BASINS, ETC., AS FOUND IN SHEETS C1.01 THROUGH C1.10.
B5 SEDIMENT CONTROL PLAN FOR CONCENTRATED FLOW AREAS - SEE STORMWATER POLLUTION PREVENTION PLANS AND THE VARIOUS DETAILS TO BE USED SUCH AS SILT FENCE, DIVERSION SWALES, TEMPORARY SEDIMENT BASINS, ETC., AS FOUND IN SHEETS C1.01 THROUGH C1.10.
B6 STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECS - SEE STORMWATER POLLUTION PREVENTION PLANS AND THE VARIOUS DETAILS TO BE USED SUCH AS DROP INLET PROTECTION, ROCK CHECK DAMS, COCONUT INLET MATS, ETC., AS FOUND IN SHEETS C1.01 THROUGH C1.10.
B7 RUNOFF CONTROL MEASURES - NOT APPLICABLE
B8 STORM WATER OUTLET PROTECTION SPECS - SEE STORMWATER POLLUTION PREVENTION PLANS AND THE VARIOUS DETAILS TO BE USED SUCH AS DIVERSION SWALES, DIVERSION BERMS, ROCK CHECK DAMS, TEMPORARY SEDIMENT BASINS, ETC., AS FOUND IN SHEETS C1.01 THROUGH C1.10. THE PERMANENT OUTLET IS TO BE EXTENDED INTO THE SITE AND BE USED DURING THE SWPPP PHASING OF THE SITE UNTIL THE FINAL STORM SEWER SYSTEM HAS BEEN INSTALLED.
B9 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECS - SEE STORMWATER POLLUTION PREVENTION PLANS AND THE VARIOUS DETAILS TO BE USED SUCH AS TEMPORARY SEED, PERMANENT SEED, SOD(ALTERANTE), EROSION BLANKET, ETC., AS FOUND IN SHEETS C1.01 THROUGH C1.10.
B10 STORMWATER QUALITY CONSTRUCTION DETAILS - SEE STORMWATER POLLUTION PREVENTION PLAN.
B11 TEMPORARY SURFACE STABILIZATION METHOD FOR EACH SEASON - SEE SEASONAL SOIL PROTECTION CHART
B12 PERMANENT SURFACE STABILIZATIONS - SEE SEASONAL SOIL PROTECTION CHART
B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN - POTENTIAL POLLUTANTS FROM CONSTRUCTION ACTIVITY SUCH AS ASPHALT FROM PAVING; CONCRETE FROM CURBING, SIDEWALKS. A CONCRETE WASHOUT AREA HAS BEEN DESIGNATED OIL, GREASE, ANTIFREEZE, GASOLINE AND DIESEL FUEL FROM CONSTRUCTION EQUIPMENT. IF THERE IS A SPILL FROM ONE OF THESE, IMMEDIATE CLEANUP SHOULD OCCUR; SOIL EROSION; FERTILIZER AND PESTICIDES FROM LANDSCAPING AND TRASH SHOULD BE PROPERLY ATTENDED TO TO REDUCE THE CONTAMINANTS FROM ENTERING THE STORM SYSTEM. TRASH SHOULD BE CLEANED UP TO REDUCE CLOGGING OF STORM SYSTEMS AND REDUCE POTENTIAL BACTERIA AND/OR OTHER BIOLOGICAL AGENTS FROM ENTERING IN THE STORM SYSTEM.
SHALL MEET THE REQUIREMENTS OF IAC 2-6.1. FOLLOW MATERIAL SAFETY DATA SHEET (MSDS) GUIDELINES FOR CONTAMINANTS PRESENT ON SITE.
B14 MONITORING AND MAINTENANCE GUIDELINES FOR EACH STORMWATER QUALITY MEASURE - INSPECT ALL EROSION CONTROL MEASURES WEEKLY AND AFTER EACH STORM EVENT OR HEAVY USE. REPAIR/REPLACE ANY COMPROMISED OR FAILED MEASURE AS REQUIRED. MORE SPECIFIC GUIDELINES ARE INCLUDED ON INDIVIDUAL DETAILS.
B15 EROSION & SEDIMENT CONTROL SPECS - N/A
B17 SEDIMENT CONTROL ASSOCIATED WITH DEWATERING AND DIRECTIONAL BORING OPERATIONS - IN THE EVENT THAT DEWATERING IS REQUIRED ON SITE, PROVIDE SEDIMENT AND OIL CONTAINMENT WITH THE USE OF THE ULTRA DEWATERING BAG, PART #9724-O/S AS PROVIDED BY ULTRATECH INTERNATIONAL, INC. AND SUPPLIED BY D2 LAND & WATER RESOURCES. REFER TO MANUFACTURER SPECIFICATIONS FOR ALTERNATE SIZES OF BAGS IF NEEDED. ALTERNATE EQUAL MEASURES OF CONTAINMENT MAY BE APPROVED BY THE ENGINEER OR EROSION CONTACT PERSON IF ANOTHER PRODUCT OR METHOD OF CONTAINMENT IS DESIRED.

SECTION C - SWPPP - POST-CONSTRUCTION PHASE

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE - POTENTIAL POLLUTANTS FROM POST-CONSTRUCTION ACTIVITY SUCH AS SANDS AND SALTS FROM SNOW REMOVAL; OIL, GREASE, ANTIFREEZE, ETC. FROM VEHICLES INCLUDING HEAVY METAL FROM BRAKE PAD WEAR SHOULD BE PROPERLY ATTENDED TO TO REDUCE THE CONTAMINANTS FROM ENTERING THE STORM SYSTEM. TRASH SHOULD BE CLEANED UP TO REDUCE CLOGGING OF STORM SYSTEMS AND REDUCE POTENTIAL BACTERIA AND/OR OTHER BIOLOGICAL AGENTS FROM ENTERING IN THE STORM SYSTEM. EXCESS FERTILIZERS AND HERBICIDES SHOULD BE AVOIDED. CLEAN UP IMMEDIATELY IF ANY IS SPILLED.
C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION - WATER QUALITY IS PROVIDED BY THE TIME OF TRAVEL ACROSS THE PROPOSED STORMWATER MANAGEMENT AREA AT THE NORTH END OF THE COMBINED TRACTS AS SHOWN ON THE PLANS, AND VARIOUS CATCH BASINS AROUND THE SITE. ADDITIONAL WATER QUALITY MEASURES WILL BE IMPLEMENTED BY THE SITE OWNER AS PART OF THEIR SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN. DETAILS ARE PROVIDED IN SHEETS C1.08 THROUGH C.10.
C3 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES - WATER QUALITY IS PROVIDED BY THE TIME OF TRAVEL ACROSS THE PROPOSED STORMWATER MANAGEMENT AREA AT THE NORTH END OF THE COMBINED TRACTS AS SHOWN ON THE PLANS, AND VARIOUS CATCH BASINS AROUND THE SITE. ADDITIONAL WATER QUALITY MEASURES WILL BE IMPLEMENTED BY THE SITE OWNER AS PART OF THEIR SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN. DETAILS ARE PROVIDED IN SHEETS C1.08 THROUGH C.10.
C4 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORM WATER QUALITY MEASURE - WATER QUALITY IS PROVIDED BY THE TIME OF TRAVEL ACROSS THE PROPOSED STORMWATER MANAGEMENT AREA AT THE NORTH END OF THE COMBINED TRACTS AS SHOWN ON THE PLANS, AND VARIOUS CATCH BASINS AROUND THE SITE. ADDITIONAL WATER QUALITY MEASURES WILL BE IMPLEMENTED BY THE SITE OWNER AS PART OF THEIR SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN. DETAILS ARE PROVIDED IN SHEETS C1.08 THROUGH C.10.
C5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST CONSTRUCTION STORMWATER QUALITY MEASURES - MAINTENANCE GUIDELINES FOR THE STORMWATER MANAGEMENT AREA AND CATCH BASINS ARE INDICATED IN THE O&M MANUAL PROVIDED, AND AS STATED BELOW:.

CATCH BASINS:
CATCH BASIN/INLET CLEANING AND REPAIR HAS TRADITIONALLY BEEN PERFORMED TO RESPOND TO LOCALIZED FLOODING PROBLEMS IN STREETS. CATCH BASINS ARE INLETS AT THE CURB WITH A SMALL TRAP (USUALLY SIX INCHES TO ONE FOOT DEEP) BELOW THE SEWER PIPE. THESE DEVICES HELP TO CLEAN STORM WATER BECAUSE PARTICLES IN STREET RUNOFF SETTLE INTO THE TRAP BEFORE THE WATER ENTERS THE STORM SEWERS. CATCH BASINS REQUIRE REGULAR CLEANING OF THE SEDIMENT TRAP TO BE. THE INLETS DO NOT TRAP SEDIMENTS AND DON'T NEED CLEANING UNLESS THEY ARE PLUGGED. CLEANING FOR EITHER CATCH BASINS OR INLETS CAN BE DONE BY HAND (E.G., WITH A CLAMSHELL OR SHOVEL) OR WITH A VACUUM TRUCK.

CONVEYANCE STORM PIPES:
A GOOD RULE OF THUMB IS TO CONDUCT INSPECTION OF STORM DRAIN INLETS, DITCHES, CHANNELS, PONDS AND OTHER TREATMENT FACILITIES AT LEAST ONCE A YEAR, PRIOR TO THE BEGINNING OF THE RAINY SEASON. COMPLETE INSPECTIONS EARLY ENOUGH SO THAT REPAIRS CAN BE MADE DURING DRY WEATHER. CATCH BASINS SHOULD BE INSPECTED AT LEAST ONCE EVERY SIX MONTHS. SOME STORM WATER TREATMENT DEVICES, SUCH AS OIL/WATER SEPARATORS, MAY REQUIRE MORE FREQUENT INSPECTION. FOR THESE, CHECK THE MANUFACTURER'S SPECIFICATION OR OTHER DESIGN GUIDANCE HANDBOOKS. SEWER PIPES AND CULVERTS SHOULD BE INSPECTED EVERY THREE TO FIVE YEARS, OR IN RESPONSE TO A REPORTED PROBLEM. MOST AGENCIES INSPECT THEIR SEWER PIPES SIX INCHES OR LARGER WITH A TV CAMERA, AND PIPES 36 INCHES OR LARGER WITH A WALK-THROUGH INSPECTION. ALL OTHER PARTS OF THE SYSTEM ARE INSPECTED VISUALLY.

LOOK FOR EXCESSIVE SILT BUILD-UP, EROSION, UNUSUAL ALGAL GROWTH, CRACKED OR COLLAPSED PIPES, MISALIGNED JOINTS, AND OTHER SIGNS OF PROBLEMS SUCH AS A SHEEN ON THE WATER SURFACE, DISCOLORED WATER, OR AN UNPLEASANT ODOR. CHECK WITH PRODUCT MANUFACTURERS OR STORM WATER HANDBOOKS FOR ADVICE ON WHAT TO LOOK FOR WHEN INSPECTING MORE SOPHISTICATED TREATMENT DEVICES SUCH AS FLOW SPLITTERS AND DIVERTERS. WHEN A PROBLEM IS NOTED, TAKE STEPS TO CORRECT THE PROBLEM, OR ROUTE THIS INFORMATION IMMEDIATELY TO THE APPROPRIATE INDIVIDUAL(S) IN YOUR ORGANIZATION WHO CAN RESPOND. IF NEEDED, DEVELOP A GOOD RESPONSE PLAN TO ENSURE QUICK FOLLOW-UP IN THE FUTURE.

WET DETENTION BASIN:
ALSO CALLED STORMWATER PONDS, RETENTION PONDS OR WET EXTENDED DETENTION PONDS, THESE FACILITIES ARE BASINS THAT HAVE A PERMANENT POOL OF WATER THROUGHOUT THE YEAR. THE WET POND IS CONSTRUCTED TO STORE RUNOFF DURING AND AFTER STORMS. WET PONDS TREAT AND FILTER STORMWATER RUNOFF THROUGH SETTLING AND THROUGH NUTRIENT UPTAKE BY PLANTS AND OTHER AQUATIC ORGANISMS.

SECTION 1 - EMERGENCY RESPONSE NUMBERS

EMERGENCY RESPONSE TO ANY LIFE THREATENING PROBLEM.	911
JOHNSON COUNTY FIRE DEPARTMENT	911
JOHNSON COUNTY POLICE DEPARTMENT	911
INDIANA DEPARTMENT OF NATURAL RESOURCES	812-477-8773
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	317-233-7745
JOHNSON COUNTY SOIL AND WATER	317-342-5594

SECTION 2 MATERIAL HANDLING AND SPILL PREVENTION PLAN

IN ORDER TO MINIMIZE THE RELEASE OF POTENTIAL POLLUTANTS DURING CONSTRUCTION THE CONTRACTOR SHALL IMPLEMENT THIS MATERIAL HANDLING AND SPILL PREVENTION PLAN. THE CONTRACTOR SHALL REVIEW THIS PLAN WITH ALL SUBCONTRACTORS AND REQUIRE THAT THEY IMPLEMENT THE PLAN AS WELL.

1. CONSTRUCTION EQUIPMENT
A. FUELING, LUBRICATION AND FLUIDS: ALL OPERATIONS INVOLVING THE ADDITION OF FLUIDS TO EQUIPMENT SHOULD BE DONE IN ONE LOCATION, AS DESIGNATED BY THE CONSTRUCTION MANAGER. ONLY THOSE FLUIDS NECESSARY TO OPERATE EQUIPMENT ON THE SITE, WHICH WILL FACILITATE THE CLEANUP OF SPILLS. IF AN ONSITE-FUELING TANK IS PLANNED TO BE ON SITE, IT SHALL BE DOUBLE WALLED AND STORED IN THIS DESIGNED AREA. THIS LOCATION IN AN AREA THAT WILL NOT ALLOW SPILLED FLUIDS TO MIGRATE INTO SURFACE SOILS. IN THE EVENT OF A SPILL, THE FLUID SHALL IMMEDIATELY BE CLEANED UP BY REMOVING THE CONTAMINATED SOIL OR STONE, WHICH SHALL BE DISPOSED OF IN AN ACCEPTABLE MANNER. SPILLS ON HARD SURFACES SHALL BE SOAKED UP BY AN ACCEPTABLE MATERIAL SUCH AS OIL DRY AND THE ABSORBENT MATERIAL DISPOSED OF IN A PROPER MANNER. THE SPILL SHALL ALSO BE REPORTED IMMEDIATELY TO THE CONSTRUCTION MANAGER'S SUPERINTENDENT.
B. EQUIPMENT REPAIR, ESPECIALLY WHEN FLUIDS MUST BE REMOVED FROM THE EQUIPMENT OR THE POSSIBILITY OF FLUID SPILLS IS HIGH, SHOULD ALWAYS BE DONE OFFSITE AT A FACILITY THAT IS MORE SUITABLE THAN A CONSTRUCTION SITE TO HANDLE SPILLS. WHEN EQUIPMENT MUST BE REPAIRED ONSITE IT SHOULD BE MOVED TO THE MAINTENANCE AND FUELING AREA IF POSSIBLE. OTHERWISE, SUITABLE ON SITE CONTAINERS SHOULD BE PLACED UNDER THE EQUIPMENT DURING REPAIR TO CATCH ANY SPILLED FLUIDS AND THESE FLUIDS SHOULD BE DISPOSED OF IN A PROPER MANNER.
C. ALL REUSABLE FLUID CONTAINERS, SUCH AS GASOLINE CANS, SHALL BE INSPECTED FOR LEAKS EACH TIME THEY ARE USED. IF LEAKS ARE FOUND, THE FLUID SHALL BE REMOVED FROM THE CONTAINER IN A PROPER MANNER AND THE CONTAINERS DISPOSED OF IN AN ACCEPTABLE MANNER. EMPTY DISPOSABLE CONTAINER, SUCH AS GREASE TUBES AND LUBRICATING OIL AND BRAKE FLUID CONTAINERS, AND THEIR PACKAGING, SHALL BE DISPOSED OF IN A PROPER MANNER AND SHALL NOT BE LEFT ON THE GROUND OR IN THE OPEN ON THE CONSTRUCTION SITE.
2. CONSTRUCTION MATERIALS AND THEIR PACKAGING
A. EROSION CONTROL MEASURE SHOWN ON THE SUBJECT PROJECT SHALL BE IMPLEMENTED PRIOR TO AND DURING CONSTRUCTION TO MINIMIZE SEDIMENT PROGRESSING TO MINIMIZE SOIL EROSION. STORMWATER CONTROLS SHALL BE INSPECTED AND MAINTAINED AS DESCRIBED ELSEWHERE ON THE PLANS. EXCESSIVE DUSTING OF SOIL ON THE SITE SHALL BE MINIMIZED BY REDUCING DISTURBED AREAS PROPERLY PROPER GRADING BARE SOIL DURING DRY AND/OR WINDY WEATHER, AND BY APPLYING WATER OR OTHER ACCEPTABLE DUST CONTROL MEASURES TO THE SOIL. UPON COMPLETION OF CONSTRUCTION AND SUITABLE ESTABLISHMENT OF PERMANENT VEGETATION, TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE, CHECK DAMS AND INLET PROTECTION DEVICES SHALL BE REMOVED IN A MANNER TO MINIMIZE ADDITIONAL LAND DISTURBANCE. ANY AREAS DISTURBED BY THESE OPERATIONS SHALL BE PROPERLY REGESTATED.
B. LARGE WASTE MATERIALS CREATED BY CUTTING, SAWING, DRILLING, OR OTHER OPERATIONS SHALL BE PROPERLY DISPOSED OF IN SUITABLE WASTE CONTAINERS. THE SITE SHALL BE CHECKED AT THE END OF THE DAY, AS A MINIMUM, AND ALL WASTE MATERIALS, INCLUDING THOSE BLOWN ACROSS OR OFF THE SITE BY WIND SHALL BE PICKED UP AND DISPOSED OF IN SUITABLE CONTAINERS. WHERE POSSIBLE, OPERATIONS SUCH AS SAWING THAT CREATE SMALL PARTICLES SHOULD BE PERFORMED IN ONE SPOT IN AN AREA SPECIFICALLY DESIGNED AND ONSITE PARTICLES COLLECTED AND DISPOSED OF FREQUENTLY TO MINIMIZE WIND DISPERSAL. PACKAGING USED TO TRANSPORT MATERIALS TO THE SITE FOR CONSTRUCTION OF THE FACILITY SHALL BE DISPOSED OF PROPERLY, WHERE POSSIBLE RECYCLED, AND TAKEN OUT OF ITS PACKAGE AND INCORPORATED INTO THE PROJECT IMMEDIATELY OR STORED ONSITE FOR FUTURE USE. PACKAGED MATERIALS STORED ONSITE SHALL BE INSPECTED REGULARLY AND ANY LOOSE PACKAGING SHALL BE REPAIRED OR DISPOSED OF PROPERLY.
C. ALL DEWATERING OF ACTIVITIES SHALL BE DONE IN ACCORDANCE TO GOOD EROSION CONTROL PRACTICES. THESE PRACTICES SHOULD INCLUDE THE USE OF DIRT BAGS SUCH AS SILT FENCE INLET PROTECTION. THE USE OF THESE TYPES OF DEWATERING DEVICES WILL REMOVE LARGE QUANTITIES OF SILT, SEDIMENT, AND DIRT AND PREVENT THESE MATERIALS TO ENTER THE STORM SEWER SYSTEM.
D. IF THE USE OF LIME IS USED TO STABILIZE THE SOIL OF THE SITE THEN ALL CONSTRUCTION EQUIPMENT USED SHALL BE CLEANED OF ALL EXCESS MATERIAL WITH WATER IN THE MAINTENANCE AND REFUELING AREA AS SHOWN WITHIN THESE PLANS.
E. NUTRIENTS AND FERTILIZERS SHALL ONLY BE USED TO ESTABLISH RAPID VEGETATION. WHEN THESE PRODUCTS ARE UTILIZED, THE USER SHOULD PAY STRICT ATTENTION TO THE PRODUCTS RECOMMENDED USAGE.
3. CONCRETE WASTE WATER
A. ALL CONCRETE WASTEWATER SHALL BE DISPOSED OF IN THE DESIGNED AREA AS DIRECTED BY THE CONSTRUCTION MANAGER. THIS AREA IS TO BE A 3' DEEP, 10' SQUARE PIT AS DETAILED ON THE EROSION CONTROL PLAN. THIS AREA SHALL BE INSPECTED ON A DAILY BASIS AT A MINIMUM. WHEN THIS AREA BECOMES FULL, THE POLLUTANTS SHALL BE EXCAVATED, PLACED IN AN ACCEPTABLE CONTAINER AND DISPOSED OF IN PROPER MANNER, BY THE EXCAVATION CONTRACTOR.
4. PAINT PRODUCTS
A. ALL EXCESS PAINT AND THEIR RELATED PRODUCTS SHALL BE DISPOSED OF IN THE MANNER AT WHICH THE MANUFACTURER SUGGESTS. UNDER NO CIRCUMSTANCES WILL PAINT OR THEIR RELATED PRODUCTS BE CLEANED OR DISPOSED OF IN SOIL, SANITARY SEWERS, STORM SEWERS OR DETENTION BASINS. ANY VIOLATION OF THIS SHALL BE REPORTED TO THE JOB SUPERINTENDENT.
IN THE EVENT OF ACCIDENTAL CONTAMINATION ALL EFFORTS SHOULD BE MADE TO REMOVE CONTAMINANTS IN AN APPROPRIATE MANNER. THE FRANKLIN FIRE DEPARTMENT SHOULD BE CONTACTED IMMEDIATELY TO DETERMINE IF FURTHER MEASURES ARE NEEDED.

RULE 6. SPILLS OF OIL AND OTHER OBJECTIONABLE SUBSTANCES; REPORTING, CONTAINMENT AND CLEANUP

(REPEALED BY WATER POLLUTION CONTROL BOARD; FILED FEB 25, 1997, 1:00 P.M.: 20 IR 1734)

RULE 6.1. SPILLS; REPORTING, CONTAINMENT, AND RESPONSE

327 IAC 2-6.1-1 APPLICABILITY
AUTHORITY: IC 13-14-8-7
AFFECTED: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17
SEC. 1. THIS RULE APPLIES TO THE REPORTING AND CONTAINMENT OF, AND THE RESPONSE TO THOSE SPILLS OF HAZARDOUS SUBSTANCES, EXTREMELY HAZARDOUS SUBSTANCES, PETROLEUM, AND OBJECTIONABLE SUBSTANCES THAT ARE OF A QUANTITY, TYPE, DURATION AND IN A LOCATION AS TO DAMAGE THE WATERS OF THE STATE. NOTHING IN THIS RULE IS INTENDED TO AFFECT REPORTING OR CLEAN-UP REQUIREMENTS SET FORTH BY OTHER FEDERAL, STATE, OR LOCAL LAWS. (WATER POLLUTION CONTROL BOARD; 327 IAC 2-6.1-1; FILED FEB 25, 1997, 1:00 P.M.: 20 IR 1731; READOPTED FILED JAN 10, 2001, 3:23 P.M.: 24 IR 1518; READOPTED FILED NOV 21, 2007, 1:16 P.M.: 20071219-IR-327070553BFA)

327 IAC 2-6.1-2 SPECIAL AREAS
AUTHORITY: IC 13-14-8-7
AFFECTED: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17
SEC. 2. CERTAIN AREAS OF THE STATE ARE RECOGNIZED AS HAVING UNIQUE GEOLOGY. A LARGE SECTION OF THE MID-SOUTHERN PART OF THE STATE IS A KARST REGION. PORTIONS OF SAINT JOSEPH, ELKHART, KOSCIUSKO, AND LAGRANGE COUNTIES CONTAIN A SOLE SOURCE AQUIFER AS REFERENCED IN 42 U.S.C. 300H-3(E). THE WATERS OF THE STATE ARE PARTICULARLY VULNERABLE TO DAMAGE FROM SPILLS IN THESE AREAS, AND CARE SHOULD BE EXERCISED WHEN EVALUATING DAMAGE FROM SPILLS. INFORMATION ABOUT THESE AREAS CAN BE OBTAINED BY CALLING THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF LAND QUALITY, EMERGENCY RESPONSE SECTION: AREA CODE 1-888-233-7745 FOR IN-STATE CALLS (TOLL FREE), (317) 233-7745 FOR OUT-OF-STATE CALLS. (WATER POLLUTION CONTROL BOARD; 327 IAC 2-6.1-2; FILED FEB 25, 1997, 1:00 P.M.: 20 IR 1731; READOPTED FILED JAN 10, 2001, 3:23 P.M.: 24 IR 1518; READOPTED FILED NOV 21, 2007, 1:16 P.M.: 20071219-IR-327070553BFA; ERRATA FILED MAY 27, 2008, 2:06 P.M.: 20080625-IR-327080419ACA)

327 IAC 2-6.1-3 EXCLUSIONS
AUTHORITY: IC 13-14-8-7
AFFECTED: IC 13-11-2; IC 13-18-1; IC 13-18-3; IC 13-18-8; IC 13-18-17
SEC. 3. NOTWITHSTANDING ANY OTHER SECTION OF THIS RULE, THE REPORTING REQUIREMENT OF THIS RULE DOES NOT APPLY TO THE FOLLOWING OCCURRENCES:
(1) DISCHARGES OR EXCEEDANCES THAT ARE UNDER THE JURISDICTION OF AN APPLICABLE PERMIT WHEN THE SUBSTANCE IN QUESTION IS COVERED BY THE PERMIT AND DEATH OR ACUTE INJURY OR ILLNESS TO ANIMALS OR HUMANS DOES NOT OCCUR.
(2) LAWFUL APPLICATION OF MATERIALS, INCLUDING, BUT NOT LIMITED TO:
(A) COMMERCIAL OR NATURAL FERTILIZERS AND PESTICIDES ON OR TO LAND OR WATER; OR
(B) DUST SUPPRESSION MATERIALS.
(3) THE APPLICATION OF PESTICIDES DURING CONSTRUCTION FOR SPECIFICATION TO MINIMIZE SOIL EROSION. STORMWATER CONTROLS SHALL BE INSPECTED AND MAINTAINED AS DESCRIBED ELSEWHERE ON THE PLANS. EXCESSIVE DUSTING OF SOIL ON THE SITE SHALL BE MINIMIZED BY REDUCING DISTURBED AREAS PROPERLY PROPER GRADING BARE SOIL DURING DRY AND/OR WINDY WEATHER, AND BY APPLYING WATER OR OTHER ACCEPTABLE DUST CONTROL MEASURES TO THE SOIL. UPON COMPLETION OF CONSTRUCTION AND SUITABLE ESTABLISHMENT OF PERMANENT VEGETATION, TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE, CHECK DAMS AND INLET PROTECTION DEVICES SHALL BE REMOVED IN A MANNER TO MINIMIZE ADDITIONAL LAND DISTURBANCE. ANY AREAS DISTURBED BY THESE OPERATIONS SHALL BE PROPERLY REGESTATED.
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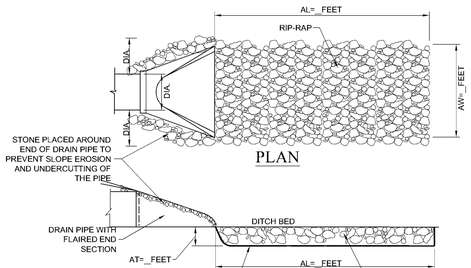


TABLE 1. SIZING FOR FLOW DISSIPATERS AT CULVERT PIPE OUTLETS

PIPE SIZE (D50)	AVERAGE RIPRAP DIAMETER	APRON WIDTH	APRON LENGTH
8 IN.	3 IN.	2 TO 3 FEET	5 TO 7 FEET
12 IN.	5 IN.	3 TO 4 FEET	6 TO 12 FEET
18 IN.	8 IN.	4 TO 6 FEET	8 TO 18 FEET
24 IN.	10 IN.	6 TO 8 FEET	12 TO 22 FEET
30 IN.	12 IN.	8 TO 10 FEET	14 TO 28 FEET
36 IN.	14 IN.	10 TO 12 FEET	16 TO 32 FEET

AT=1.5' X D50 15" OR LESS, 1.2' X D50 15" OR LARGER STONE.

ENERGY DISSIPATER (OUTLET PROTECTION)

1. DIVERT SURFACE WATER RUNOFF AROUND THE STRUCTURE DURING CONSTRUCTION SO THAT THE SITE CAN BE PROPERLY DEWATERED FOR FOUNDATION PREPARATION.
2. EXCAVATE FOUNDATION AND APRON AREA SUBGRADES BELOW DESIGN ELEVATION TO ALLOW FOR THICKNESS OF THE FILTER MEDIUM AND RIPRAP.
3. COMPACT ANY FILL USED IN SUBGRADE PREPARATION TO THE DENSITY OF SURROUNDING UNDISTURBED SOIL MATERIAL.
4. SMOOTH SUBGRADE ENOUGH TO PROTECT GEOTEXTILE FABRIC FROM TEARING.
5. PLACE GEOTEXTILE FABRIC OR AGGREGATE BEDDING MATERIAL (FOR STABILIZATION AND FILTRATION) ON THE COMPACTED AND SMOOTHED FOUNDATION.
6. INSTALL RIPRAP TO THE LINES AND ELEVATIONS SHOWN IN THE CONSTRUCTION PLANS. BLEND RIPRAP SMOOTHLY TO SURROUNDING GRADE. IF THE CHANNEL IS WELL DEFINED, EXTEND THE APRON ACROSS THE CHANNEL BOTTOM AND UP THE CHANNEL BANKS TO AN ELEVATION OF SIX INCHES ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
7. IF GEOTEXTILE FABRIC TEARS WHEN PLACING RIPRAP, REPAIR IMMEDIATELY BY LAYING AND STAPLING A PIECE OF FABRIC OVER DAMAGED AREA, OVERLAPPING THE UNDAMAGED AREAS BY AT LEAST 12 INCHES.
8. CONSTRUCT A SMALL PLUNGE POOL WITHIN THE OUTLET APRON. (RIPRAP APRONS MUST BE LEVEL WITH OR SLIGHTLY LOWER THAN THE RECEIVING CHANNEL AND SHOULD NOT PRODUCE AN OVERFALL OR RESTRICT FLOW OF THE WATER CONVEYANCE STRUCTURE.)

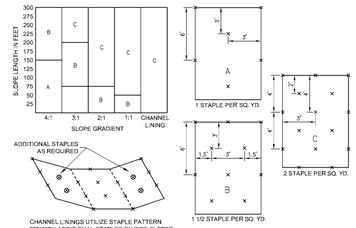
MAINTENANCE

_ INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
_ INSPECT FOR STONE DISPLACEMENT; REPLACE STONES ENSURING PLACEMENT AT FINISHED GRADE.
_ CHECK FOR EROSION OR SCOURING AROUND SIDES OF THE APRON; REPAIR IMMEDIATELY.
_ CHECK FOR PIPING OR UNDERCUTTING; REPAIR IMMEDIATELY.

REFERENCE IN CHAPTER 7 PAGE 121 IN THE INDIANA STORM WATER QUALITY MANUAL

OUTLET EROSION CONTROL PROTECTION

(NO SCALE)



EROSION CONTROL BLANKET STAPLE PATTERN

(NO SCALE)

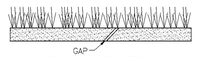
GENERAL STAPLE RECOMMENDATIONS

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE ANNUAL RAINFALL.

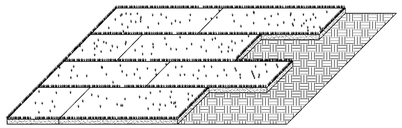
AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.

CHANNEL LININGS REQUIRED A 2.0' MINIMUM OVERLAP AT LONGITUDINAL JOINTS. SIDESLOPES SHALL REQUIRE A 6" MINIMUM OVERLAP. WHERE OVERLAPS OCCUR, THE UPSTREAM BLANKET SHALL OVERLAP THE DOWNSTREAM.

IF OTHER THAN NORTH AMERICAN GREEN EROSION CONTROL BLANKETS ARE INSTALLED FOLLOW THE INSTALLATION DIRECTIONS RECOMMENDED BY THAT PRODUCTS COMPANY.



CROSS SECTION



PERSPECTIVE VIEW

TABLE 1. TEMPORARY SEEDING SPECIFICATIONS

SEED SPECIES 1	RATE PER ACRE	PLANTING DEPTH	OPTIMUM DATES 2
WHEAT OR RYE	150 LBS.	1 TO 1½ INCHES	SEPT. 15 - OCT. 30
SPRING OATS	100 LBS.	1 INCH	MARCH 1 - APRIL 15
ANNUAL RYEGRASS	40 LBS.	¼ INCH	MARCH 1 - MAY 1 AUG. 1 - SEPT. 1
GERMAN MILLET	40 LBS.	1 TO 2 INCHES	MAY 1 - JUNE 1
SUDANGRASS	35 LBS.	1 TO 2 INCHES	MAY 1 - JULY 30
BUCKWHEAT	60 LBS.	1 TO 2 INCHES	APRIL 15 - JUNE 1
CORN (BROADCAST)	300 LBS.	1 TO 2 INCHES	MAY 11 - AUG. 10
SORGHUM	35 LBS.	1 TO 2 INCHES	MAY 1 - JULY 15

1 PERENNIAL SPECIES MAY BE USED AS A TEMPORARY COVER, ESPECIALLY IF THE AREA TO BE SEEDED WILL REMAIN IDLE FOR MORE THAN ONE YEAR.
2 SEEDING DONE OUTSIDE THE OPTIMUM SEEDING DATES INCREASES THE CHANCES OF SEEDING FAILURE. DATES MAY BE EXTENDED OR SHORTENED BASED ON THE LOCATION OF THE PROJECT SITE WITHIN THE STATE.

NOTES

MULCH ALONE IS AN ACCEPTABLE TEMPORARY COVER AND MAY BE USED IN LIEU OF TEMPORARY SEEDING, PROVIDED THAT IT IS APPROPRIATELY ANCHORED. A HIGH POTENTIAL FOR FERTILIZER, SEED, AND MULCH TO WASH EXISTS ON STEEP BANKS, CUTS, AND IN CHANNELS AND AREAS OF CONCENTRATED FLOW.

SEEDBED PREPARATION

1. TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS.
2. APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.
3. WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF THE SOIL WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE.

SEEDING

1. SELECT A SEED SPECIES OR AN APPROPRIATE SEED MIXTURE AND APPLICATION RATE FROM TABLE
2. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER SEEDER OR BY BROADCASTING. PLANT OR COVER SEED TO THE DEPTH SHOWN IN TABLE 1.

NOTES

1. IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL CONTACT BY FIRMING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER COMPLETING SEEDING OPERATIONS.
2. DAILY SEEDING WHEN THE SOIL IS MOIST IS USUALLY MOST EFFECTIVE.
3. IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.
3. APPLY MULCH AND ANCHOR IT IN PLACE.

MAINTENANCE

_ INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
_ CHECK FOR EROSION OR MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
_ MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80 PERCENT DENSITY); RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
_ IF NITROGEN DEFICIENCY IS APPARENT, TOP-DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

REFERENCE IN CHAPTER 7 PAGES 31-33 IN THE INDIANA STORM WATER QUALITY MANUAL

TEMPORARY SEED

OPEN LOW-MAINTENANCE AREAS (REMAINING IDLE MORE THAN SIX MONTHS)

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. PERENNIAL RYEGRASS - WHITE CLOVER	70 LBS. 2 LBS.	5.6 TO 7.0
2. PERENNIAL RYEGRASS - TALL FESCUE	70 LBS. 50 LBS.	5.6 TO 7.0
3. TALL FESCUE - WHITE CLOVER	70 LBS. 2 LBS.	5.5 TO 7.5

STEEP BANKS AND CUTS, LOW-MAINTENANCE AREAS (NOT MOWED)

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. SMOOTH BROME GRASS - RED CLOVER	35 LBS. 20 LBS.	5.5 TO 7.0
2. TALL FESCUE - WHITE CLOVER	50 LBS. 2 LBS.	5.5 TO 7.5
3. TALL FESCUE - RED CLOVER	50 LBS. 20 LBS.	5.5 TO 7.5
4. ORCHARD GRASS - RED CLOVER - WHITE CLOVER	30 LBS. 20 LBS. 2 LBS.	5.6 TO 7.0
5. CROWNVETCH - TALL FESCUE	12 LBS. 30 LBS.	5.6 TO 7.0

LAWNS AND HIGH-MAINTENANCE AREAS

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. BLUEGRASS	140 LBS.	5.5 TO 7.0
2. PERENNIAL RYEGRASS (TURF TYPE)	60 LBS. 90 LBS.	5.6 TO 7.0
3. TALL FESCUE (TURF TYPE) - BLUEGRASS	170 LBS. 30 LBS.	5.6 TO 7.5

CHANNELS AND AREAS OF CONCENTRATED FLOW

SEED MIXTURES	RATE PER ACRE PURE LIVE SEED	OPTIMUM SOIL PH
1. PERENNIAL RYEGRASS - WHITE	150 LBS. 2 LBS.	5.5 TO 7.0
2. KENTUCKY BLUEGRASS - SMOOTH BROMEGRASS - SWITCHGRASS - TIMOTHY - PERENNIAL RYEGRASS - WHITE CLOVER	20 LBS. 10 LBS. 3 LBS. 4 LBS. 10 LBS. 2 LBS.	5.5 TO 7.5
3. TALL FESCUE - WHITE CLOVER	150 LBS. 2 LBS.	5.5 TO 7.5
4. TALL FESCUE - PERENNIAL RYEGRASS - KENTUCKY BLUEGRASS	150 LBS. 20 LBS. 20 LBS.	5.5 TO 7.5

NOTES

1. AN OAT OR WHEAT COMPANION OR NURSE CROP MAY BE USED WITH ANY OF THE ABOVE PERMANENT SEEDING MIXTURES, AT THE FOLLOWING RATES:
(A) SPRING OATS - ONE-FOURTH TO THREE-FOURTHS BUSHEL PER ACRE
(B) WHEAT - NO MORE THAN ONE-HALF BUSHEL PER ACRE
2. A HIGH POTENTIAL FOR FERTILIZER, SEED, AND MULCH TO WASH EXISTS ON STEEP BANKS, CUTS, AND IN CHANNELS AND AREAS OF CONCENTRATED

INSTALLATION

1. GRADE THE SITE TO ACHIEVE POSITIVE DRAINAGE.
2. ADD TOPSOIL OR COMPOST MULCH TO ACHIEVE NEEDED DEPTH FOR ESTABLISHMENT OF VEGETATION. (COMPOST MATERIAL MAY BE ADDED TO IMPROVE SOIL MOISTURE HOLDING CAPACITY, SOIL FRIABILITY, AND NUTRIENT AVAILABLITY.)

SEEDBED PREPARATION

1. TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS.
2. APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST AND WORK INTO THE UPPER TWO TO FOUR INCHES OF SOIL. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.
3. TILL THE SOIL TO OBTAIN A UNIFORM SEEDBED. USE A DISK OR RAKE, OPERATED ACROSS THE SLOPE, TO WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF THE SOIL.

SEEDING

OPTIMUM SEEDING DATES ARE MARCH 1 TO MAY 10 AND AUGUST 10 TO SEPTEMBER 30.PERMANENT SEEDING DONE BETWEEN MAY 10 AND AUGUST 10 MAY NEED TO BE IRRIGATED. SEEDING OUTSIDE OR BEYOND OPTIMUM SEEDING DATES IS STILL POSSIBLE WITH THE UNDERSTANDING THAT RESEEDING OR OVERSEEDING MAY BE REQUIRED IF ADEQUATE SURFACE COVER IS NOT ACHIEVED. RESEEDING OR OVERSEEDING CAN BE EASILY ACCOMPLISHED IF THE SOIL SURFACE REMAINS WELL PROTECTED WITH MULCH.
1. SELECT A SEEDING MIXTURE AND RATE FROM TABLE 1. SELECT SEED MIXTURE BASED ON SITE CONDITIONS, SOIL PH, INTENDED LAND USE, AND EXPECTED LEVEL OF MAINTENANCE.
2. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER SEEDER OR BY BROADCASTING. PLANT OR COVER THE SEED TO A DEPTH OF ONE-FOURTH TO ONE-HALF INCH. IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL CONTACT BY FIRMING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER COMPLETING SEEDING OPERATIONS. (IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.)
3. MULCH ALL SEEDED AREAS AND USE APPROPRIATE METHODS TO ANCHOR THE MULCH IN PLACE. CONSIDER USING EROSION CONTROL BLANKETS ON SLOPING AREAS AND CONVEYANCE CHANNELS

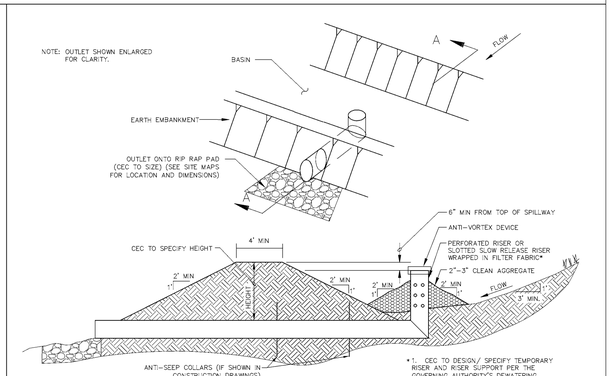
MAINTENANCE

INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS UNTIL THE VEGETATION IS SUCCESSFULLY ESTABLISHED.
_ CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE VIGOROUS DARK GREEN OR BLUISHGREEN SEEDLINGS WITH A UNIFORM VEGETATIVE COVER DENSITY OF 90 PERCENT OR MORE.
_ CHECK FOR EROSION OR MOVEMENT OF MULCH.
_ REPAIR DAMAGED, BARE, GULLIED, OR SPARSELY VEGETATED AREAS AND THEN FERTILIZE, RESEED, AND APPLY AND ANCHOR MULCH.
_ IF PLANT COVER IS SPARSE OR PATCHY, EVALUATE THE PLANT MATERIALS CHOSEN, SOIL FERTILITY, MOISTURE CONDITION, AND MULCH APPLICATION; REPAIR AFFECTED AREAS EITHER BY OVERSEEDING OR PREPARING A NEW SEEDBED AND RESEEDING. APPLY AND ANCHOR MULCH ON THE NEWLY SEEDED AREAS.
_ IF VEGETATION FAILS TO GROW, CONSIDER SOIL TESTING TO DETERMINE SOIL PH OR NUTRIENT DEFICIENCY PROBLEMS. (CONTACT YOUR SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE.)
_ IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.
_ ADD FERTILIZER THE FOLLOWING GROWING SEASON. FERTILIZE ACCORDING TO SOIL TEST RECOMMENDATIONS.
_ FERTILIZE TURF AREAS ANNUALLY. APPLY FERTILIZER IN A SPLIT APPLICATION. FOR COOL-SEASON GRASSES, APPLY ONE-HALF OF THE FERTILIZER IN LATE SPRING AND ONE HALFIN EARLY FALL. FOR WARM-SEASON GRASSES, APPLY ONE-THIRD IN EARLY SPRING, ONE-THIRD IN LATE SPRING, AND THE REMAINING ONE-THIRD IN MIDDLE SUMMER.

TABLE 1. PERMANENT SEEDING RECOMMENDATIONS
THIS TABLE PROVIDES SEVERAL SEED MIXTURE OPTIONS. ADDITIONAL SEED MIXTURES ARE AVAILABLE COMMERCIALLY. WHEN SELECTING A MIXTURE, CONSIDER INTENDED LAND USE AND SITE CONDITIONS, INCLUDING SOIL PROPERTIES (E.G., SOIL PH AND DRAINAGE), SLOPE ASPECT, AND THE TOLERANCE OF EACH SPECIES TO SHADE AND DROUGHT.

REFERENCE IN CHAPTER 7 PAGES 35-40 IN THE INDIANA STORM WATER QUALITY MANUAL

PERMANENT SEED



SECTION A-A

GENERAL NOTES:
1. PIPE MATERIAL – CORRUGATED METAL PIPE, PVC, HDPE OR OTHER PLASTIC MATERIAL.
2. FILTER FABRIC (CEC TO SPECIFY TYPE OF FILTER FABRIC).
3. DIMENSIONS – (CEC TO SPECIFY LIMIT OF EXCAVATION AND PIPE DIAMETER ON THIS OR ON THE CONSTRUCTION DRAWINGS.)
4. RISER PERFORATION OR SLOTS – (CEC TO SHOW ON THIS DETAIL OR ON THE CONSTRUCTION DRAWINGS.)
5. ALL PIPE CONNECTION SHALL BE WATERTIGHT.
6. FILL MATERIAL AROUND PIPE SHALL BE COMPACTED IN 4 INCHES LIFTS. A MINIMUM OF 2 FEET OF COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE BEFORE CROSSING IT WITH CONSTRUCTION TRAFFIC.
7. PONDING OF SEDIMENT LADEN RUNOFF IN SEDIMENT BASIN ACCOMPLISHED BY EMBANKMENT OR EXCAVATION DEPENDING ON TERRAIN. (CEC TO SHOW ON THIS DETAIL OR REFERENCE CONSTRUCTION DRAWINGS FOR BASIN TYPE AND DIMENSIONS.)
8. SIDE SLOPES SHALL BE 2:1 OR FLATTER.

SEDIMENT BASIN WITH PIPE OUTLET

(NO SCALE)

SPECIFICATIONS

SITE PREPARATION

_ GRADE THE SITE TO ACHIEVE POSITIVE DRAINAGE.
_ PREPARE A SMOOTH, FIRM SOIL SURFACE AND APPLY SOIL AMENDMENTS. IRRIGATION IRRIGATE AS NEEDED TO ENSURE ROOTING OF SOD.

MATERIALS

_ SOIL AMENDMENTS - SELECT MATERIALS AND RATES AS DETERMINED BY A SOIL TEST (CONTACT YOUR COUNTY SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE AND SOIL INFORMATION, INCLUDING AVAILABLE SOIL TESTING SERVICES.) OR 400 TO 600 POUNDS OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.
_ SOD - SELECT A HIGH QUALITY, HEALTHY, VIGOROUS VARIETY WELL ADAPTED TO THE REGION AND COMPATIBLE WITH THE INTENDED USE.

INSTALLATION

SOD SHOULD NOT BE INSTALLED DURING HOT WEATHER, ON DRY SOIL, FROZEN SOIL, COMPACTED CLAY, LOOSE SAND OR GRAVELLY SUBSTRATE SOILS, AGGREGATE, OR PESTICIDE TREATED SOIL. THE IDEAL TIME TO LAY SOD IS MAY 1 TO JUNE 1 OR SEPTEMBER 1 TO SEPTEMBER 30, ALTHOUGH IT CAN BE INSTALLED AS EARLY AS MARCH 15 IF AVAILABLE OR JUNE 1 TO SEPTEMBER 1 IF IRRIGATED.

SITE PREPARATION

1. APPLY TOPSOIL IF EXISTING SOIL CONDITIONS ARE UNSUITABLE FOR ESTABLISHING VEGETATION.
2. GRADE THE SITE TO ACHIEVE POSITIVE DRAINAGE AND CREATE A SMOOTH, FIRM SOIL SURFACE.
3. WHERE APPLICABLE, USE A CHISEL PLOW, DISK, HARROW, OR RAKE TO BREAK UP COMPACTED SOILS AND CREATE A FAVORABLE ROOTING DEPTH OF SIX TO EIGHT INCHES.

SOD BED PREPARATION

1. TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS.
2. IF SOIL PH IS TOO ACIDIC FOR THE GRASS SOD TO BE INSTALLED, APPLY LIME ACCORDING TO SOIL TEST RESULTS OR AT THE RATE RECOMMENDED BY THE SOD SUPPLIER.
3. APPLY FERTILIZER AS RECOMMENDED BY THE SOIL TEST. IF TESTING WAS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.
4. WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF SOIL WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE.
5. RAKE OR HARROW THE AREA TO ACHIEVE A SMOOTH FINAL GRADE AND THEN ROLL OR CULTIPACK THE SOIL SURFACE TO CREATE A FIRM SURFACE ON WHICH TO LAY THE SOD.

LAYING THE SOD

1. INSTALL SOD WITHIN THIRTY-SIX HOURS OF ITS CUTTING.
2. STORE THE SOD IN A SHADED LOCATION DURING INSTALLATION.
3. IMMEDIATELY BEFORE LAYING THE SOD, RAKE THE SOIL SURFACE TO BREAK ANY CRUST. (IF THE WEATHER IS HOT, LIGHTLY IRRIGATE THE SOIL SURFACE PRIOR TO LAYING THE SOD.)
4. LAY SOD STRIPS IN A BRICK-LIKE PATTERN.
5. BUTT ALL JOINTS TIGHTLY AGAINST EACH OTHER (DO NOT STRETCH OR OVERLAP THEM), USING A KNIFE OR MASON'S TROWEL TO TRIM AND FIT SOD INTO IRREGULARLY SHAPED AREAS.
6. ROLL THE SOD LIGHTLY AFTER INSTALLATION TO ENSURE FIRM CONTACT BETWEEN THE SOD AND SOIL.
7. IRRIGATE NEWLY SODDED AREAS UNTIL THE UNDERLYING SOIL IS WET TO A DEPTH OF FOUR INCHES, AND THEN KEEP MOIST UNTIL THE GRASS TAKES ROOT.

SLOPE APPLICATION

1. INSTALL THE SOD STRIPS WITH THE LONGEST DIMENSION PERPENDICULAR TO THE SLOPE.
2. WHERE SLOPES EXCEED A RATIO OF 3:1, STAPLE OR STAKE EACH STRIP AT THE CORNERS AND IN THE MIDDLE.

CHANNEL APPLICATION

(SODDING PROVIDES QUICKER PROTECTION THAN SEEDING AND MAY REDUCE THE RISK OF EARLY WASHOUT.)
1. EXCAVATE THE CHANNEL, ALLOWING FOR THE FULL THICKNESS OF THE SOD.
2. LAY THE SOD STRIPS WITH THE LONGEST DIMENSION PERPENDICULAR TO CHANNEL FLOW.
3. STAPLE OR STAKE EACH STRIP OF SOD AT THE CORNERS AND IN THE MIDDLE.
4. STAPLE JUTE OR BIODEGRADABLE POLYPROPYLENE NETTING OVER THE SODDED AREA TO MINIMIZE THE POTENTIAL FOR WASHOUT DURING ESTABLISHMENT.

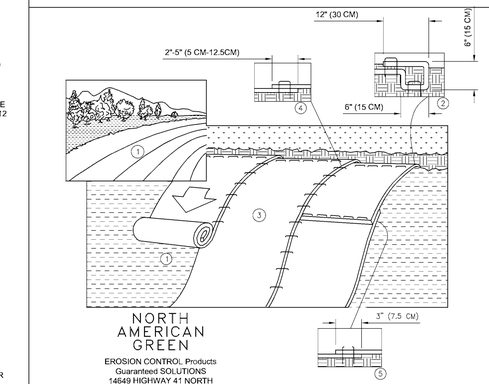
MAINTENANCE

_ INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS UNTIL SOD IS WELL ROOTED.
_ KEEP SOD MOIST UNTIL FULLY ROOTED.
_ AFTER SOD IS WELL-ROOTED (TWO TO THREE WEEKS), MAINTAIN A PLANT HEIGHT OF TWO TO THREE INCHES. _ TIME MOWING TO AVOID RUTS IN TURF.
_ FERTILIZE TURF AREAS ANNUALLY. APPLY FERTILIZER IN A SPLIT APPLICATION. FOR COOL SEASON GRASSES, APPLY ONE-HALF OF THE FERTILIZER IN LATE SPRING AND ONE-HALF IN EARLY FALL. FOR WARM-SEASON GRASSES, APPLY ONE-THIRD IN EARLY SPRING, ONE-THIRD IN LATE SPRING AND ONE-THIRD IN MID-SUMMER.

REFERENCE IN CHAPTER 7 PAGES 47-50 IN THE INDIANA STORM WATER QUALITY MANUAL

SOD APPLICATION DETAIL

(NO SCALE)



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S COVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.

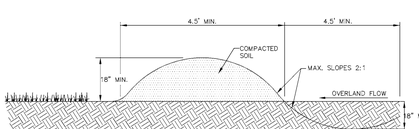
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THOUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.

5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE R STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSAY TO PROPERLY SECURE THE RECP's.

SLOPE INSTALLATION

(NO SCALE)



TEMPORARY DIVERSION DIKE

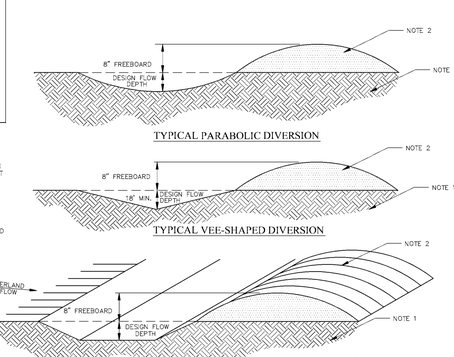
(NO SCALE)

NOTES:
1. REMOVE ANY EXISTING VEGETATION AND SCARIFY OR BENCH ADJACENT SOILS PRIOR TO PLACING BERM.
2. BERM MATERIALS MUST BE ADEQUATELY COMPACTED AND STABILIZED.
3. REFER TO SWPPP FOR TEMPORARY AND/ OR FINAL STABILIZATION MEASURES.
4. BERM SHALL NOT BE CONSTRUCTED OF TOPSOIL.
5. REFERENCED IN CHAPTER 7 PAGE 76 IN THE INDIANA STORM WATER QUALITY MANUAL.

NOTES:
1. REMOVE ANY EXISTING VEGETATION AND SCARIFY OR BENCH ADJACENT SOILS PRIOR TO PLACING BERM.
2. BERM MATERIALS MUST BE ADEQUATELY COMPACTED AND STABILIZED 6–8 INCH LIFTS.
3. REFER TO E&S PHASE I & II FOR TEMPORARY AND/OR FINAL STABILIZATION MEASURES.
4. BERM SHALL NOT BE CONSTRUCTED OF TOPSOIL.

DIVERSIONS

(NO SCALE)



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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO. W14-0460
DWG NAME: w14-0460-C104 swppp det.dwg
DESIGNED BY: RLW/RAM
DRAWN BY: RLW/RAM
CHECKED BY: JKS
DATE: 02.12.2015

REVISIONS AND ISSUES	BY	DATE
SUBMITTED FOR INITIAL REVIEW	BJS	02.12.2015

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SWPPP DETAILS
Part of the NE¼ of Section 16, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.08
PROJECT NO.
W14-0460

LOCK ON: H:\2014\W14-0460\Engineering\design\consset\w14-0460-C104 swppp det.dwg
LAYOUT: C1.08
in:/TIME: February 12, 2015 – 7:28am
in:/PTP BY: schoeffb

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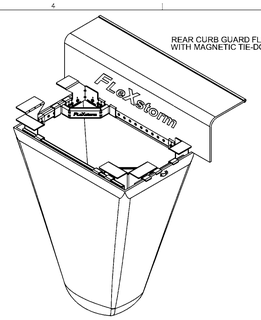
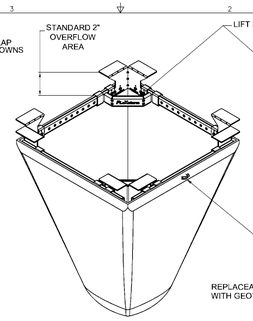
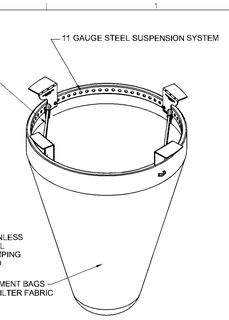


TYPICAL CURB BOX INLET FILTER

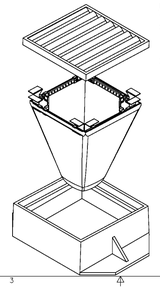


TYPICAL FLAT/RECTANGULAR/ROLLED CURB INLET FILTER

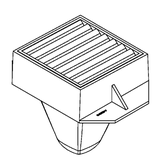


TYPICAL ROUND INLET FILTER

FLEXSTORM Inlet Filter Specifications		
WOVEN Geotextile Sediment Bag Specs (2 ft^3 vol)		
Material Property	Test Method	Value (ave)
Grab Tensile	ASTM D 4632	255 x 275
Puncture Strength	ASTM D 4833	135 lbs
Trapezoidal Tear	ASTM D 4533	75 lbs
UV Resistance	ASTM D 4355	90%
App Open Size (AOS)	ASTM D 4751	20 sieve
Permittivity	ASTM D 4491	1.5 / sec
Water Flow Rate	ASTM D 4491	200 gpm/sqft
Sediment Removal Efficiency (8% mix)	ASTM D 7351	82%



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



DRAWN	ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC DISTRIBUTED BY ADS WWW.INLETFILTERS.COM (866) 287-8555 PH (630) 355-3477 FX INFO@INLETFILTERS.COM
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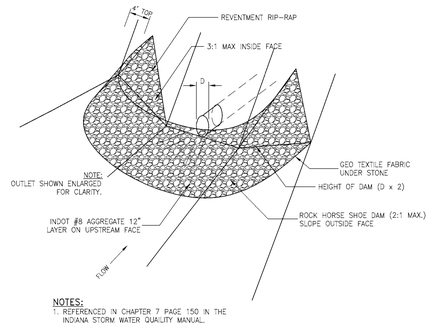
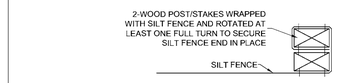
QA	
MFG	
APPROVED	
SIZE: C	DWG NO: FLEXSTORM_SPECS	REV
SCALE	SHEET 1 OF 1	



NOTES:
1. REFERENCED IN CHAPTER 7 PAGE 150 IN THE INDIANA STORM WATER QUALITY MANUAL.

ROCK HORSE SHOE CHECK DAM

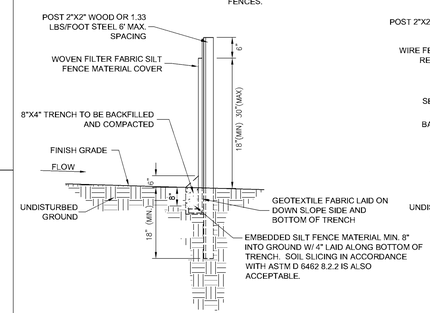
SCHEMATIC (NO SCALE)



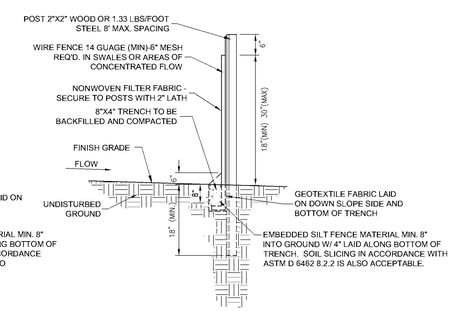
MAXIMUM LOAD SLOPE AND DISTANCE FOR WHICH A SILT FENCE IS APPLICABLE

LOAD SLOPE	MAX. DISTANCE ABOVE FENCE
LESS THAN 2%	100 FT.
2 TO 5%	75 FT.
5 TO 10%	50 FT.
10 TO 20%	25 FT.
MORE THAN 20%	15 FT.

POSTS: STEEL T OR U TYPE, OR 2"X2" HARD WOOD POST
FENCE: WOVEN WIRE, 14-1/2 GA., 6" MAX. MESH OPENING
FABRIC: IN ACCORDANCE WITH ASTM D 6461 LATEST EDITION.



WITHOUT WIRE SUPPORT



WITH WIRE SUPPORT

INSTALLATION
PREFABRICATED SILT FENCE
1. LAY OUT THE LOCATION OF THE FENCE SO THAT IT IS PARALLEL TO THE CONTOUR OF THE SLOPE AND AT LEAST 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A SEDIMENT STORAGE AREA. TURN THE ENDS OF THE FENCE UP SLOPE SUCH THAT THE POINT OF CONTACT BETWEEN THE GROUND AND THE BOTTOM OF THE FENCE END TERMINATES AT A HIGHER ELEVATION THAN THE TOP OF THE FENCE AT ITS LOWEST POINT.
2. EXCAVATE AN EIGHT-INCH DEEP BY FOUR-INCH WIDE TRENCH ALONG THE ENTIRE LENGTH OF THE FENCE LINE. INSTALLATION BY PLOWING IS ALSO ACCEPTABLE.
3. INSTALL THE SILT FENCE WITH THE FILTER FABRIC LOCATED ON THE UP-SLOPE SIDE OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN-SLOPE SIDE OF THE TRENCH.
4. DRIVE THE SUPPORT POSTS AT LEAST 18 INCHES INTO THE GROUND, TIGHTLY STRETCHING THE FABRIC BETWEEN THE POSTS AS EACH IS DRIVEN INTO THE SOIL. MINIMUM OF 12 INCHES OF THE FILTER FABRIC SHOULD EXTEND INTO THE TRENCH.
5. LAY THE LOWER FOUR INCHES OF FILTER FABRIC ON THE BOTTOM OF THE TRENCH AND EXTEND IT TOWARD THE UP-SLOPE SIDE OF THE TRENCH.
6. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE.

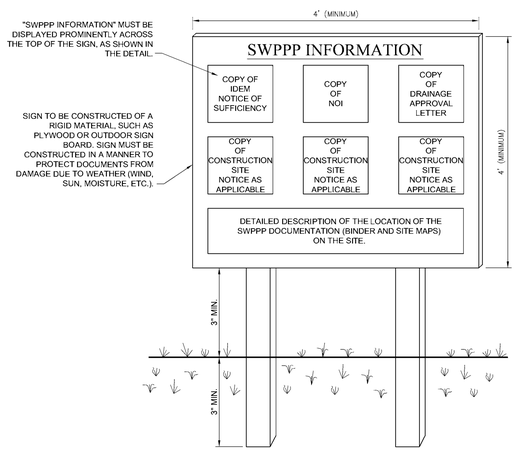
NOTE: IF THE SILT FENCE IS BEING CONSTRUCTED ON-SITE, ATTACH THE FILTER FABRIC TO THE SUPPORT POSTS AND ATTACH WOODEN LATHE TO SECURE THE FABRIC TO THE POSTS. ALLOW FOR AT LEAST 12 INCHES OF FABRIC BELOW GROUND LEVEL. COMPLETE THE SILT FENCE INSTALLATION, FOLLOWING STEPS 1 THROUGH 6 ABOVE.

MAINTENANCE
- INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. NOTE: ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.
- REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE FILTER FABRIC TO BULGE OR WHEN IT REACHES ONE-HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.

REFERENCE IN CHAPTER 7 PAGES 215-221 IN THE INDIANA STORM WATER QUALITY MANUAL

SEDIMENTATION/SILT FENCE

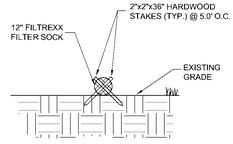
(NO SCALE)



NOTES:
1. THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.
2. ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-OF-TERMINATION (NOT) IS FILED FOR THE PERMIT.
3. CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.
4. SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.
5. CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY OF THE SWPPP INFORMATION SIGN.

SWPPP INFORMATION SIGN

(NO SCALE)



COIR LOG (FIBER ROLL)

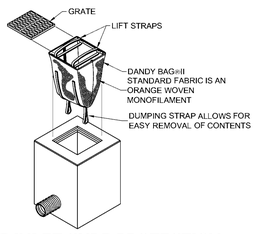
MAINTENANCE:
- INSPECT DAILY.
- REMOVE ACCUMULATED SEDIMENT FROM PAVED AREA (DO NOT FLUSH WITH WATER) AFTER EACH STORM EVENT. DEPOSIT SEDIMENT IN AN AREA WHERE IT WILL NOT RE-ENTER THE PAVED AREA OR STORM DRAINS.
- INSPECT FOR DAMAGE BY VEHICULAR TRAFFIC AND REPAIR IF NEEDED.

DANDY BAG

INSTALLATION AND MAINTENANCE GUIDELINES

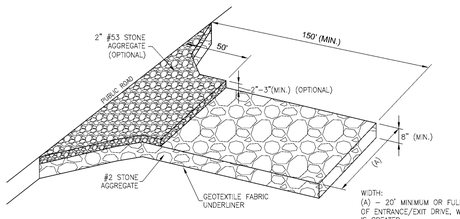
INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY BAG®II SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE DANDY BAG®II. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.



DROP INLET CURB PROTECTION

DETAIL PROVIDED BY DANDY BAG (NO SCALE)



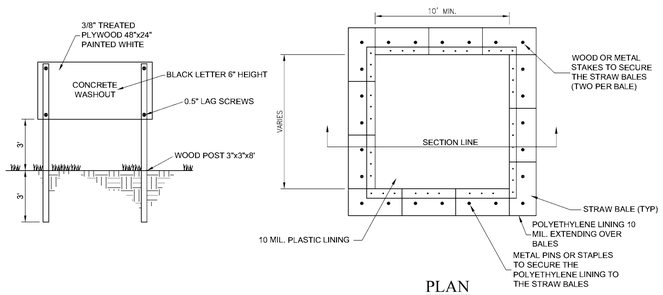
INSTALLATION:
1. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
2. GRADE FOUNDATION AND CROWN FOR POSITIVE DRAINAGE. IF THE SLOPE OF THE CONSTRUCTION ENTRANCE IS TOWARD A PUBLIC ROAD AND EXCEEDS TWO PERCENT, CONSTRUCT AN EIGHT INCH HIGH DIVERSION RIDGE WITH A RATIO OF 3-TO-1 SIDE SLOPES ACROSS THE FOUNDATION AREA ABOUT 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE ROAD.
3. INSTALL A CULVERT PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.
4. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.
5. PLACE AGGREGATE (INDOT CA NO. 2) TO THE DIMENSIONS AND GRADE SHOWN IN THE CONSTRUCTION PLANS, LEAVING THE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. TOP-DRESS THE FIRST 50 FEET ADJACENT TO THE PUBLIC ROADWAY WITH TWO TO THREE INCHES OF WASHED AGGREGATE (INDOT CA NO. 53) [OPTIONAL, USED PRIMARILY WHERE THE PURPOSE OF THE PAD IS TO KEEP SOIL FROM ADHERING TO VEHICLE TIRES].
7. WHERE POSSIBLE, DIVERT ALL STORM WATER RUNOFF AND DRAINAGE FROM THE INGRESS/EGRESS PAD TO A SEDIMENT TRAP OR BASIN.

MAINTENANCE:
- INSPECT DAILY.
- RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
- TOP DRESS WITH CLEAN AGGREGATE AS NEEDED.
- IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS.
- FLUSHING SHOULD ONLY BE USED IF THE WATER CAN BE CONVEYED INTO A SEDIMENT TRAP OR BASIN.

REFRENCED IN CHAPTER 7 PAGE 17-20 IN INIANA STORM WATER QUALITY MANUAL.

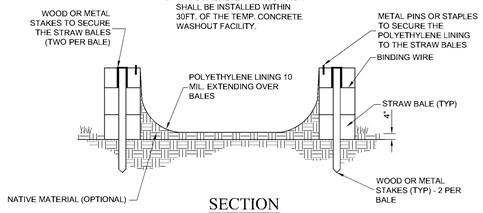
TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD

LARGE SITES - TWO ACRES OR LARGER (NO SCALE)



PLAN

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



SECTION

ALTERNATE
CONTRACTOR MAY USE A 10 MIL. POLYETHYLENE LINED DUMPSTER FOR CONCRETE WASHOUT.

INSTALLATION
1. UTILIZE AND FOLLOW THE DESIGN IN THE STORM WATER POLLUTION PREVENTION PLAN TO INSTALL THE SYSTEM.
2. DEPENDENT UPON THE TYPE OF SYSTEM, EITHER EXCAVATE THE PIT OR INSTALL THE CONTAINMENT SYSTEM.
3. A BASE SHALL BE CONSTRUCTED AND PREPARED THAT IS FREE OF ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE LINING.
4. INSTALL THE POLYETHYLENE LINING. FOR EXCAVATED SYSTEMS, THE LINING SHOULD EXTEND OVER THE ENTIRE EXCAVATION. THE LINING FOR BERMED SYSTEMS SHOULD BE INSTALLED OVER THE POOLING AREA WITH ENOUGH MATERIAL TO EXTEND THE LINING OVER THE BERM OR CONTAINMENT SYSTEM. THE LINING SHOULD BE SECURED WITH PINS, STAPLES, OR OTHER FASTENERS.
5. PLACE FLAGS, SAFETY FENCING, OR EQUIVALENT TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND OTHER TRAFFIC.
6. PLACE A NON-COLLAPSING, NON-WATER HOLDING COVER OVER THE WASHOUT FACILITY PRIOR TO A PREDICTED RAINFALL EVENT TO PREVENT ACCUMULATION OF WATER AND POSSIBLE OVERFLOW OF THE SYSTEM (OPTIONAL).
7. INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS.
8. POST SIGNS DIRECTING CONTRACTORS AND SUPPLIERS TO DESIGNATED LOCATIONS.
9. WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS (SEE TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD ON PAGE 17) OR ALTERNATIVE APPROACH PAD FOR CONCRETE WASHOUT SYSTEMS.
10. USE A 10 MIL. POLYETHYLENE LINED DUMPSTER AS AN ALTERNATE.

CONCRETE WASHOUT

TYPE "ABOVE GRADE W/ STRAW BALES" (NO SCALE)

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture
10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

PROJECT NO.	W140460	
DWG NAME:	w140460-C104 swppp det.dwg	
DESIGNED BY:	RLW/PAM	
DRAWN BY:	RLW/PAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SWPPP DETAILS
Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.08
PROJECT NO.
W14.0460

LOCK ON: 11/12/2014 W:\W140460\Engineering\design\const\w140460-C104 swppp det.dwg
LAYOUT: C1.08 - SWPPP
LAST SAVED: February 12, 2015 - 7:28am
PLOTTED BY: bshoells

PDF compression, OCR, web optimization using a watermarked evaluation copy of CVISION PDFCompressor

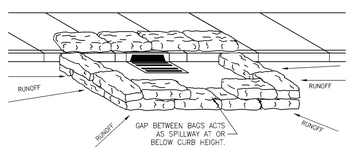
INSTALLATION:
1. FILL BAGS APPROXIMATELY ONE-HALF FULL WITH WASHED GRAVEL OR AGGREGATE.
2. FOR INLETS LOCATED ON A SLOPE GRADIENT (SEE EXHIBIT 1):
   A. AT A POSITION(S) UP SLOPE OF THE INLET, LAY BAGS TIGHTLY IN A ROW CURVING UPSLOPE FROM THE INLET AND AWAY FROM THE CURB.
   B. OVERLAP BAGS ONTO THE CURB AND EXTEND A MINIMUM OF THREE FEET INTO THE STREET, KEEPING BAGS TIGHTLY ABUTTED TOGETHER.
   C. FOR ADDITIONAL LAYERS OF BAGS, OVERLAP THE BAGS WITH THE ROW BENEATH AND LEAVE A ONE-BAG GAP (AT OR BELOW CURB HEIGHT) IN THE MIDDLE OF THE TOP ROW TO SERVE AS A SPILLWAY. IF THE SPILLWAY HEIGHT IS HIGHER THAN THE TOP OF THE CURB, PLACE ADDITIONAL BAGS ALONG THE CURB TO PREVENT BYPASS FLOW.
   D. FOR ADDITIONAL STORAGE CAPACITY, CONSTRUCT A SERIES OF STONE BAG BARRIERS ALONG THE CURB SO EACH ONE TRAPS SMALL AMOUNTS OF SEDIMENT.
3. FOR INLETS LOCATED IN A DEPRESSIONAL (SUMP) POSITION (SEE EXHIBIT 2)
   A. PLACE BAGS IN AN ARC AROUND THE CURB INLET.
   B. OVERLAP BAGS ONTO THE CURB, KEEPING BAGS TIGHTLY ABUTTED TOGETHER.
   C. FOR ADDITIONAL LAYERS OF BAGS, OVERLAP THE BAGS WITH THE ROW BENEATH AND LEAVE A ONE-BAG GAP (AT OR BELOW CURB HEIGHT) IN THE MIDDLE OF THE TOP ROW TO SERVE AS A SPILLWAY. IF THE SPILLWAY HEIGHT IS HIGHER THAN THE TOP OF THE CURB, PLACE ADDITIONAL BAGS ALONG THE CURB TO PREVENT BYPASS FLOW.
4. PLACE A TRAFFIC BARRICADE AT EACH INSTALLED MEASURE FOR SAFETY AND TO PROTECT MEASURE INTEGRITY.

MAINTENANCE:
_ INSPECT DAILY.
_ REMOVE ACCUMULATED SEDIMENT FROM PAVED AREA (DO NOT FLUSH WITH WATER) AFTER EACH STORM EVENT. DEPOSIT SEDIMENT IN AN AREA WHERE IT WILL NOT RE-ENTER THE PAVED AREA OR STORM DRAINS.
_ INSPECT FOR DAMAGE BY VEHICULAR TRAFFIC AND REPAIR IF NEEDED.
_ WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE SEDIMENT, PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL, GRADE AREA TO THE ELEVATION OF THE STORM DRAIN INLET TOP, THEN STABILIZE IMMEDIATELY.

REFERENCE IN CHAPTER 7 PAGE 170-172 IN THE INDIANA STORM WATER QUALITY MANUAL.

NOTE:
GRAVEL OR AGGREGATE MUST BE LARGER THAN STORM SEWER GRATE OPENING TO PREVENT IT FROM FALLING INTO THE STORM SEWER IN THE EVENT A BAG BREAKS.

NOTE:
IN SITUATIONS WITH NO WALK, PLACE SILT FENCE OR SILTSOCK BEHIND CURB INLET.



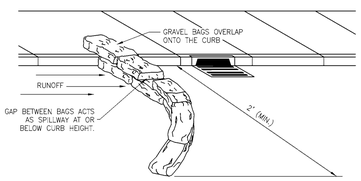
GRAVELBAG CURB INLET PROTECTION
FOR SAG INLETS LOCATIONS (NO SCALE)

INSTALLATION:
1. FILL BAGS APPROXIMATELY ONE-HALF FULL WITH WASHED GRAVEL OR AGGREGATE.
2. FOR INLETS LOCATED ON A SLOPE GRADIENT:
   A. AT A POSITION(S) UP SLOPE OF THE INLET, LAY BAGS TIGHTLY IN A ROW CURVING UP SLOPE FROM THE INLET AND AWAY FROM THE CURB.
   B. OVERLAP BAGS ONTO THE CURB AND EXTEND A MINIMUM OF THREE FEET INTO THE STREET, KEEPING BAGS TIGHTLY ABUTTED TOGETHER.
   C. FOR ADDITIONAL LAYERS OF BAGS, OVERLAP THE BAGS WITH THE ROW BENEATH AND LEAVE A ONE-BAG GAP (AT OR BELOW CURB HEIGHT) IN THE MIDDLE OF THE TOP ROW TO SERVE AS A SPILLWAY. IF THE SPILLWAY HEIGHT IS HIGHER THAN THE TOP OF THE CURB, PLACE ADDITIONAL BAGS ALONG THE CURB TO PREVENT BYPASS FLOW.
   D. FOR ADDITIONAL STORAGE CAPACITY, CONSTRUCT A SERIES OF STONE BAG BARRIERS ALONG THE CURB SO EACH ONE TRAPS SMALL AMOUNTS OF SEDIMENT.
3. FOR INLETS LOCATED IN A DEPRESSIONAL (SUMP) POSITION
   A. PLACE BAGS IN AN ARC AROUND THE CURB INLET.
   B. OVERLAP BAGS ONTO THE CURB, KEEPING BAGS TIGHTLY ABUTTED TOGETHER.
   C. FOR ADDITIONAL LAYERS OF BAGS, OVERLAP THE BAGS WITH THE ROW BENEATH AND LEAVE A ONE-BAG GAP (AT OR BELOW CURB HEIGHT) IN THE MIDDLE OF THE TOP ROW TO SERVE AS A SPILLWAY. IF THE SPILLWAY HEIGHT IS HIGHER THAN THE TOP OF THE CURB, PLACE ADDITIONAL BAGS ALONG THE CURB TO PREVENT BYPASS FLOW.
4. PLACE A TRAFFIC BARRICADE AT EACH INSTALLED MEASURE FOR SAFETY AND TO PROTECT MEASURE INTEGRITY.

MAINTENANCE:
_ INSPECT DAILY.
_ REMOVE ACCUMULATED SEDIMENT FROM PAVED AREA (DO NOT FLUSH WITH WATER) AFTER EACH STORM EVENT. DEPOSIT SEDIMENT IN AN AREA WHERE IT WILL NOT RE-ENTER THE PAVED AREA OR STORM DRAINS.
_ INSPECT FOR DAMAGE BY VEHICULAR TRAFFIC AND REPAIR IF NEEDED.
_ WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE SEDIMENT, PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL, GRADE AREA TO THE ELEVATION OF THE STORM DRAIN INLET TOP, THEN STABILIZE IMMEDIATELY.

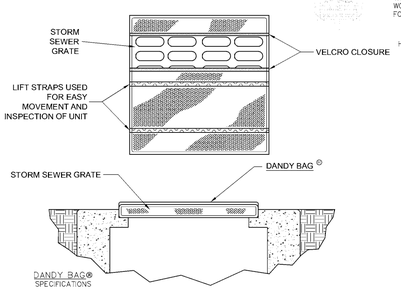
REFERENCE IN CHAPTER 7 PAGE 170-172 IN THE INDIANA STORM WATER QUALITY MANUAL.

NOTE:
GRAVEL OR AGGREGATE MUST BE LARGER THAN STORM SEWER GRATE OPENING TO PREVENT IT FROM FALLING INTO THE STORM SEWER IN THE EVENT A BAG BREAKS.



GRAVELBAG CURB INLET PROTECTION
FOR INLETS LOCATED ON GRADE (NO SCALE)

DANDY BAG ©



NOTE:
THE DANDY BAG® WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

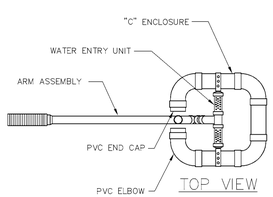
HI-FLOW DANDY BAG® (SAFETY ORANGE)

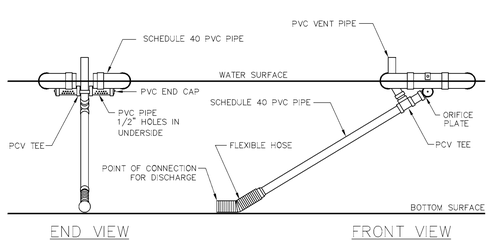
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	$l/min/m^2$ ($gal/min/ft^2$)	5907 (145)
Permittivity	ASTM D 4491	Sec^{-1}	2.1

*Note: All Dandy Bags® can be ordered with our optional oil absorbent pillows

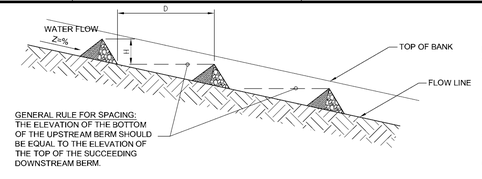
DETAIL OF INLET SEDIMENT CONTROL DEVICE
(NO SCALE)

NOTE:
1) INSTALL, DEWATER, AND MAINTAIN PER MANUFACTURER'S SPECIFICATIONS.
2) DETAIL PER PENNSYLVANIA EROSION AND SEDIMENTATION CONTROL MANUAL, MARCH 2000 ISSUE.
3) CEC TO SPECIFY SEDIMENT SKIMMER.

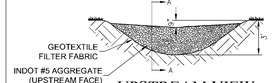




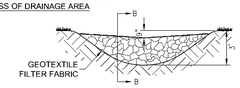
TEMPORARY POND SKIMMER
(NO SCALE)



CHECK DAMS IN SWALE
2 ACRES OR LESS OF DRAINAGE AREA



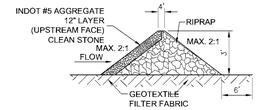
UPSTREAM VIEW



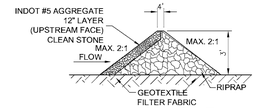
DOWNSTREAM VIEW

INSTALLATION
1. LAY OUT THE LOCATION OF THE CHECK DAM.
2. EXCAVATE A CUTOFF TRENCH INTO THE CHANNEL BOTTOM AND DITCH BANKS, EXTENDING IT A MINIMUM OF 18 INCHES BEYOND THE TOP OF THE DITCH BANK.
3. INSTALL AND ANCHOR FILTER FABRIC IN THE CHANNEL AND CUTOFF TRENCH.
4. PLACE RIPRAP IN THE CUTOFF TRENCH AND CHANNEL TO THE LINES AND DIMENSIONS SHOWN IN THE CONSTRUCTION PLANS. THE CENTER OF EACH DAM MUST BE AT LEAST NINE INCHES LOWER THAN THE UPPERMOST POINTS OF CONTACT BETWEEN THE RIPRAP DAM AND CHANNEL BANKS (SEE ROCK CHECK DAM WORKSHEET ON PAGE 101).
5. EXTEND THE RIPRAP AT LEAST 18 INCHES BEYOND THE TOP OF THE CHANNEL BANKS TO KEEP OVERFLOW WATER FROM ERODING AREAS ADJACENT TO THE CHANNEL BANKS BEFORE IT RE-ENTERS THE CHANNEL.
6. PLACE FILTER MEDIUM (INDOT CA NO. 5 AGGREGATE) ON THE UP-SLOPE SIDE OF THE DAM. PLACE FILTER MEDIUM OVER THE ENTIRE FACE OF THE DAM UP TO THE BASE OF THE OVERFLOW WEIR NOTCH.
7. STABILIZE THE CHANNEL ABOVE THE UPPERMOST DAM.
8. INSTALL AN EROSIONS-RESISTANT LINING IN THE CHANNEL BELOW THE LOWERMOST DAM. THE LINING SHOULD EXTEND A MINIMUM DISTANCE OF SIX FEET BELOW THE DAM.
9. ADDITIONAL SEDIMENT STORAGE CAN BE PROVIDED BY EXCAVATING A SMALL SEDIMENT TRAP ON THE UPSTREAM SIDE OF THE CHECK DAM.

MAINTENANCE
- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, INSTALL AN EROSION-RESISTANT LINER IN THAT PORTION OF THE CHANNEL.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE DAM TO MAINTAIN CHANNEL CAPACITY, ALLOW DRAINAGE THROUGH THE DAM, AND PREVENT LARGE FLOW FROM DISPLACING SEDIMENT.
- ADD RIPRAP AND AGGREGATE AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION OF THE DAMS.
- WHEN DAMS ARE NO LONGER NEEDED, REMOVE THE RIPRAP AND AGGREGATE AND STABILIZE THE CHANNEL USING AN EROSION-RESISTANT LINING IF NECESSARY. (RIPRAP AND AGGREGATE FROM THE DAM MAY BE REMOVED OR UTILIZED TO STABILIZE THE CHANNEL.)



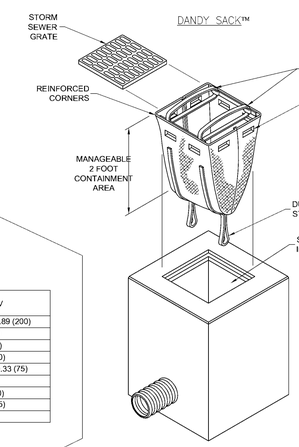
ELEVATION A



ELEVATION B

ROCK CHECK DAM
FOR SWALES AND DITCHES(NO SCALE)

NOTE
1. REFERENCED IN CHAPTER 7 PAGE 97 IN THE INDIANA STORM WATER QUALITY MANUAL.



NOTE: THE DANDY SACK™ WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW DANDY SACK™ (BLACK)

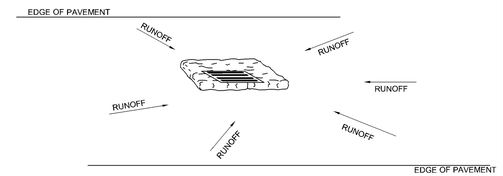
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5506 (800)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.67 (150) x 0.73 (165)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	$l/min/m^2$ ($gal/min/ft^2$)	2852 (70)
Permittivity	ASTM D 4491	Sec^{-1}	0.90

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

HI-FLOW DANDY SACK™ (SAFETY ORANGE)

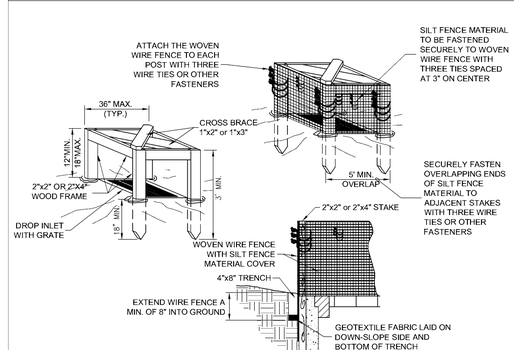
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	$l/min/m^2$ ($gal/min/ft^2$)	5907 (145)
Permittivity	ASTM D 4491	Sec^{-1}	2.1

DETAIL OF INLET SEDIMENT CONTROL DEVICE
(NO SCALE)



MAINTENANCE
- INSPECT DAILY.
- REMOVE ACCUMULATED SEDIMENT FROM PAVED AREA (DO NOT FLUSH WITH WATER) AFTER EACH STORM EVENT. DEPOSIT SEDIMENT IN AN AREA WHERE IT WILL NOT RE-ENTER THE PAVED AREA OR STORM DRAINS.
- INSPECT FOR DAMAGE BY VEHICULAR TRAFFIC AND REPAIR IF NEEDED.
_ WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE SEDIMENT, PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL, GRADE AREA TO THE ELEVATION OF THE STORM DRAIN INLET TOP, THEN STABILIZE IMMEDIATELY.

COCONUT MAT INLET PROTECTION
FOR SAG INLETS LOCATIONS (NO SCALE)



POSTS: 2 X 4 WOODEN STAKE
FENCE: WOVEN WIRE, 14-1/2 GA., 6" MAX. MESH OPENING
FABRIC: IN ACCORDANCE WITH ASTM D 6461 LATEST EDITION.

INSTALLATION
1. DIG AN EIGHT-INCH DEEP, FOUR-INCH WIDE TRENCH AROUND THE PERIMETER OF THE INLET.
2. IF USING PRE-ASSEMBLED GEOTEXTILE FABRIC AND POSTS, DRIVE THE POSTS INTO THE SOIL, TIGHTLY STRETCHING THE GEOTEXTILE FABRIC BETWEEN POSTS AS EACH IS DRIVEN. (POSTS MUST BE PLACED ON THE INLET SIDE OF THE ANCHOR TRENCH WITH THE GEOTEXTILE FABRIC ON THE SIDE OF THE TRENCH FARTHIEST FROM THE INLET.)

NOTE: IF ASSEMBLING THE GEOTEXTILE FABRIC AND POSTS ON-SITE, DRIVE THE POSTS INTO THE SOIL AND THEN SECURE THE GEOTEXTILE FABRIC TO THE POSTS BY PLACING A PIECE OF LATHE OVER THE FABRIC AND FASTENING IT TO THE POST (STRETCHING THE FABRIC BETWEEN POSTS AS IT IS FASTENED).

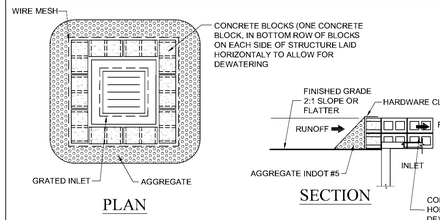
3. USE THE WRAP JOIN METHOD WHEN JOINING POSTS.
4. PLACE THE BOTTOM 12 INCHES OF GEOTEXTILE FABRIC INTO THE EIGHT-INCH DEEP TRENCH, LAYING THE REMAINING FOUR INCHES IN THE BOTTOM OF THE TRENCH AND EXTENDING AWAY FROM THE INLET.
5. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE.
6. BRACE THE POSTS BY NAILING BRACES INTO EACH CORNER POST OR UTILIZE RIGID PANELS TO SUPPORT FABRIC.

NOTE: IN SITUATIONS WHERE STORM WATER MAY BYPASS THE STRUCTURE, EITHER: SET THE TOP OF THE GEOTEXTILE FABRIC FILTER AT LEAST SIX INCHES LOWER THAN THE GROUND ELEVATION ON THE DOWN-SLOPE SIDE OF THE STORM DRAIN INLET, BUILD A TEMPORARY DIKE, COMPACTED TO SIX INCHES HIGHER THAN THE FABRIC, ON THE DOWN-SLOPE SIDE OF THE STORM DRAIN INLET, AND/OR USE IN CONJUNCTION WITH EXCAVATED DROP INLET PROTECTION.

MAINTENANCE
_ INSPECT DAILY.
_ INSPECT GEOTEXTILE FABRIC AND MAKE NEEDED REPAIRS IMMEDIATELY.
_ REMOVE SEDIMENT FROM POOL AREA TO PROVIDE STORAGE FOR THE NEXT STORM EVENT. AVOID DAMAGING OR UNDERCUTTING FABRIC DURING SEDIMENT REMOVAL.
_ WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE SEDIMENT, PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL, GRADE AREA TO THE ELEVATION OF THE STORM DRAIN INLET TOP, THEN STABILIZE IMMEDIATELY.

REFERENCED IN CHAPTER 7 PAGE 153-157 IN THE INDIANA STORM WATER QUALITY MANUAL.

SILT FENCE INLET PROTECTION
FOR NON PAVED AREAS (NO SCALE)



PLAN
SECTION

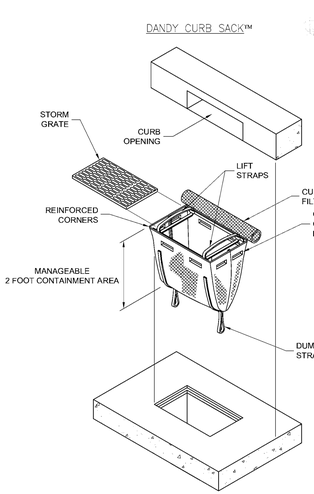
INSTALLATION
1. EXCAVATE THE FOUNDATION FOR THE CONCRETE BLOCKS ON LEVEL GRADE AND AT LEAST TWO INCHES BELOW THE TOP OF THE STORM DRAIN INLET.
2. PLACE THE BOTTOM ROW OF CONCRETE BLOCKS AROUND THE PERIMETER OF THE STORM DRAIN. LAY BLOCKS WITH OPENINGS FACING UP, ABUTTING THE BLOCKS TOGETHER AND OVERLAPPING THE CORNERS.
3. IF NECESSARY, SUPPORT THE BLOCKS BY DRIVING SHARPENED 2 X 4 INCH WOOD STUDS OR REBAR (NOT MORTAR) THROUGH THE BLOCK OPENINGS AND INTO THE UNDERLYING SOIL.
4. ON EACH SIDE OF THE BOTTOM ROW, TURN ONE CONCRETE BLOCK WITH ITS OPENINGS FACING HORIZONTALLY TO ALLOW FOR DEWATERING.
5. PLACE HARDWARE CLOTH OVER THE OPENINGS TO HOLD THE AGGREGATE IN PLACE.
6. PLACE THE FILTER MEDIUM (INDOT CA NO. 5 AGGREGATE) AROUND THE OUTSIDE OF THE CONCRETE BLOCKS TO CONTROL DRAINAGE RATE; LIMIT FILTER MEDIUM SIDE SLOPES TO 2:1 RATIO OR FLATTER.

NOTE: IN SITUATIONS WHERE STORM WATER MAY BYPASS THE STRUCTURE, EITHER:
_ SET THE TOP OF THE CONCRETE BLOCKS AT LEAST SIX INCHES LOWER THAN THE GROUND ELEVATION ON THE DOWN-SLOPE SIDE OF THE STORM DRAIN INLET,
_ BUILD A TEMPORARY DIKE, COMPACTED TO SIX INCHES HIGHER THAN THE CONCRETE BLOCKS, ON THE DOWN-SLOPE SIDE OF THE STORM DRAIN INLET, AND/OR
_ USE IN CONJUNCTION WITH EXCAVATED DROP INLET PROTECTION (SEE EXCAVATED DROP INLET PROTECTION ON PAGE 145).

MAINTENANCE
_ INSPECT DAILY.
_ REMOVE SEDIMENT AND DEBRIS AND MAKE NEEDED REPAIRS IMMEDIATELY.
_ WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION MATERIAL AND SEDIMENT, THEN STABILIZE.

REFERENCED IN CHAPTER 7 PAGE 163 TO 166 IN THE INDIANA STORM WATER QUALITY MANUAL.

BLOCK AND AGGREGATE INLET SEDIMENT DEVICE
(NO SCALE)



NOTE: THE DANDY CURB SACK™ WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW DANDY CURB SACK™ (BLACK)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5506 (800)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.67 (150) x 0.73 (165)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	$l/min/m^2$ ($gal/min/ft^2$)	2852 (70)
Permittivity	ASTM D 4491	Sec^{-1}	0.90

HI-FLOW DANDY CURB SACK™ (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
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Permittivity	ASTM D 4491	Sec^{-1}	2.1

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

DETAIL OF INLET SEDIMENT CONTROL DEVICE WITH CURB FILTER
(NO SCALE)

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

DATE	BY	
02.12.2015	BJS	PROJECT NO. W14-0460
		DWG NAME: w14046C-C104 swppp det.dwg
		DESIGNED BY: RJW/RAM
		DRAWN BY: RJW/RAM
		CHECKED BY: JKS
		DATE: 02.12.2015

REVISIONS/UPDATES SUBMITTED FOR INITIAL REVIEW

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SWPPP DETAILS
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C1.09
PROJECT NO.
W14-0460

LOCK ON: H:\2014\W14-0460\Engineering\design\cornet\w140460-C104 swppp det.dwg
LAYOUT: C1.09
LAST SAVED: February 12, 2015 - 7:28am
LAYOUT BY: schoeffle
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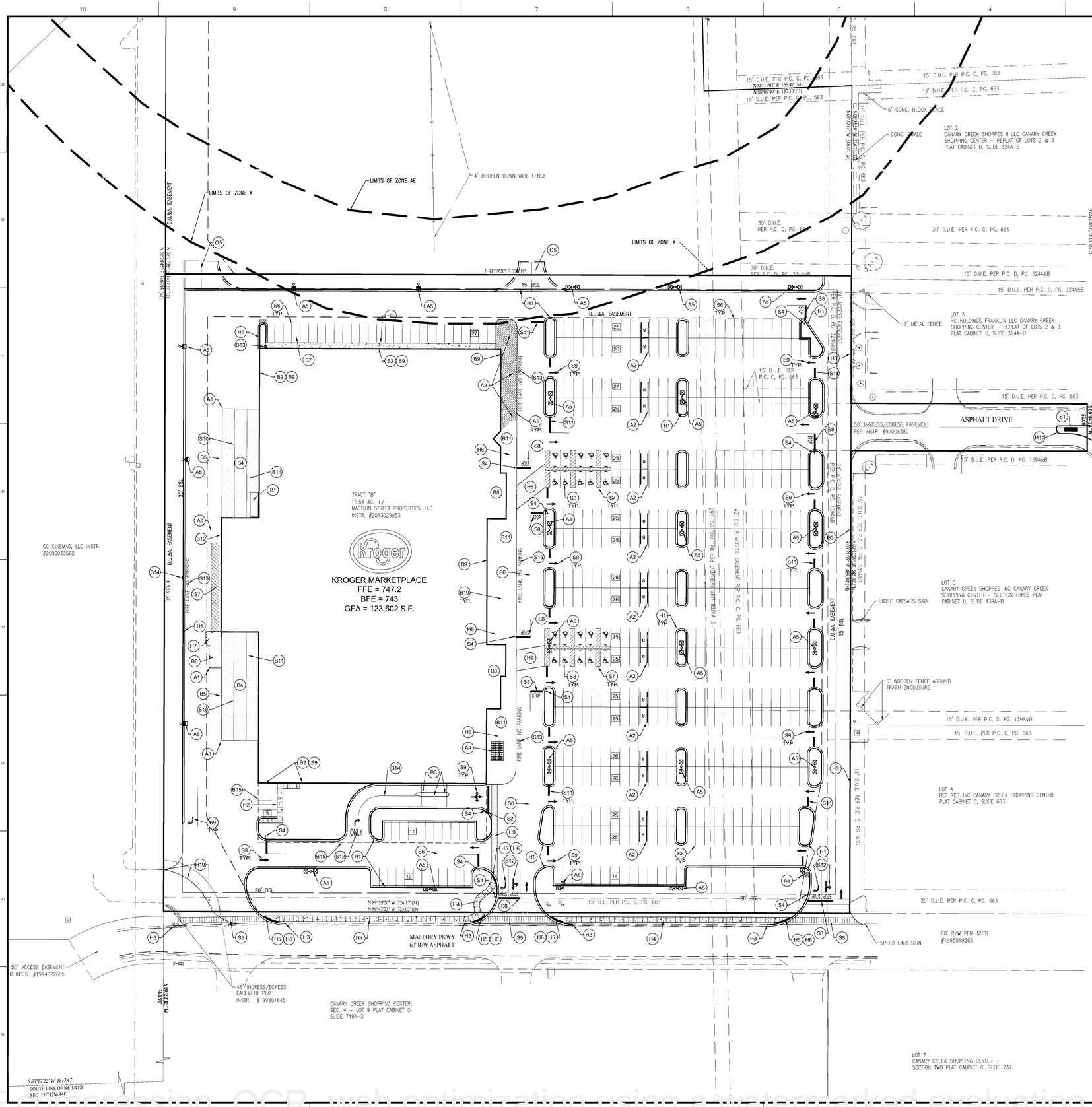

SITE PLAN NOTES

HARDSCAPE

- H1 6" CURB AND GUTTER
- H2 CONCRETE WALK AND CURB. COORDINATE WITH ARCHITECTURAL PLANS.
- H3 MATCH EXISTING PAVEMENT ALIGNMENT AND ELEVATION
- H4 CONCRETE SIDEWALK
- H5 ADA ACCESSIBLE RAMP WITH DETECTABLE WARNING.
  - PRIVATE WARNINGS TO BE GROOVED CONCRETE
  - RIGHT OF WAY WARNINGS TO BE TRUNCATED DOMES
- H6 PAVEMENT FLUSH WITH SIDEWALK
- H7 TRANSFORMER PAD LOCATION
- H8 INTEGRAL WALK AND CURB (SITE SPECIFICATION)
- H9 STAMPED ASPHALT OR CONCRETE WALK AREA.
- H10 MATCH ASPHALT EDGE
- H11 NEW 6" TALL CONCRETE PORKCHOP ISLAND FOR THE SIGN

BUILDING ACCESSORIES

- B1 COMPACTOR ENCLOSURE
- B2 CONCRETE STOOP
- B3 DRIVE THROUGH PHARMACY ISLANDS AND EQUIPMENT
- B4 LOADING DOCK
- B5 LOADING DOCK RETAINING WALL
- B6 GENERATOR
- B7 GREASE INTERCEPTOR WITH H20 LOADING RATED COVERS, FLUSH WITH GRADE
- B8 ENTRANCE VESTIBULES
- B9 EXIT DOOR
- B10 ARCHITECTURAL BUILDING COLUMN OVERHANG ABOVE.
- B11 CONCRETE PER ARCHITECTURAL PLANS
  - STOREFRONT SIDEWALK - MIN. 5" DEPTH
  - FROST PADS - MIN. 5" DEPTH
  - CONCRETE PADS FOR Rx OR BANK LANES - MIN. 5" DEPTH
  - SLAB / PAD FOR FOR MECHANICAL HOUSINGS OR REFRIGERATION EQUIPMENT - MIN. 8" DEPTH
  - DUMPSTER / COMPACTOR PAD - MIN. 8" DEPTH
  - LANDSCAPE SIDEWALK - MIN. 4" DEPTH
- B12 DSD DOOR
- B13 GAS METER LOCATION
- B14 STACKING SPACE AT DRIVE THROUGH
- B15 LIMITS OF FUTURE BUILDING EXPANSION.

ACCESSORIES

- A1 BOLLARD (TYP. ON ALL)
- A2 CART CORRALS
- A3 2000 S.F. PUBLIC AREA REQUIRED BY CITY ORDINANCE. USE DECORATIVE STAMPED CONCRETE. REFER TO THE ARCHITECTURAL DRAWINGS FOR DETAILS.
- A4 BIKE RACK
- A5 LIGHT POLE AND BASE
  - ALL LIGHT POLES, FIXTURES, AND ANCHOR BOLTS ARE PROVIDED BY THE OWNER, KROGER, AND MUST BE COORDINATED, RECEIVED, HANDLED, ASSEMBLED, AND INSTALLED BY THE SITE CONTRACTOR. ALL WARRANTY WORK AND REPAIRS ARE THE SITE CONTRACTOR'S RESPONSIBILITY.

SIGNAGE & MARKINGS

- S1 KROGER MULTI-TENANT PYLON SIGN
- S2 SIGN "DO NOT ENTER"
- S3 ADA PARKING SPACE. ALL ADA STRIPING SHALL BE BLUE.
- S4 STOP SIGN
- S5 PEDESTRIAN CROSSWALK.
- S6 4" PAINTED YELLOW SOLID LINES (TYP)
- S7 4" PAINTED YELLOW SOLID LINE ISLAND, BLUE FOR ADA PARKING
- S8 24" PAINTED WHITE STOP BAR WITH "STOP" TEXT
- S9 PAINTED WHITE DIRECTIONAL TRAFFIC ARROWS
- S10 65' X4" WIDE PAINTED LINES FOR EACH OVERHEAD DOCK DOOR.
- S11 24" PAINTED WHITE STOP BAR
- S12 PAINTED WHITE SOLID LANE SPECIFIC DIRECTIONAL ARROWS WITH TEXT
- S13 PAINTED "FIRE LANE NO PARKING"
- S14 SIGN "FIRE LANE NO PARKING"

OFFSITE COORDINATION

- O1 REPLACE THE WHITE VINYL FENCE TO MATCH EXISTING
- O2 REPLACE THE WOOD PRIVACY FENCE TO MATCH EXISTING
- O3 PROVIDE A HEAVY DUTY PAVEMENT PATCH OVER THE STORM SEWER TRENCH PER SECTION 8 OF THE TOWN STANDARDS
- O4 REPLACE CURB AND GUTTER WITH SAME STYLE AND ELEVATION
- O5 FUTURE DRIVE TO THE NORTH ADJOINER. ACTUAL LOCATION AND DESIGN TO BE COMPLETED BY THE NORTHERN ADJOINER WHEN THEIR TRACT IS DEVELOPED.

SITE PLAN GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
2. ALL QUANTITIES GIVEN ON THESE PRINTS, VERBALLY OR IN THE SCOPE OF WORK SECTION ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.
3. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH. IN ADDITION, EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
4. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THIS PROJECT.
5. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS.
6. BEARINGS, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS AND PLATS FOR EXACT INFORMATION.
7. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT.
8. ALL DIMENSIONS ARE BASED ON FACE OF CURB OR BACK OF ROLL CURB OR FACE OF BUILDING.
9. SEE ARCHITECTURAL PLANS FOR DETAILS OF BUILDING, BUILDING DIMENSIONS, ATM RELATED DETAILS, AND SIGNAGE SPECIFICATIONS. DO NOT STAKE BUILDING FROM THESE PLANS.
10. COORDINATE CONSTRUCTION ACTIVITIES WITH ADJOINING WORK IF APPLICABLE. VERIFY EXTENT OF ADJOINING WORK AND COORDINATE AS REQUIRED.
11. FIELD VERIFY EXISTING CURBS AND TAPER PROPOSED VERTICAL CURBS TO MATCH WITHIN A MIN. OF THREE (3) FEET.
12. ± DIMENSIONS INDICATE FIELD DIMENSION ADJUSTMENT AREA BASED ON ACTUAL FIELD LAYOUT COORDINATES.
13. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
14. PROVIDE SMOOTH TRANSITION FROM NEWLY PAVED AREAS TO EXISTING AREAS AS NECESSARY. ALL AREAS WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE FREE OF ALL LOOSE DEBRIS. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING.
15. RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS ALL AREAS WHERE THE EXISTING PAVEMENT OR LAWNS ARE DAMAGED DURING CONSTRUCTION FROM TRAFFIC BY CONTRACTORS, SUBCONTRACTORS, OR SUPPLIERS AFTER CONSTRUCTION WORK IS COMPLETE.
16. THE CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
17. REFER TO ARCHITECTURAL PLANS FOR BUILDING ACCESSORY DETAILS.
18. REFER TO SHEET C2.03, C2.04, C2.05 FOR SITE PLAN DETAILS UNLESS OTHERWISE NOTED.

SITE DATA

SITE AREA = 11.54 AC
BUILDING AREA = 123,602 SF
ZONING = MXC & GW-OL

FRONT YARD BSL REQUIRED	= 20	FT
REAR YARD BSL REQUIRED	= 20	FT
SIDE YARD BSL REQUIRED	= 15	FT

PARKING REQUIRED:
PARKING REQUIREMENT: 1 SPACE/300S.F. +1 PER EMPLOYEE ON LARGEST SHIFT (90± EMPLOYEES)

PARKING REQUIRED	= 502 SPACES
PARKING DIMENSIONS	= 9' x 20' or 10' x 20'
ADA PARKING SPACES	= 20 (3.8% OF TOTAL)
PARKING RATIO PROVIDED	= 4.27 spaces / 1000 S.F.

OPEN SPACE:
PARKING & DRIVE AREA = 309,529 S.F.
(OPEN SPACE REQUIRED) = (5%)
OPEN SPACE PROVIDED = 16,886 S.F. = 5.5%

GENERAL SITE HARD SURFACE BUILDING, PARKING, DRIVES AND WALKS (MAX) = (75%)
PROVIDED = 444,729 S.F. = 88%

PARKING PROVIDED:
490 - STANDARD SPACES
+20 - ADA SPACES
510 - TOTAL SPACES
+18 - CART CORRALS
528 - TOTAL

SITE PLAN LEGEND

	=	EXISTING SIGN
MB	=	MAILBOX
	=	EXISTING LIGHT
BOL	=	EXISTING BOLLARD
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
R.O.W.	=	RIGHT-OF-WAY
F.F.E.	=	FINISH FLOOR ELEVATION
12	=	PARKING COUNT
	=	ADA PARKING
BSL	=	BUILDING SETBACK LINE
ESMT	=	EASEMENT
D&UE	=	DRAINAGE AND UTILITY EASEMENT
PKF	=	EXISTING IRON PIN & OR PK (SET/FOUND)
	=	EXISTING TREE LINE
	=	PROPOSED DIRECTIONAL SIGN

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

Know what's below. Call before you dig.
Within Indiana Call 811 or 800-382-5544
24 Hours a Day, 7 Days a Week.

PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO: W14.0460
DWG NAME: w14046460-C200 site.dwg
DESIGNED BY: RJW/PAM
DRAWN BY: RJW/PAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SITE PLAN
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C2.01
PROJECT NO.
W14.0460

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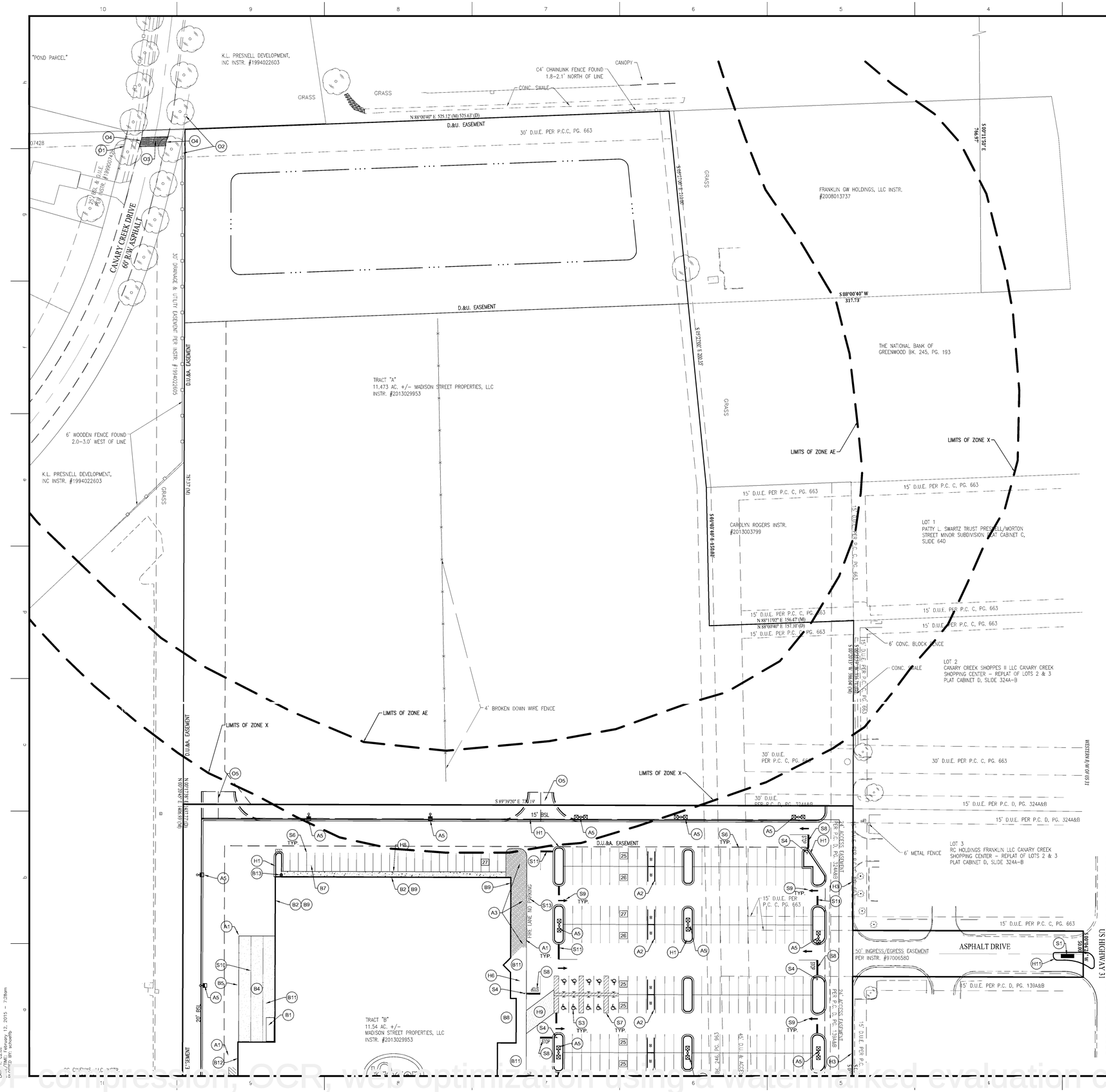

SITE PLAN NOTES

HARDSCAPE

- H1 6" CURB AND GUTTER
- H2 CONCRETE WALK AND CURB. COORDINATE WITH ARCHITECTURAL PLANS.
- H3 MATCH EXISTING PAVEMENT ALIGNMENT AND ELEVATION
- H4 CONCRETE SIDEWALK
- H5 ADA ACCESSIBLE RAMP WITH DETECTABLE WARNING.
  - PRIVATE WARNINGS TO BE GROOVED CONCRETE
  - RIGHT OF WAY WARNINGS TO BE TRUNCATED DOMES
- H6 PAVEMENT FLUSH WITH SIDEWALK
- H7 TRANSFORMER PAD LOCATION
- H8 INTEGRAL WALK AND CURB (SITE SPECIFICATION)
- H9 STAMPED ASPHALT OR CONCRETE WALK AREA.
- H10 MATCH ASPHALT EDGE
- H11 NEW 6" TALL CONCRETE PORKCHOP ISLAND FOR THE SIGN

BUILDING ACCESSORIES

- B1 COMPACTOR ENCLOSURE
- B2 CONCRETE STOOP
- B3 DRIVE THROUGH PHARMACY ISLANDS AND EQUIPMENT
- B4 LOADING DOCK
- B5 LOADING DOCK RETAINING WALL
- B6 GENERATOR
- B7 GREASE INTERCEPTOR WITH H20 LOADING RATED COVERS, FLUSH WITH GRADE
- B8 ENTRANCE VESTIBULES
- B9 EXIT DOOR
- B10 ARCHITECTURAL BUILDING COLUMN OVERHANG ABOVE.
- B11 CONCRETE PER ARCHITECTURAL PLANS
  - STOREFRONT SIDEWALK - MIN. 5" DEPTH
  - FROST PADS - MIN. 5" DEPTH
  - CONCRETE PADS FOR Rx OR BANK LANES - MIN. 5" DEPTH
  - SLAB / PAD FOR FOR MECHANICAL HOUSINGS OR REFRIGERATION EQUIPMENT - MIN. 8" DEPTH
  - DUMPSTER / COMPACTOR PAD - MIN. 8" DEPTH
  - LANDSCAPE SIDEWALK - MIN. 4" DEPTH
- B12 DSD DOOR
- B13 GAS METER LOCATION
- B14 STACKING SPACE AT DRIVE THROUGH
- B15 LIMITS OF FUTURE BUILDING EXPANSION.

ACCESSORIES

- A1 BOLLARD (TYP. ON ALL)
- A2 CART CORRALS
- A3 2000 S.F. PUBLIC AREA REQUIRED BY CITY ORDINANCE. USE DECORATIVE STAMPED CONCRETE. REFER TO THE ARCHITECTURAL DRAWINGS FOR DETAILS.
- A4 BIKE RACK
- A5 LIGHT POLE AND BASE
  - ALL LIGHT POLES, FIXTURES, AND ANCHOR BOLTS ARE PROVIDED BY THE OWNER, KROGER, AND MUST BE COORDINATED, RECEIVED, HANDLED, ASSEMBLED, AND INSTALLED BY THE SITE CONTRACTOR. ALL WARRANTY WORK AND REPAIRS ARE THE SITE CONTRACTOR'S RESPONSIBILITY.

SIGNAGE & MARKINGS

- S1 KROGER MULTI-TENANT PYLON SIGN
- S2 SIGN "DO NOT ENTER"
- S3 ADA PARKING SPACE. ALL ADA STRIPING SHALL BE BLUE.
- S4 STOP SIGN
- S5 PEDESTRIAN CROSSWALK.
- S6 4" PAINTED YELLOW SOLID LINES (TYP)
- S7 4" PAINTED YELLOW SOLID LINE ISLAND. BLUE FOR ADA PARKING
- S8 24" PAINTED WHITE STOP BAR WITH "STOP" TEXT
- S9 PAINTED WHITE DIRECTIONAL TRAFFIC ARROWS
- S10 65' X4" WIDE PAINTED LINES FOR EACH OVERHEAD DOCK DOOR.
- S11 24" PAINTED WHITE STOP BAR
- S12 PAINTED WHITE SOLID LANE SPECIFIC DIRECTIONAL ARROWS WITH TEXT
- S13 PAINTED "FIRE LANE NO PARKING"
- S14 SIGN "FIRE LANE NO PARKING"

OFFSITE COORDINATION

- O1 REPLACE THE WHITE VINYL FENCE TO MATCH EXISTING
- O2 REPLACE THE WOOD PRIVACY FENCE TO MATCH EXISTING
- O3 PROVIDE A HEAVY DUTY PAVEMENT PATCH OVER THE STORM SEWER TRENCH PER SECTION 8 OF THE TOWN STANDARDS
- O4 REPLACE CURB AND GUTTER WITH SAME STYLE AND ELEVATION
- O5 FUTURE DRIVE TO THE NORTH ADJOINER. ACTUAL LOCATION AND DESIGN TO BE COMPLETED BY THE NORTHERN ADJOINER WHEN THEIR TRACT IS DEVELOPED.

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SITE PLAN GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
2. ALL QUANTITIES GIVEN ON THESE PRINTS, VERBALLY OR IN THE SCOPE OF WORK SECTION ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.
3. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH. IN ADDITION, EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
4. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THIS PROJECT.
5. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS.
6. BEARINGS, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS AND PLATS FOR EXACT INFORMATION.
7. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT.
8. ALL DIMENSIONS ARE BASED ON FACE OF CURB OR BACK OF ROLL CURB OR FACE OF BUILDING.
9. SEE ARCHITECTURAL PLANS FOR DETAILS OF BUILDING, BUILDING DIMENSIONS, ATM RELATED DETAILS, AND SIGNAGE SPECIFICATIONS. DO NOT STAKE BUILDING FROM THESE PLANS.
10. COORDINATE CONSTRUCTION ACTIVITIES WITH ADJOINING WORK IF APPLICABLE. VERIFY EXTENT OF ADJOINING WORK AND COORDINATE AS REQUIRED.
11. FIELD VERIFY EXISTING CURBS AND TAPER PROPOSED VERTICAL CURBS TO MATCH WITHIN A MIN. OF THREE (3) FEET.
12. ± DIMENSIONS INDICATE FIELD DIMENSION ADJUSTMENT AREA BASED ON ACTUAL FIELD LAYOUT COORDINATES.
13. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
14. PROVIDE SMOOTH TRANSITION FROM NEWLY PAVED AREAS TO EXISTING AREAS AS NECESSARY. ALL AREAS WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE FREE OF ALL LOOSE DEBRIS. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING.
15. RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS ALL AREAS WHERE THE EXISTING PAVEMENT OR LAWNS ARE DAMAGED DURING CONSTRUCTION FROM TRAFFIC BY CONTRACTORS, SUBCONTRACTORS, OR SUPPLIERS AFTER CONSTRUCTION WORK IS COMPLETE.
16. THE CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
17. REFER TO ARCHITECTURAL PLANS FOR BUILDING ACCESSORY DETAILS.
18. REFER TO SHEET C2.03, C2.04, C2.05 FOR SITE PLAN DETAILS UNLESS OTHERWISE NOTED.

SITE DATA

SITE AREA = 11.54 AC
BUILDING AREA = 123,602 SF
ZONING = MXC & GW-OI.
FRONT YARD BSL REQUIRED = 20 FT
REAR YARD BSL REQUIRED = 20 FT
SIDE YARD BSL REQUIRED = 15 FT

PARKING REQUIRED:
PARKING REQUIREMENT: 1 SPACE/300S.F. +1 PER EMPLOYEE ON LARGEST SHIFT (90± EMPLOYEES)
PARKING REQUIRED = 502 SPACES
PARKING DIMENSIONS = 9' x 20' or 10' x 20'
ADA PARKING SPACES = 20 (3.8% OF TOTAL)
PARKING RATIO PROVIDED = 4.27 spaces / 1000 S.F.

OPEN SPACE:
PARKING & DRIVE AREA = 309,529 S.F.
(OPEN SPACE REQUIRED) = (5%)
OPEN SPACE PROVIDED = 16,886 S.F. = 5.5%

GENERAL SITE HARD SURFACE BUILDING, PARKING, DRIVES AND WALKS (MAX) = (75%)
PROVIDED = 444,729 S.F. = 88%

PARKING PROVIDED:
490 - STANDARD SPACES
+20 - ADA SPACES
510 - TOTAL SPACES
+18 - CART CORRALS
528 - TOTAL

SITE PLAN LEGEND

	=	EXISTING SIGN
MB	=	MAILBOX
	=	EXISTING LIGHT
BOL	=	EXISTING BOLLARD
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
R.O.W.	=	RIGHT-OF-WAY
F.F.E.	=	FINISH FLOOR ELEVATION
12	=	PARKING COUNT
	=	ADA PARKING
BSL	=	BUILDING SETBACK LINE
ESMT	=	EASEMENT
D&UE	=	DRAINAGE AND UTILITY EASEMENT
• PKF	=	EXISTING IRON PIN & OR PK (SET/FOUND)
	=	EXISTING TREE LINE
	=	PROPOSED DIRECTIONAL SIGN

SCALE: 1" = 50

Know what's below. Call before you dig.
Within Indiana Call 811 or 800-382-5544
24 Hours a Day, 7 Days a Week.
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14-0460
DWG NAME:	w140460-C200 site.dwg
DESIGNED BY:	RJW/SAM
DRAWN BY:	RJW/SAM
CHECKED BY:	JKS
DATE:	02.12.2015

DATE	BY	REVISIONS AND NOTES
02.12.2015	BJS	SUBMITTED FOR FINAL REVIEW

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SITE PLAN
Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C2.02
PROJECT NO.
W14-0460

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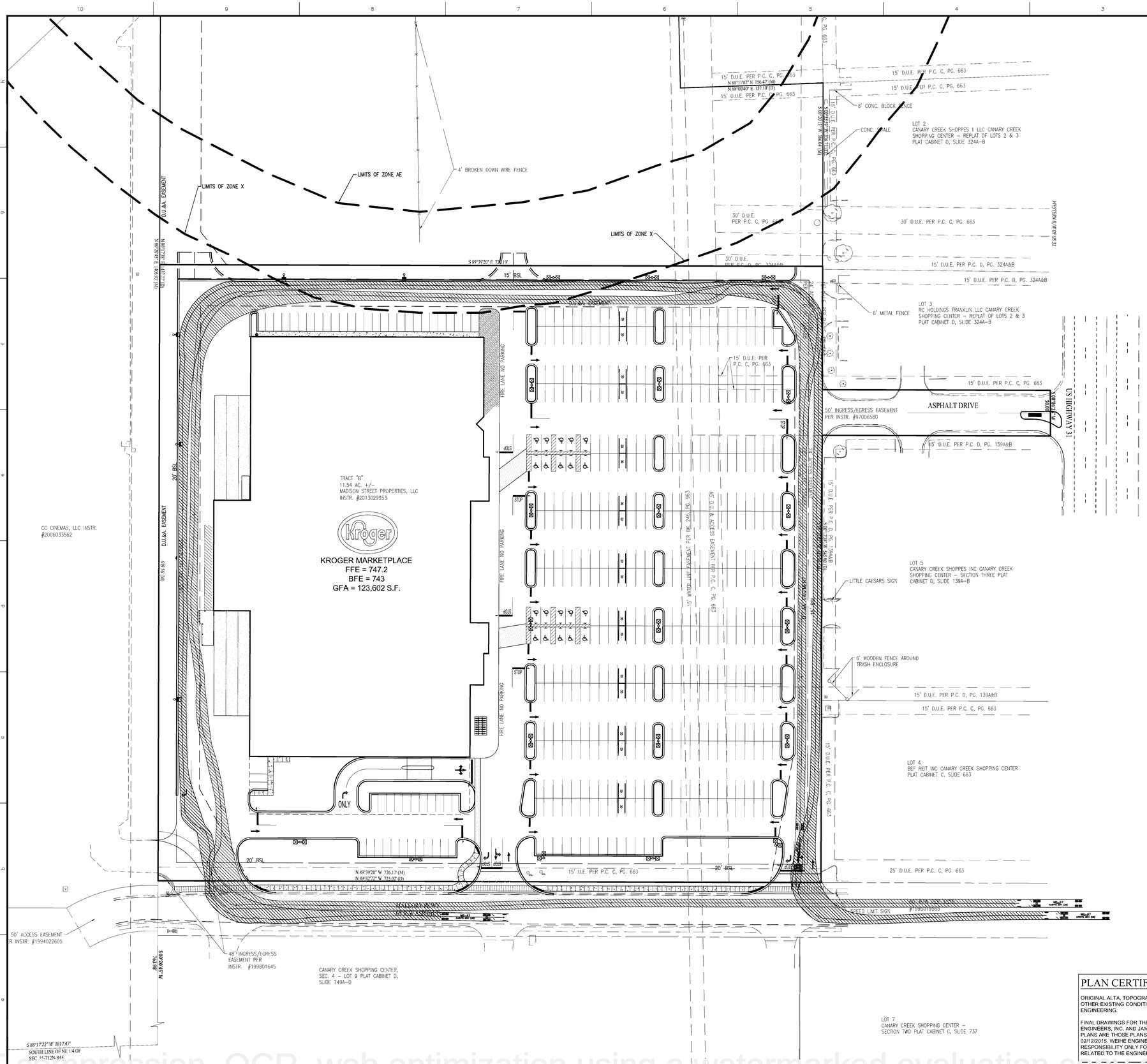

SITE PLAN LEGEND

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PLAN CERTIFICATE NOTE:

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WEIHE ENGINEERS

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net

317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 *fax*

ALLAN H. WEIHE, P.E., L.S. - FOUNDER

Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO:	W14-0460	
DWG NAME:	w14046C-C200 site.dwg	
DESIGNED BY:	RLW/SAM	
DRAWN BY:	RLW/SAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.B.

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

TRUCK ROUTING PLAN

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.

C2.03

PROJECT NO.

W14.0460

LOCK On: 01/01/2014\W14046C\Engineering\design\consert\w14046C-C200 site.dwg
LAYOUT: C2.03
LAST TIME: February 12, 2015 – 7:29am
plotted By: Schotto

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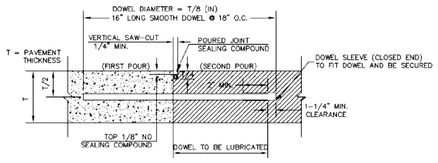
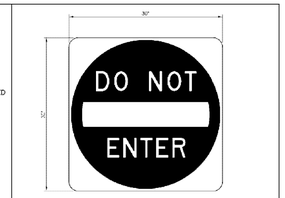


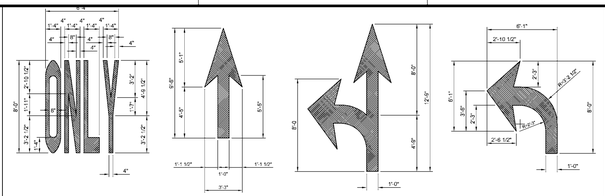
NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

CONSTRUCTION JOINT
(NO SCALE)



NOTE:
SIGN IS TO BE MOUNTED ON GALVANIZED STEEL U-POST AND MEET IN.D.O.T. AND INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

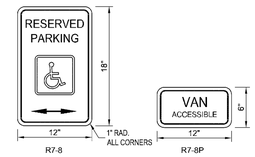
DO NOT ENTER SIGN
(NO SCALE)



NOTE:
LANE CONTROL ARROWS SHALL BE WHITE AND SHALL BE PLACED IN ACCORDANCE WITH IMUTCD. THE ARROW SHOULD BE 20 FEET IN ADVANCE OF THE STOPLINE. THE WORD "ONLY" SHOULD BE LOCATED IN ADVANCE OF THE PAVEMENT ARROW.

TRAFFIC MARKING DETAILS
(NO SCALE)

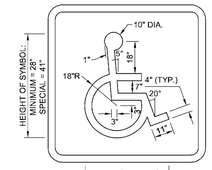
NOTE:
TYPICAL SIZES FOR NORMAL INSTALLATION; SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD FOR LOW-SPEED URBAN CONDITIONS.



NOTE:
12"X18" 18 GAUGE HOT DIP GALVANIZED NON-REFLECTIVE SIGN WITH 12" POST DRIVEN 4 FEET INTO GROUND. POST SHALL BE 12' LONG GALVANIZED 2 1/2" OD STEEL POSTS. SET BOTTOM OF SIGN 7' ABOVE GRADE.
NOTE:
WHERE PARKING SPACES THAT ARE RESERVED FOR PERSONS WITH DISABILITIES ARE DESIGNATED TO ACCOMMODATE WHEELCHAIR VANS, A VAN ACCESSIBLE (R7-8P) PLAQUE SHALL BE MOUNTED BELOW THE R7-8 SIGN. THE R7-8SIGN SHALL HAVE A GREEN LEGEND AND BORDER AND A WHITE WHEELCHAIR SYMBOL ON A BLUE SQUARE ALL ON A WHITE BACKGROUND. THE R7-8P PLAQUE SHALL HAVE A GREEN LEGEND AND BORDER ON A WHITE BACKGROUND.

ADA SIGNS
(NO SCALE)

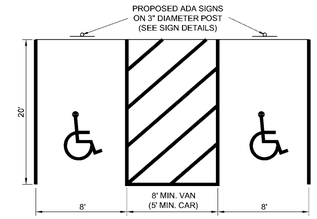
NOTE:
ALL STRIPES TO BE PAINTED WHITE.
MINIMUM = 3"
SPECIAL = 4"



NOTE:
BLUE BACKGROUND AND WHITE BORDER ARE OPTIONAL

ADA PARKING SYMBOL DETAIL
(NO SCALE)

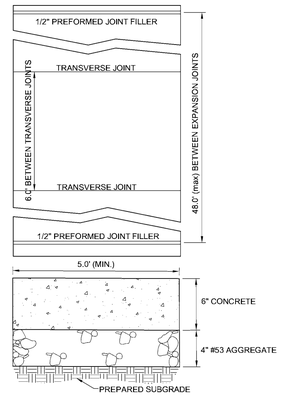
NOTE::
ALL PAINT TO BE BLUE NON-SKID SURFACE APPLICATION OF CILICA SAND OR GLASS BEAD BY METHOD OF MIXTURE AND OR BROADCASTING.



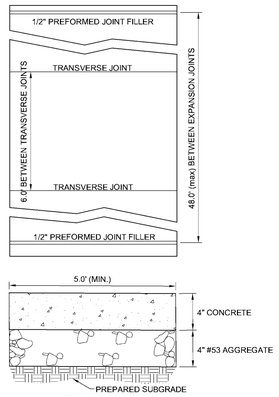
"ADA" PARKING SPACES
(NO SCALE)

"FUEL TRUCK ONLY" SIGN
(NO SCALE)

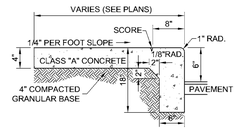
"NO PARKING - FIRE LANE" SIGN
(NO SCALE)



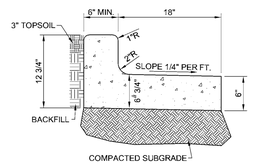
SIDEWALK SECTION - DRIVEWAY CROSSING
(NO SCALE)



TYPICAL SIDEWALK SECTION
(NO SCALE)

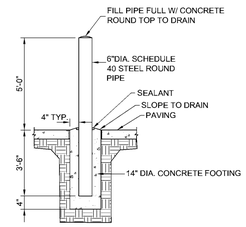


INTEGRAL WALK AND CURB DETAIL
(NO SCALE)

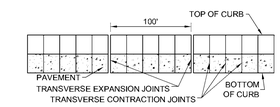


SEE STD. SHT. 12-03 FOR GENERAL NOTES
SEE STD. SHT.12-04 FOR JOINT SPACING DETAILS

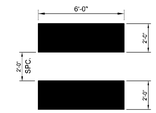
COMBINED CONCRETE CURB & GUTTER
TYPE III
(NO SCALE)



PIPE BOLLARD DETAIL
(NO SCALE)

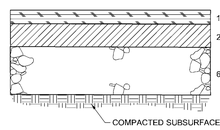


CURB JOINT DETAIL
(NO SCALE)

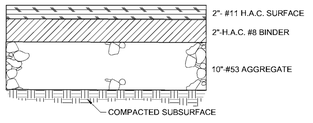


NOTES:
- CONTRACTOR SHALL PROPERLY RE-ALIGN STOP BARS AND OTHER PAVEMENT MARKERS AS NECESSARY TO INSTALL CROSSWALK.
- CROSSWALK STRIPES SHALL BE APPLIED IN ACCORDANCE WITH MUNICIPAL STANDARDS.
- STRIPES ARE THERMOPLASTIC WHITE WITHIN R.O.W.; OTHERWISE PAINTED WHITE.
- CONTRACTOR SHALL APPLY LONG LIFE MARKING MATERIALS ONLY.

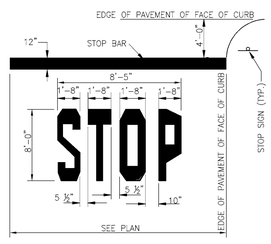
PEDESTRIAN CROSSWALK
(NO SCALE)



STANDARD DUTY ASPHALT PAVING SECTION
(NO SCALE)

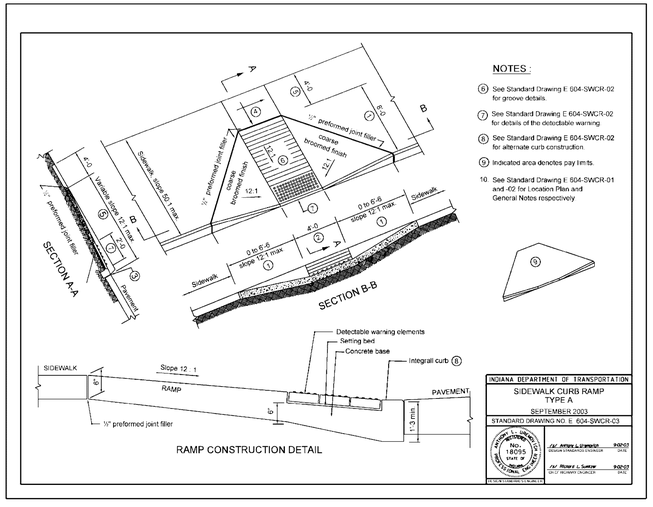


HEAVY DUTY ASPHALT PAVING SECTION
(NO SCALE)
NOTE: THE AGGREGATE BASE COURSE SHOULD CONTAIN NO MORE THAN 10% FINES AND BE WELL-GRADED



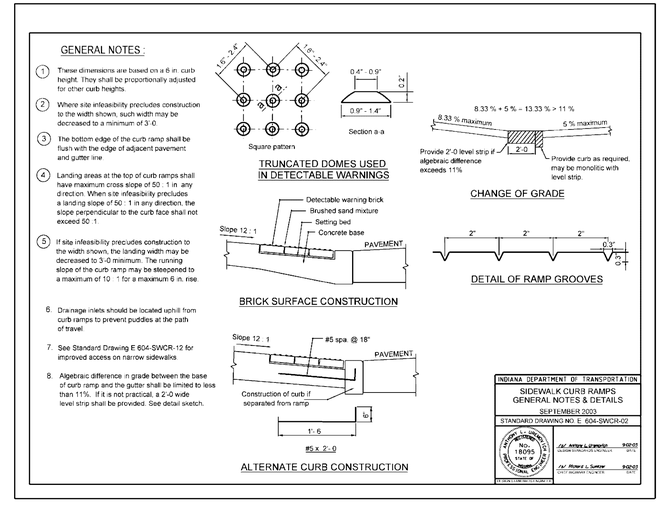
NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
2. THESE WORDS AND BAR ARE TO BE PAINTED REFLECTIVE WHITE.

STOP BAR



NOTES :
6. See Standard Drawing E 604-SWCR-02 for groove details.
7. See Standard Drawing E 604-SWCR-02 for details of the detectable warning.
8. See Standard Drawing E 604-SWCR-02 for alternate curb construction.
9. Indicated area denotes pay limits.
10. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.

INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB RAMP
TYPE A
SEPTEMBER 2003
STANDARD DRAWING NO. E 604-SWCR-03



INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB RAMPS
GENERAL NOTES & DETAILS
SEPTEMBER 2003
STANDARD DRAWING NO. E 604-SWCR-02

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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.S.

PROJECT NO.: W14-0460
DWG NAME: w14046c-C201 site det.dwg
DESIGNED BY: R.LWRAM
DRAWN BY: R.LWRAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SITE DETAILS
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C2.04
PROJECT NO.
W14.0460

LOCK ON: H:\2014\W140460\Engineering\design\conset\w140460-C201 site det.dwg
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LUTIME: February 12, 2015 - 7:29am
LUTIMEBY: schwilb

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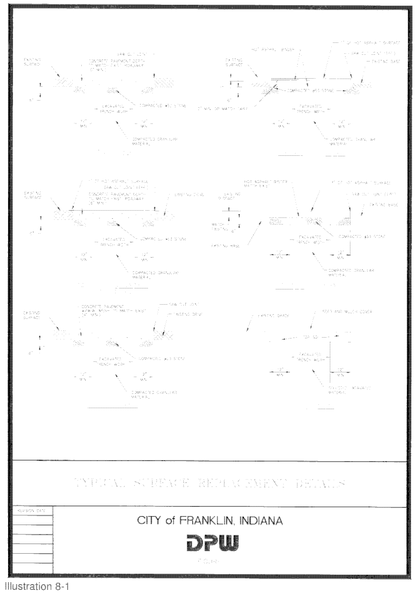
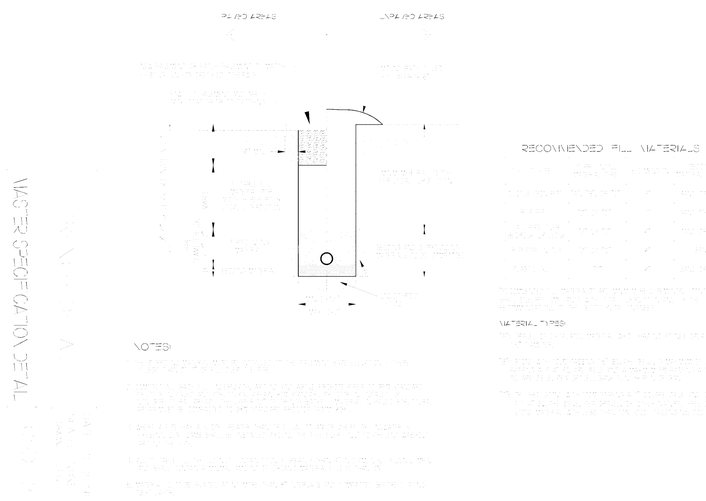
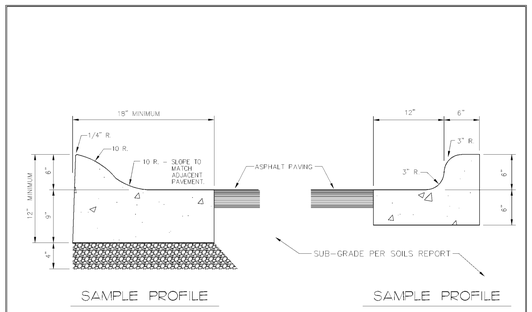


Illustration 8-1

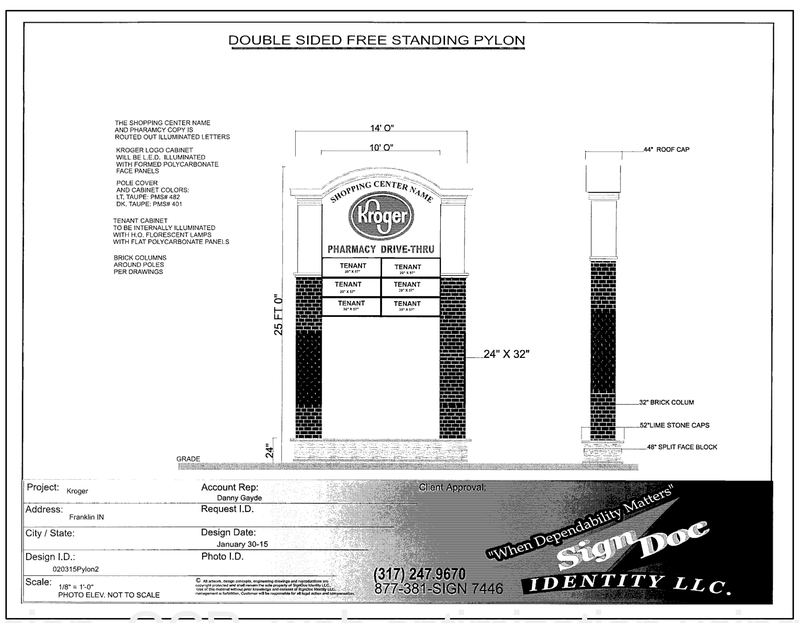


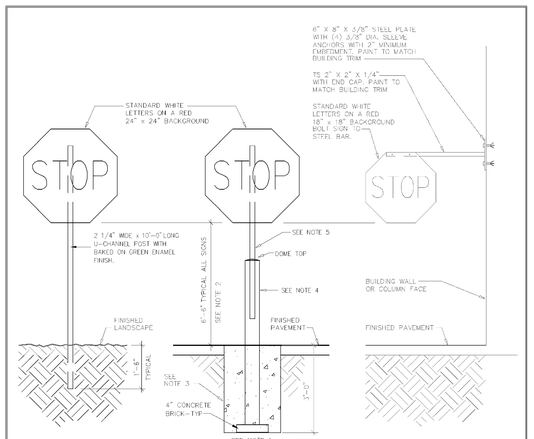


NOTES:

1. SLOPE ON GUTTER SHOULD BE MINIMUM OF 0.6%. SLOPE SHALL PROMOTE POSITIVE DRAINAGE TO DRAINAGE STRUCTURES. SLOPE TOWARDS OR AWAY FROM CURB AS REQUIRED. (REVERSE SLOPE WHEN APPLICABLE.)
2. EXPANSION JOINT: PLACE AT ENDS OF ALL RADII, 5'-0" ON EACH SIDE OF DRAINAGE STRUCTURES, AND AT 90'-0" MAXIMUM INTERVALS IN STRAIGHT CURB AND GUTTER. PROVIDE #6 x 18" LONG SMOOTH STEEL DOWEL BARS WITH 1" DIA. GREASE CAP THROUGH EXPANSION JOINTS. (3/4" THICK BITUMINOUS FILLER MATERIAL).
3. CONTRACTION JOINT: PROVIDE 2" DEEP x 1/8" WIDE CONTRACTION JOINT AT 15'-0" INTERVALS.
4. 2'-6" LONG TIE BAR ON 2'-6" CENTERS SHALL BE PROVIDED WHEN CURB IS ADJACENT TO P.C.C. PAVEMENT.
5. PROVIDE (2) #6 x 2'-6" LONG TIE BARS TO CONNECT EXISTING AND NEW CURB AND GUTTER.
6. REMOVE FORMS AS EARLY AS POSSIBLE. BRUSH TOP AND FACE OF CURBS TO REMOVE ALL IMPERFECTIONS. TYPICAL OF ALL FORM WORK.
7. ALL RADII SHALL BE TRUE ARCS.
8. MEDIUM TO LIGHT BROOM FINISH ON ALL EXTERIOR CONCRETE.

CONCRETE CURB AND GUTTER	DATE: 12-19-07 SCALE: NONE DRAWN: JFQ
MASTER SPECIFICATION DETAIL	CSD-1

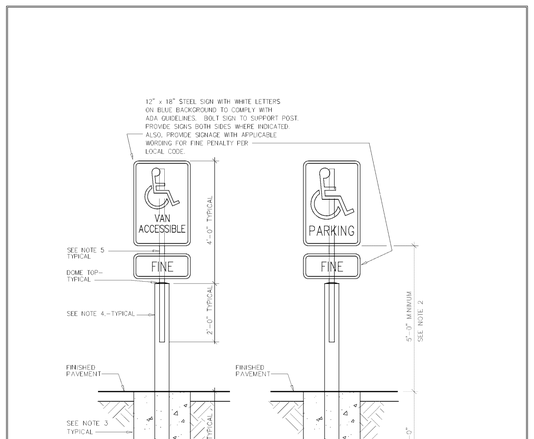




NOTES:

1. INSTALL ALL SIGNS WHERE INDICATED ON SITE PLAN.
2. ADJUST MOUNTING HEIGHTS TO MEET LOCAL CODES WHERE APPLICABLE.
3. SET ALL POSTS IN 16" DIAMETER x 36" DEEP CONCRETE FOUNDATION.
4. 4" x 6'-0" CONCRETE FILLED SCHEDULE 40 STEEL POST CENTERED IN FOUNDATION, PAINTED YELLOW. SEE SPECS.
5. 2 1/4" WIDE x 6'-0" LONG U-CHANNEL POST WITH BAKED ON GREEN ENAMEL FINISH.
6. LIGHT DUTY -- LANDSCAPED AREAS and AREAS NOT SUBJECT TO VEHICULAR TRAFFIC.
   HEAVY DUTY -- PAVED AREAS and AREAS SUBJECT TO VEHICULAR TRAFFIC or NOT PROTECTED IN LANDSCAPED AREAS.

TRAFFIC CONTROL SIGNS	DATE: 8/8/11 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATION DETAIL	CSD-60



NOTES:

1. INSTALL ALL SIGNS WHERE INDICATED ON SITE PLAN.
2. ADJUST MOUNTING HEIGHTS TO MEET LOCAL CODES WHERE APPLICABLE.
3. SET ALL POSTS IN 10" DIAMETER x 36" DEEP CONCRETE FOUNDATION.
4. 4" x 6'-0" CONCRETE FILLED SCHEDULE 40 STEEL POST CENTERED IN FOUNDATION, PAINTED YELLOW. SEE SPECS.
5. 2 1/4" WIDE x 6'-0" LONG U-CHANNEL POST WITH BAKED ON GREEN ENAMEL FINISH.

PARKING STALL SIGNS	DATE: 8/8/11 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATION DETAIL	CSD-61

* ALL DETAILS SHOWN ON THIS SHEET WERE PROVIDED BY THE KROGER COMPANY

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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

REVISION NO/ISSUE	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJB

PROJECT NO: W14-0460
DWG NAME: w140460-C201 site det.dwg
DESIGNED BY: RLW/RAM
DRAWN BY: RLW/RAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SITE DETAILS
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C2.05
PROJECT NO.
W14.0460

LDCX: Dfc: H:\2014\W140460\Engineering\design\cornet\w140460-C201 site det.dwg
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Date/Time: February 12, 2015 - 7:29am
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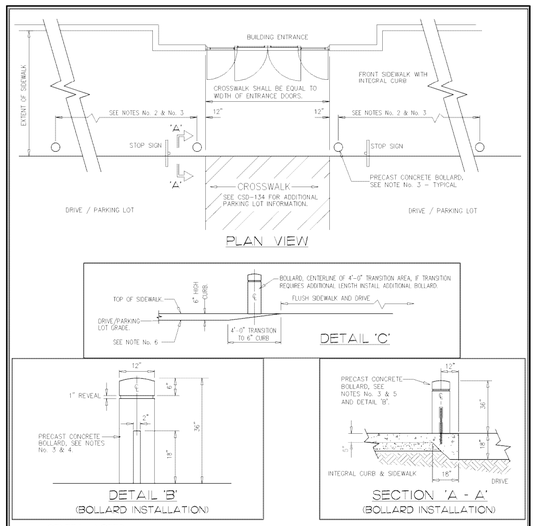
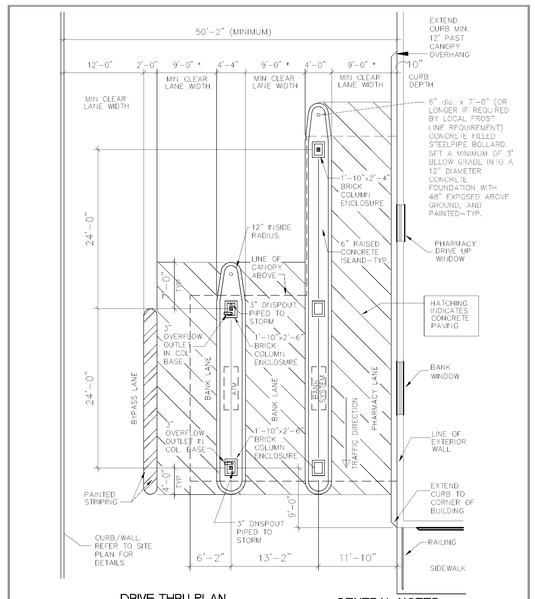


GENERAL NOTES:

1. UTILIZE FLUSH WALK & CURB AS MUCH AS DESIRABLE ALONG STORE FRONT. TRANSITION BACK TO CURB AND RETURN CURB TO END OF BUILDING. SEE DETAIL 'C' FOR TRANSITION TO 6" CURB.
2. INSTALL 12" DIAMETER PRECAST CONCRETE BOLLARDS EQUALLY SPACED AT 16'-0" TO 20'-0" ON CENTER UNTIL THE TRANSITION TO A 6" CURB (IF APPLICABLE). LOCATE FIRST BOLLARDS ON BOTH SIDE OF BUILDING ENTRANCE AS INDICATED. DO NOT LOCATE BOLLARDS WITHIN CROSSWALK AREA.
3. PRECAST CONCRETE BOLLARDS, SEE SPECS., CONTRACTOR SUPPLIED AND INSTALLED.
4. PRECAST CONCRETE BOLLARDS TO INCLUDE DOMED TOP, 1" REVEAL, SAND BLAST FINISH WITH 2" PVC INSERT FOR REBAR DOWEL.
5. PRECAST CONCRETE BOLLARDS TO BE INSTALLED IN MASTIC INCLUDING 24" #9 REBAR DOWELL INSTALLED WITH 12" EXPOSED. CAULK BASE TO SIDEWALK.
6. PAINT TRANSITION AND 6" CURB YELLOW. SEE SPECIFICATIONS.
7. SEE SPECIFICATION SECTION 32 17 00 – PAVING SPECIALTIES FOR MORE INFORMATION.

FLUSH WALK AT PEDESTRIAN CROSSING	DATE: 10/11/12 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATION DETAIL	ASD–161

ORIGINAL ISSUE DATE 8/14/06



DRIVE THRU PLAN

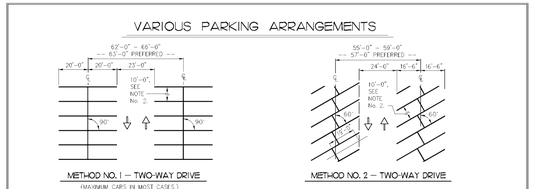
* MINIMUM CLEAR LANE WIDTH TO BE VERIFIED WITH TURNING RADII FOR VEHICLES ENTERING AND EXITING.

GENERAL NOTES

1. BOTTOM OF FASCIA IS 10'-0" ABOVE PAVEMENT.
2. FASCIA HEIGHT IS 6'-0" FROM BOTTOM OF FASCIA TO TOP OF STUD.
3. CENTER CANOPY ON BANK WINDOW.

LEFT HAND PHARMACY WITH 2 BANK DRIVE–THRU LANES	DATE: 10/11/12 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATIONS DETAIL	CSD–70L–2

VARIOUS PARKING ARRANGEMENTS



NOTE:

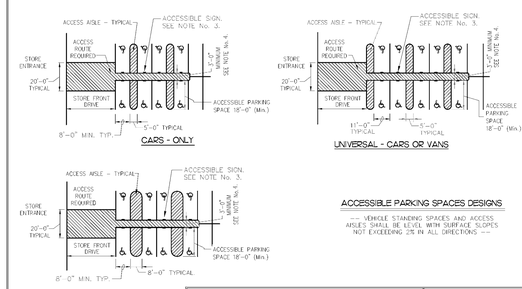
NOMINAL 23'-0" AISLE WIDTH IS INDICATED. IF 25'-0" AISLE SPACE IS REQUIRED, REDUCE STALL LENGTH FROM 20'-0" TO 19'-0".

NOTES:

1. DRIVE IMMEDIATELY IN FRONT OF STORE TO BE A MINIMUM OF 30'-0" WIDE.
2. 10'-0" WIDE PARKING SPACE IS PREFERRED, 9'-6" or ABSOLUTE MINIMUM 9'-0" WIDE MAY ONLY BE USED IF KROGER SPECIFICALLY APPROVES.

ACCESSIBLE PARKING SPACES PER STATE AND LOCAL CODES:

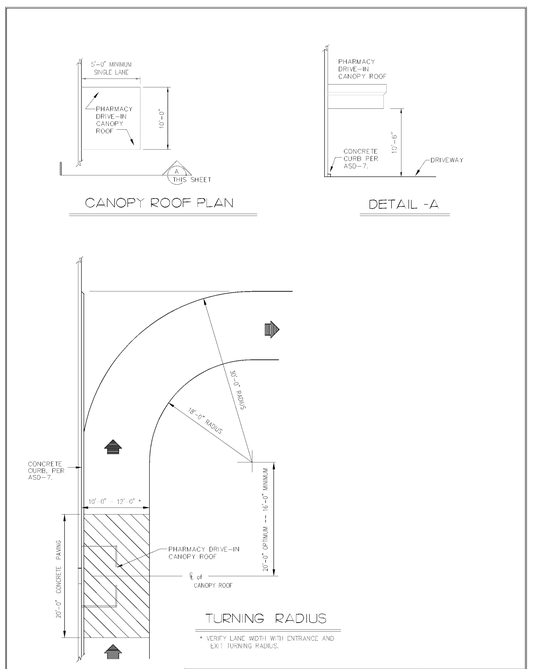
3. PARKING SPACES TO BE SIGNED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. VAN SPACES SHALL HAVE ADDITIONAL VAN ACCESSIBLE SIGN MOUNTED BELOW THE SYMBOL. NO PARKING BLOCKS/BUMPERS. REFER TO CSD-E1.
4. ACCESSIBLE ROUTE WITH 3'-0" MIN. CLEAR WIDTH BETWEEN SIGN POSTS -- EXCEPT CALIFORNIA TO BE 4'-0".



ACCESSIBLE PARKING SPACES DESIGNS

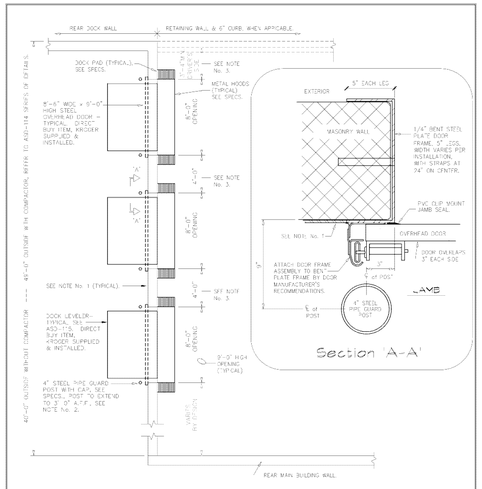
-- VEHICLE STANDING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2% IN ALL DIRECTIONS --

PARKING LOT STRIPING DETAIL	DATE: 10/11/12 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATION DETAIL	CSD–134



* VERIFY LANE WIDTH WITH ENTRANCE AND EXIT TURNING RADIUS.

PHARMACY CANOPY	DATE: 12–19–07 SCALE: NONE DRAWN: JFQ
MASTER SPECIFICATION DETAIL	CSD–154



NOTE:

1. INSTALL WALL BRACKET FOR TRUCK UNLOADING LIGHT (BETWEEN EACH DOCK), SEE ASD-62.
2. SIMILAR POST SHALL BE PLACED IN FRONT OF ALL OVERHEAD DOOR TRACKS (i.e. 250 DELIVERY DOOR, ETC.)
3. RECOMMENDED WIDTH CLEARANCE BETWEEN TRUCKS AND ADJACENT WALLS.

DOCK DOORS INSTALLATION	DATE: 5/31/12 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATION DETAIL	ASD–152

ORIGINAL ISSUE DATE 2/20/06

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WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJB

PROJECT NO. W14.0460
DWG NAME: w14046C-C201 site det.dwg
DESIGNED BY: RLWRAM
DRAWN BY: RLWRAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

SITE DETAILS

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C2.06

PROJECT NO.
W14.0460

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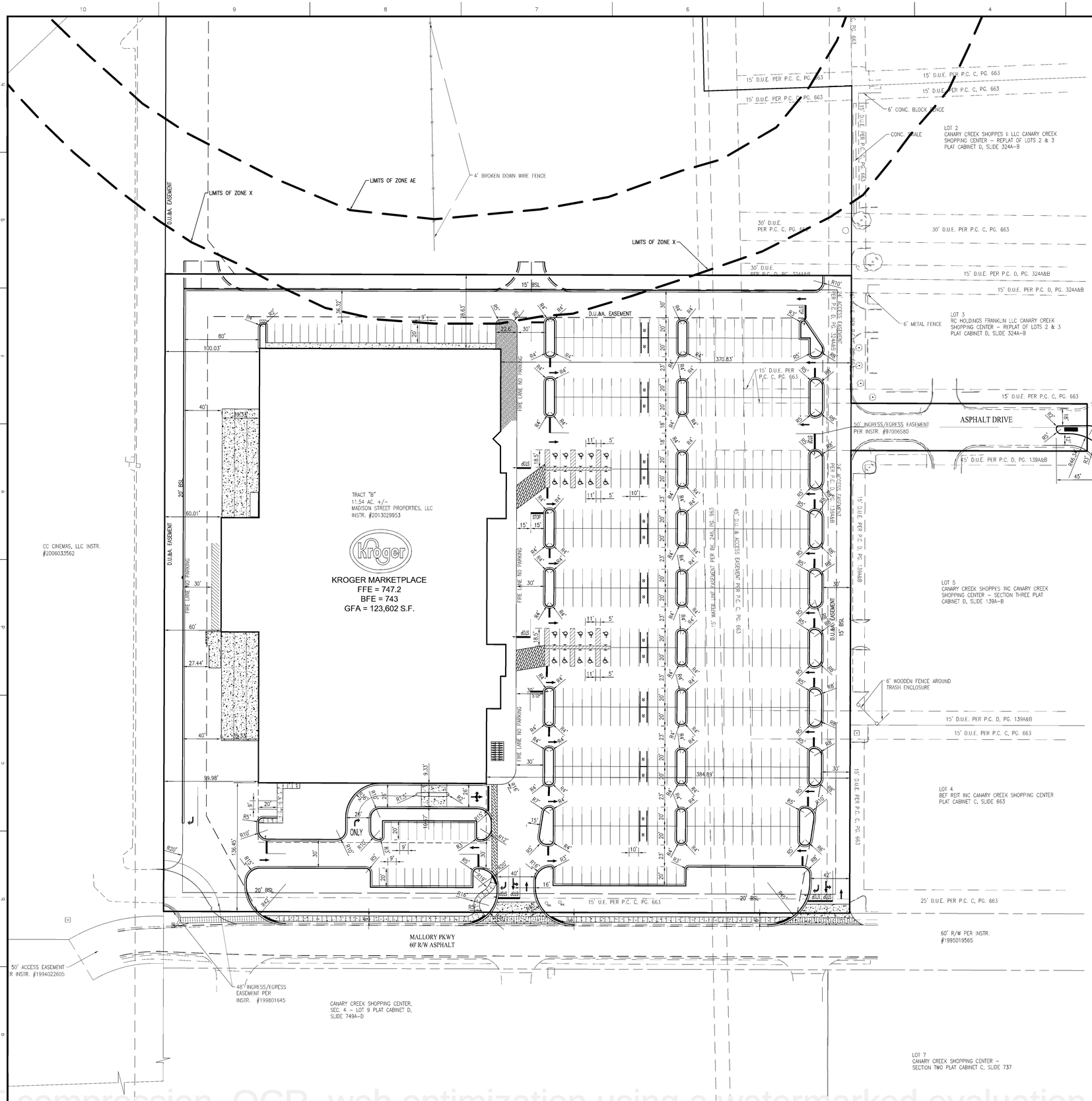


SITE PLAN GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
2. ALL QUANTITIES GIVEN ON THESE PRINTS, VERBALLY OR IN THE SCOPE OF WORK SECTION ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.
3. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS, FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH. IN ADDITION, EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
4. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THIS PROJECT.
5. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS.
6. BEARINGS, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS AND PLATS FOR EXACT INFORMATION.
7. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT.
8. ALL DIMENSIONS ARE BASED ON FACE OF CURB OR BACK OF ROLL CURB OR FACE OF BUILDING.
9. SEE ARCHITECTURAL PLANS FOR DETAILS OF BUILDING, BUILDING DIMENSIONS, ATM RELATED DETAILS, AND SIGNAGE SPECIFICATIONS. DO NOT STAKE BUILDING FROM THESE PLANS.
10. COORDINATE CONSTRUCTION ACTIVITIES WITH ADJOINING WORK IF APPLICABLE. VERIFY EXTENT OF ADJOINING WORK AND COORDINATE AS REQUIRED.
11. FIELD VERIFY EXISTING CURBS AND TAPER PROPOSED VERTICAL CURBS TO MATCH WITHIN A MIN. OF THREE (3) FEET.
12. ± DIMENSIONS INDICATE FIELD DIMENSION ADJUSTMENT AREA BASED ON ACTUAL FIELD LAYOUT COORDINATES.
13. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
14. PROVIDE SMOOTH TRANSITION FROM NEWLY PAVED AREAS TO EXISTING AREAS AS NECESSARY. ALL AREAS WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE FREE OF ALL LOOSE DEBRIS. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING.
15. RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS ALL AREAS WHERE THE EXISTING PAVEMENT OR LAWNS ARE DAMAGED DURING CONSTRUCTION FROM TRAFFIC BY CONTRACTORS, SUBCONTRACTORS, OR SUPPLIERS AFTER CONSTRUCTION WORK IS COMPLETE.
16. THE CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
17. REFER TO ARCHITECTURAL PLANS FOR BUILDING ACCESSORY DETAILS.
18. REFER TO SHEET C2.03, C2.04, C2.05 FOR SITE PLAN DETAILS UNLESS OTHERWISE NOTED.

SITE PLAN LEGEND

	=	EXISTING SIGN
MB	=	MAILBOX
	=	EXISTING LIGHT
BOL	=	EXISTING BOLLARD
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
R.O.W.	=	RIGHT-OF-WAY
F.F.E.	=	FINISH FLOOR ELEVATION
12	=	PARKING COUNT
	=	ADA PARKING
BSL	=	BUILDING SETBACK LINE
ESMT	=	EASEMENT
D&UE	=	DRAINAGE AND UTILITY EASEMENT
• PKF	=	EXISTING IRON PIN & OR PK (SET/FOUND)
	=	EXISTING TREE LINE
	=	PROPOSED DIRECTIONAL SIGN

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

Know what's below. Call before you dig.
Within Indiana Call 811 or 800-382-5544
24 Hours a Day, 7 Days a Week.
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14.0460	
DWG NAME:	w14046-C210 DIM.dwg	
DESIGNED BY:	RLW/PAM	
DRAWN BY:	RLW/PAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJB

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER
A PROFESSIONAL SEAL OR STAMP IS NOT REQUIRED

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

DIMENSION PLAN

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C2.07

PROJECT NO.
W14.0460

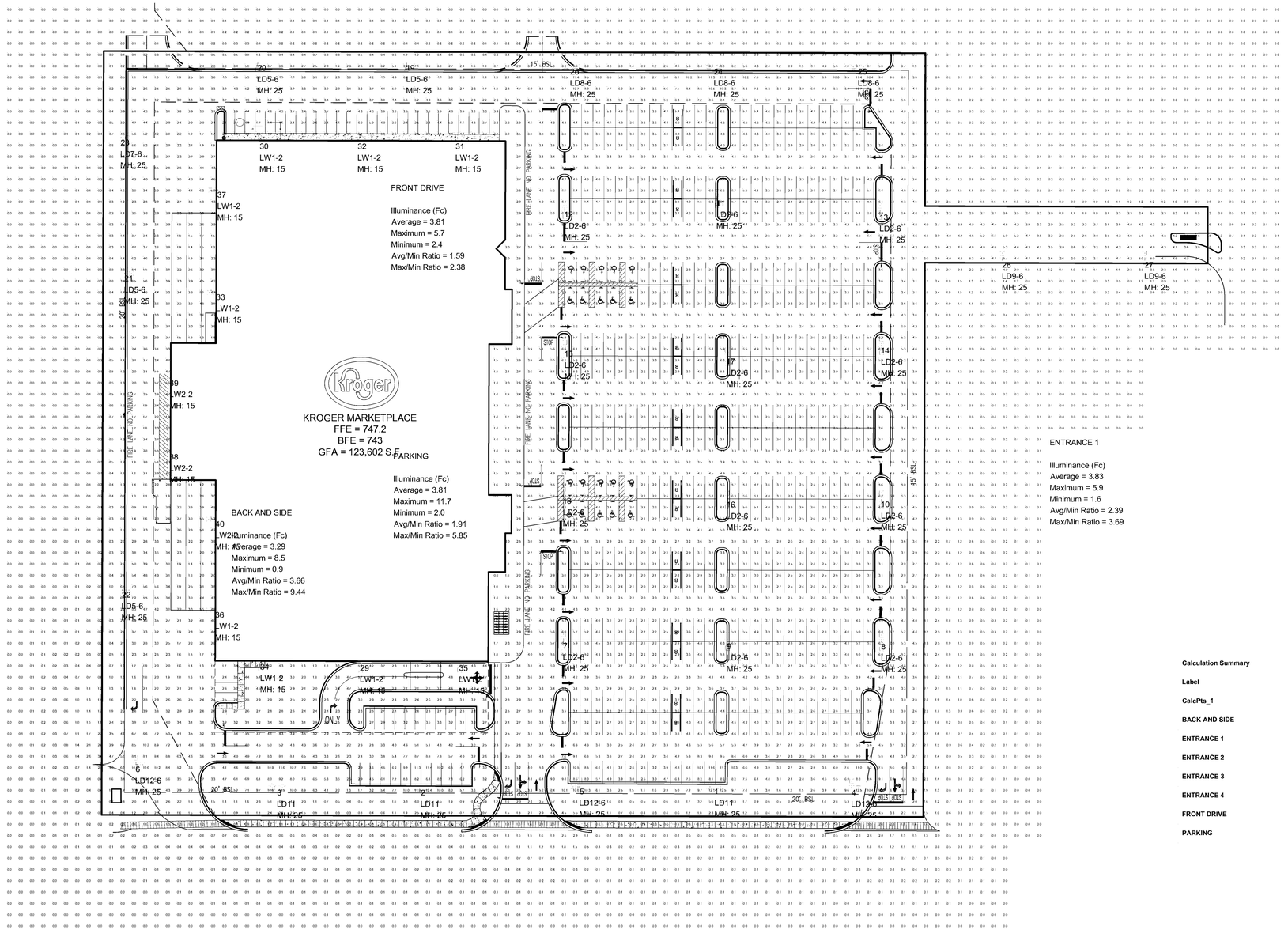
PDF compression, OCR, web optimization using a watermarked evaluation copy of CVISION PDFCompressor

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lum. Watts	Total Watts	Lum. Lumens	LLF	Description
	12	LD2-6	BACK-BACK	315	7560	32327	0.912	GLEON-AE-06-LED-E1-5WQ 2@180
	4	LD5-6	SINGLE	315	1260	30693	0.912	GLEON-AE-06-LED-E1-SL3
	1	LD7-6	SINGLE	315	315	29163	0.912	GLEON-AE-06-LED-E1-SL4
	3	LD8-6	ROTATED OPTICS	315	1890	29163	0.912	GLEON-AE-06-LED-E1-SL4-L90 & GLEON-AE-06-LED-E1-SL4-R90
	2	LD9-6	SINGLE	315	630	30697	0.912	GLEON-AE-06-LED-E1-T3
	3	LD11	ROTATED OPTICS	315	1890	30875	0.912	GLEON-AE-06-LED-E1-T4FT-L90 & GLEON-AE-06-LED-E1-T4FT-R90
	3	LD12-6	2 @ 90 DEGREES	315	1890	30875	0.912	GLEON-AE-06-LED-E1-T4FT 2@90
	9	LW1-2	SINGLE	107	963	10501	0.912	GLEON-AE-02-LED-E1-T3
	3	LW2-2	SINGLE	107	321	10562	0.912	GLEON-AE-02-LED-E1-T4FT

Luminaire Location Summary

LumNo	Label	X	Y	Z	Orient	Tilt
1	LD11	215388.7	1544374.	25	90	0
2	LD11	215128.9	1544373.	25	90	0
3	LD11	215002.0	1544373.	25	90	0
4	LD12-6	215509.4	1544373.	25	45	0
5	LD12-6	215269.3	1544374.	25	135	0
6	LD12-6	214877	1544394	25	45	0
7	LD2-6	215254.8	1544503.	25	90	0
8	LD2-6	215535.9	1544502.	25	90	0
9	LD2-6	215399.5	1544502.	25	90	0
10	LD2-6	215535.9	1544628.	25	90	0
11	LD2-6	215390.4	1544894.	25	90	0
12	LD2-6	215256.1	1544884.	25	90	0
13	LD2-6	215534.6	1544881.	25	90	0
14	LD2-6	215535.9	1544764.	25	90	0
15	LD2-6	215256.2	1544761.	25	90	0
16	LD2-6	215399.5	1544627.	25	90	0
17	LD2-6	215399.4	1544754.	25	90	0
18	LD2-6	215254.8	1544631.	25	90	0
19	LD5-6	215116.3	1545013.	25	270	0
20	LD5-6	214984.5	1545013.	25	270	0
21	LD5-6	214866.9	1544827.	25	0	0
22	LD5-6	214864.8	1544548.	25	0	0
23	LD7-6	214863.7	1544947.	25	0	0
24	LD8-6	215388.0	1545010.	25	270	0
25	LD8-6	215515.4	1545010.	25	270	0
26	LD8-6	215261.1	1545010.	25	270	0
27	LD9-6	215768.6	1544839.	25	90	0
28	LD9-6	215642.7	1544839.	25	90	0
29	LW1-2	215075.4	1544483.	15	270	0
30	LW1-2	214986.6	1544944.	15	90	0
31	LW1-2	215159.7	1544944.	15	90	0
32	LW1-2	215073.2	1544944.	15	90	0
33	LW1-2	214948.1	1544811.	15	180	0
34	LW1-2	214987.2	1544484.	15	270	0
35	LW1-2	215162.8	1544483.	15	270	0
36	LW1-2	214947.3	1544530.	15	180	0
37	LW1-2	214949.2	1544901.	15	180	0
38	LW2-2	214906.9	1544670.	15	180	0
39	LW2-2	214907.0	1544735.	15	180	0
40	LW2-2	214947.3	1544610.	15	180	0



Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	2.08	13.5	0.0	N.A.	N.A.
BACK AND SIDE	Illuminance	Fc	3.29	8.5	0.9	3.66	9.44
ENTRANCE 1	Illuminance	Fc	3.83	5.9	1.6	2.39	3.69
ENTRANCE 2	Illuminance	Fc	4.17	9.2	1.6	2.61	5.75
ENTRANCE 3	Illuminance	Fc	3.13	6.4	1.5	2.09	4.27
ENTRANCE 4	Illuminance	Fc	4.63	10.2	1.5	3.09	6.80
FRONT DRIVE	Illuminance	Fc	3.81	5.7	2.4	1.59	2.38
PARKING	Illuminance	Fc	3.81	11.7	2.0	1.91	5.85

* SITE LIGHTING AND PHOTOMETRICS FOR KROGER ARE PRPOVIDED BY:

Cooper Lighting by EATON

Cooper Lighting
by EATON
Applications Engineering
1121 Highway 74 South
Peachtree City, GA 30269
tel no: 770-486-4579
fax no: 770-486-4199
e-mail: ceiling-lightingapplications@

We make no representation as to its completeness, currency or accuracy because of reasons inherent to CAD and the additional digital data used to produce a lighting application drawing. Any reliance on the information contained in this drawing is at the sole risk of the user who should independently verify its suitability and accuracy. Because of the data data limitations inherent to the source of information, we do not guarantee or warrant that the information is free from errors, whether manually or with the aid of a computer. Title 6pt level analysis is an estimate only, and is based on estimated reflectance values for interior applications or estimated pole location based on standard light levels for exterior applications. Any variance from reflectance values, electro-lux/light loss factors or dimensional data will affect the actual light levels obtained. This analysis is a craftsmanlike effort and can be only as accurate as is permitted by the third party software and the IES standards used. In addition, actual light levels may be affected by factors beyond our control such as local electrical line sag, voltage variance, lamp output, ballast lumen variance, maintenance factors, room and application variances. The presence of objects with low/high light levels will vary actual results. Any lighting application drawings are being provided to the recipient of this disclaimer.

Know what's below. Call before you dig.

Within Indiana Call 811 or 800-382-5544
24 Hours a Day, 7 Days a Week.

PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

SCALE: 1" = 50

0 25 50 100

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net

317 | 846 - 6611
800 | 452 - 6408
317 | 843 - 0546 *fax*

ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUE	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO: W14.0460
DWG NAME: w140460-C220 light.dwg
DESIGNED BY: RJW/RAM
DRAWN BY: RJW/RAM
CHECKED BY: JKS
DATE: 02.12.2015

APPROVAL PENDING
NOT FOR CONSTRUCTION

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

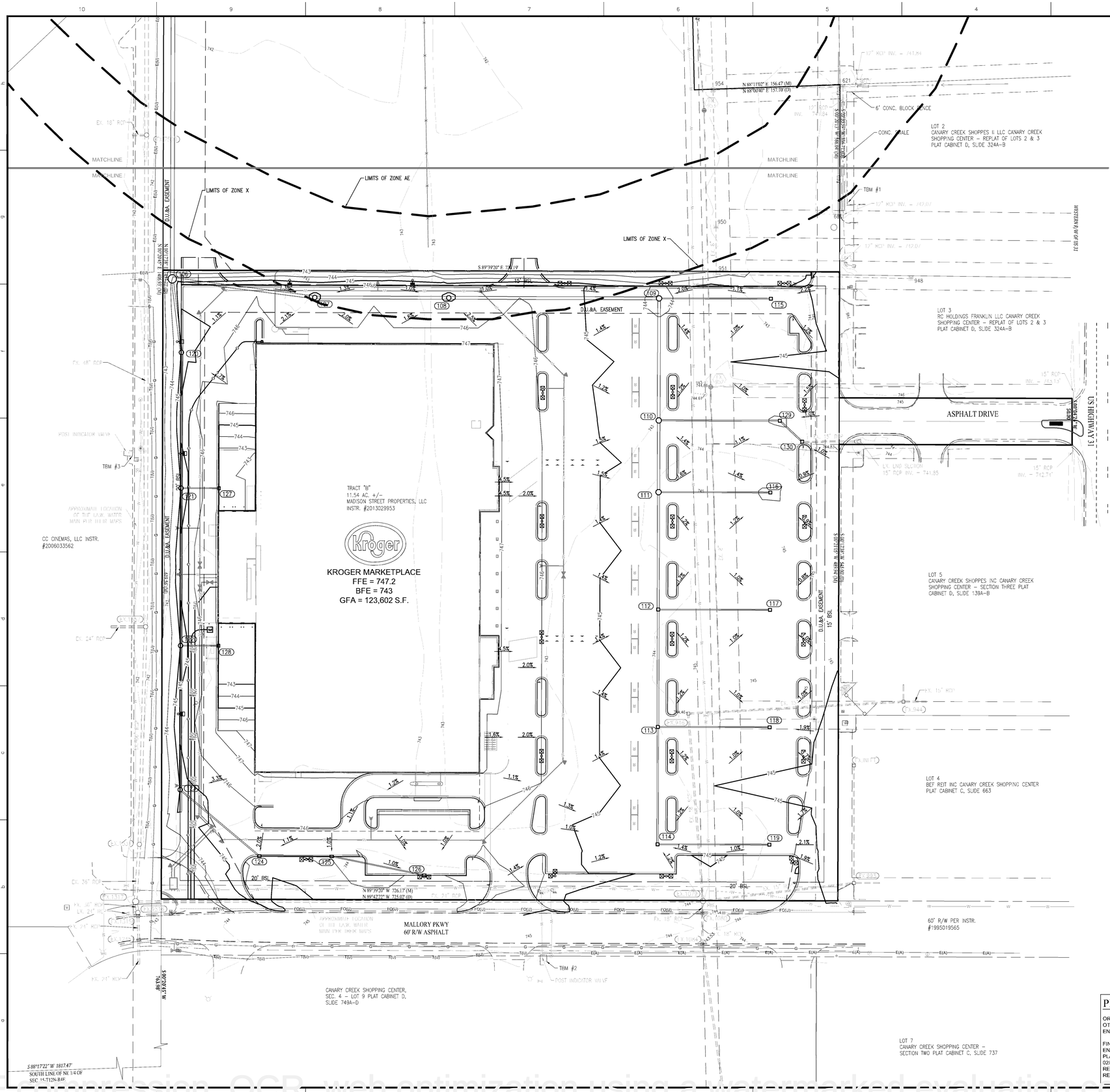
LIGHTING PLAN
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C2.08

PROJECT NO.
W14.0460

LOCK ON: 11-2014 V:\W140460\Engineering\design\consult\w140460-C220 light.dwg
LAYOUT: C2.08
LATEST TIME: February 12, 2015 - 7:30am
LOGINID BY: acbeale

PDF compression, OCR, web optimization using a watermarked evaluation copy of CVISION PDFCompressor



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- COMPACTED BUILDING PAD(S) MUST EXTEND A MINIMUM OF TEN (10) FEET BEYOND THE BUILDING FOOTPRINT, INCLUDING CANOPIES OR OTHER STRUCTURAL APPENDAGES, UNTIL THE PERIMETER FOUNDATIONS AND WALLS ARE CONSTRUCTED AND BACKFILLED. THE EXTENDED PORTION OF THE BUILDING PAD SUBGRADE MUST BE REMOVED/REGRADED TO MEET THE FINAL GRADE AND MATERIAL REQUIREMENTS AROUND THE BUILDINGS' PERIMETER.

EXISTING AREAS

PERVIOUS	=	14.25 AC.
IMPERVIOUS	=	0.75 AC.

PROPOSED AREAS

PERVIOUS	=	4.85 AC.
IMPERVIOUS	=	10.15 AC.

BENCHMARK INFORMATION

BENCHMARK INFORMATION
DNR TBM CD 1, 1988 IN JOHNSON COUNTY, FRANKLIN QUADRANGLE, IN THE NE ¼ OF SECTION 10, TOWNSHIP 12 NORTH, RANGE 4 EAST, 2ND P.M.; AT FRANKLIN; AT THE U.S. 31 BRIDGE OVER CANARY DITCH; SET IN THE TOP OF THE SOUTHEAST CONCRETE WINGWALL OF THE BRIDGE, 25.8 FEET EAST OF THE CENTERLINE OF THE BRIDGE, 0.6 FOOT NORTH OF THE SOUTH END OF THE WINGWALL 1.0 FOOT BELOW THE LEVEL OF THE ROAD; A "PK" NAIL SET IN A DRILL HOLE, INSIDE A CUT CIRCLE.
2ND ORDER ELEVATION
REVISED ELEVATION 229.240 METERS N.G.V.D. 1929
752.099 FEET N.G.V.D. 1929 (751.693 FEET N.A.V.D.1988)

TBM #1 ELEV: 745.81 CUT SQUARE ON TOP ON A CONCRETE LIGHT BASE ON THE WEST EDGE OF CONCRETE, DUE WEST OF THE SOUTHWEST CORNER OF THE SHERWIN WILLIAMS BUILDING SQUARE IS APPROXIMATELY 15 FEET NORTHEAST OF A DRIVE STUB BEHIND THE BUILDING.

TBM #2 ELEV: 747.77 CUT SQUARE IN THE NORTHWEST CORNER OF A CONCRETE WATER VAULT ON THE EAST SIDE OF THE MIDDLE KOHL'S ENTRANCE LOCATED ON THE SOUTH SIDE OF MALLORY PARKWAY.

TBM #3 ELEV: 742.94 CUT SQUARE IN THE SOUTHEAST CORNER OF A CONCRETE WATER VAULT DUE EAST OF THE SOUTHEAST CORNER OF CANARY CREEK CINEMA BUILDING.

POND

N.P.	= 735.50
2 YR.	= 738.78
10 YR.	= 739.79
100 YR.	= 740.87
SPILLWAY	= 742.00
BOTTOM	= 725.00
BFE	= 743.00

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

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Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.S.

PROJECT NO.	W14-0460
DWG NAME:	w14246-C00 grad.dwg
DESIGNED BY:	R.J.W/SAM
DRAWN BY:	R.J.W/SAM
CHECKED BY:	JKS
DATE:	02.12.2015

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER

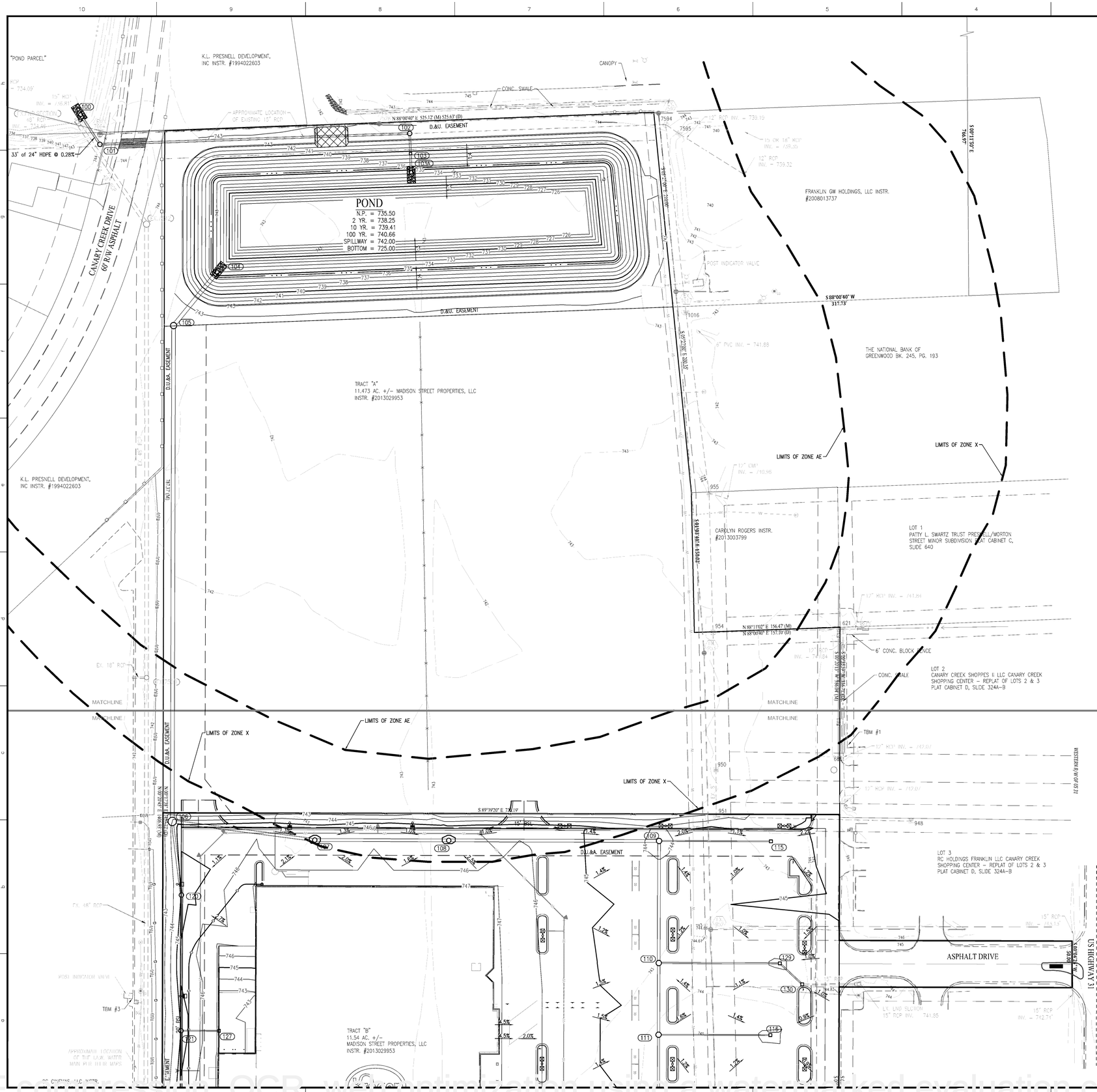
JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

GRADING PLAN
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C3.01
PROJECT NO.
W14-0460

PDF compression, OCR, web optimization using a watermarked evaluation copy of ELEVISION PDF Compressor



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- COMPACTED BUILDING PAD(S) MUST EXTEND A MINIMUM OF TEN (10) FEET BEYOND THE BUILDING FOOTPRINT, INCLUDING CANOPIES OR OTHER STRUCTURAL APPENDAGES, UNTIL THE PERIMETER FOUNDATIONS AND WALLS ARE CONSTRUCTED AND BACKFILLED. THE EXTENDED PORTION OF THE BUILDING PAD SUBGRADE MUST BE REMOVED/REGRADED TO MEET THE FINAL GRADE AND MATERIAL REQUIREMENTS AROUND THE BUILDINGS' PERIMETER.

EXISTING AREAS

PERVIOUS	=	14.25 AC.
IMPERVIOUS	=	0.75 AC.

PROPOSED AREAS

PERVIOUS	=	4.85 AC.
IMPERVIOUS	=	10.15 AC.

BENCHMARK INFORMATION

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DNR TBM CD 1, 1988 IN JOHNSON COUNTY, FRANKLIN QUADRANGLE, IN THE NE ¼ OF SECTION 10, TOWNSHIP 12 NORTH, RANGE 4 EAST, 2ND P.M.; AT FRANKLIN; AT THE U.S. 31 BRIDGE OVER CANARY DITCH; SET IN THE TOP OF THE SOUTHEAST CONCRETE WINGWALL OF THE BRIDGE, 25.8 FEET EAST OF THE CENTERLINE OF THE BRIDGE, 0.6 FOOT NORTH OF THE SOUTH END OF THE WINGWALL 1.0 FOOT BELOW THE LEVEL OF THE ROAD; A "PK" NAIL SET IN A DRILL HOLE, INSIDE A CUT CIRCLE.
2ND ORDER ELEVATION
REVISED ELEVATION 229.240 METERS N.G.V.D. 1929
752.099 FEET N.G.V.D. 1929 (751.693 FEET N.A.V.D.1988)

TBM #1 ELEV: 745.81 CUT SQUARE ON TOP ON A CONCRETE LIGHT BASE ON THE WEST EDGE OF CONCRETE, DUE WEST OF THE SOUTHWEST CORNER OF THE SHERWIN WILLIAMS BUILDING SQUARE IS APPROXIMATELY 15 FEET NORTHEAST OF A DRIVE STUB BEHIND THE BUILDING.

TBM #2 ELEV: 747.77 CUT SQUARE IN THE NORTHWEST CORNER OF A CONCRETE WATER VAULT ON THE EAST SIDE OF THE MIDDLE KOHL'S ENTRANCE LOCATED ON THE SOUTH SIDE OF MALLORY PARKWAY.

TBM #3 ELEV: 742.94 CUT SQUARE IN THE SOUTHEAST CORNER OF A CONCRETE WATER VAULT DUE EAST OF THE SOUTHEAST CORNER OF CANARY CREEK CINEMA BUILDING.

POND

N.P.	= 735.50
2 YR.	= 738.78
10 YR.	= 739.79
100 YR.	= 740.87
SPILLWAY	= 742.00
BOTTOM	= 725.00
BFE	= 743.00

PLAN CERTIFICATE NOTE:

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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14-0460	
DWG NAME:	w14046-C00 grad.dwg	
DESIGNED BY:	R.L/R/SAM	
DRAWN BY:	R.L/R/SAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT A PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

GRADING PLAN
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C3.02

PROJECT NO.
W14-0460

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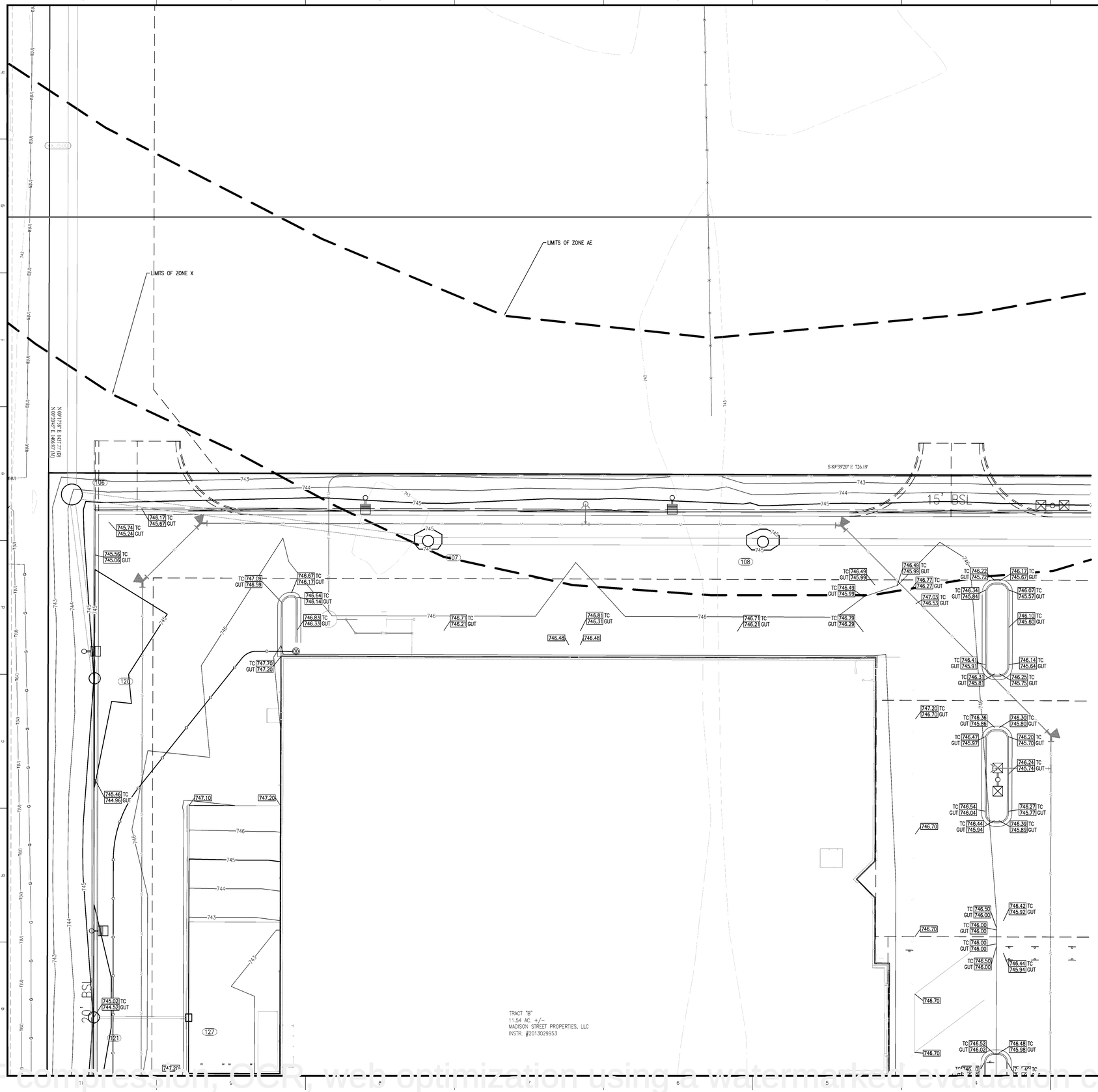

GENERAL GRADING NOTES

1. REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, LATEST EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS. THE SECTIONS BELOW FOR VARIOUS ITEMS ARE TO CLARIFY THE INTENT OF THE REQUIREMENTS FOR THIS PROJECT. PLEASE NOTE THAT OTHER SECTIONS OF THE INDOT STANDARD SPECIFICATIONS MAY ALSO BE APPLICABLE.
2. FILL MATERIAL SHALL CONSIST OF EARTH OBTAINED FROM CUT AREAS, BORROW PITS OR OTHER APPROVED SOURCES. EARTH SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES AND LARGE ROCKS. THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED SIX INCHES FOLLOWING COMPACTION, PROPER MOISTURE CONTENT OF FILL MATERIAL WILL BE SUCH TO ACHIEVE SPECIFIED COMPACTION DENSITY. ALL FILL BENEATH PAVED AREAS, FLOOR SLABS AND FUTURE BUILDINGS SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D-1557. FIELD COMPACTING TEST SHALL BE RUN ON EACH LIFT, IN FILL SECTIONS, AND THE REQUIRED COMPACTION ON EACH LIFT SHALL BE IN ACCORDANCE WITH INDOT SECTION 211.
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REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.S.

PROJECT NO. W14-0460
DWG NAME: w140460-C300 grading quad.dwg
DESIGNED BY: R.J.WRAM
DRAWN BY: R.J.WRAM
CHECKED BY: J.K.S.
DATE: 02.12.2015

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
APPROVED FOR CONSTRUCTION
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

ENLARGED GRADING PLAN

Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C3.03
PROJECT NO.
W14-0460

LOCK ON: 11/1/2014\W140460\Engineering\Design\conset\w140460-C300 grading quad.dwg
LAYOUT: C3.03
DATE/TIME: February 12, 2015 - 7:31am
PLOTTED BY: schaefer

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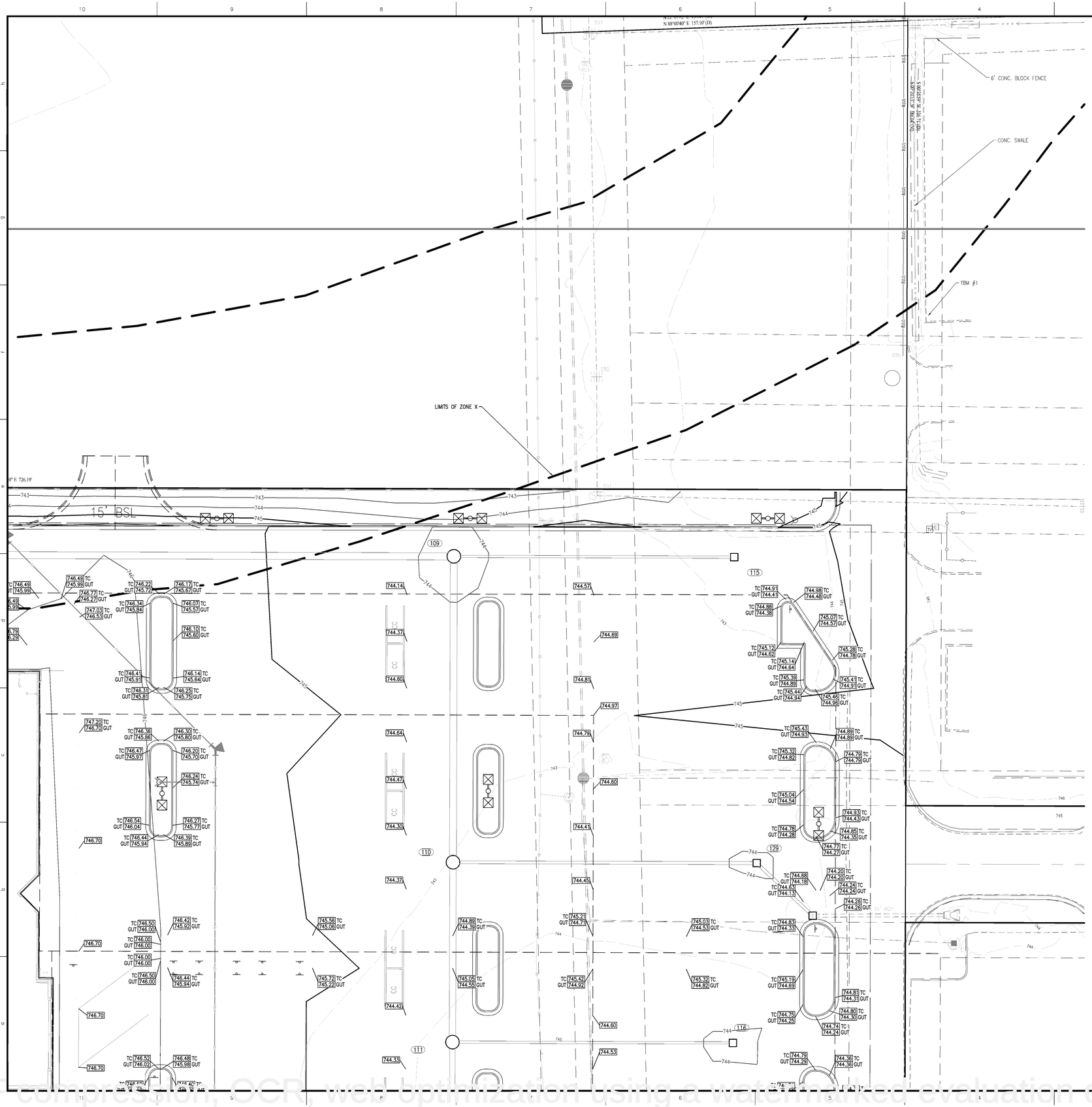

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REVISIONS AND ISSUES SUBMITTED FOR INITIAL REVIEW	DATE 02.12.2015	BY B.S.

PROJECT NO. W14.0460
DWG NAME: w140460-C300 grading quad.dwg
DESIGNED BY: R.L.W/B.A.M.
DRAWN BY: R.L.W/B.A.M.
CHECKED BY: J.K.S.
DATE: 02.12.2015

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
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KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
ENLARGED GRADING PLAN
Part of the NE4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C3.04
PROJECT NO.
W14.0460

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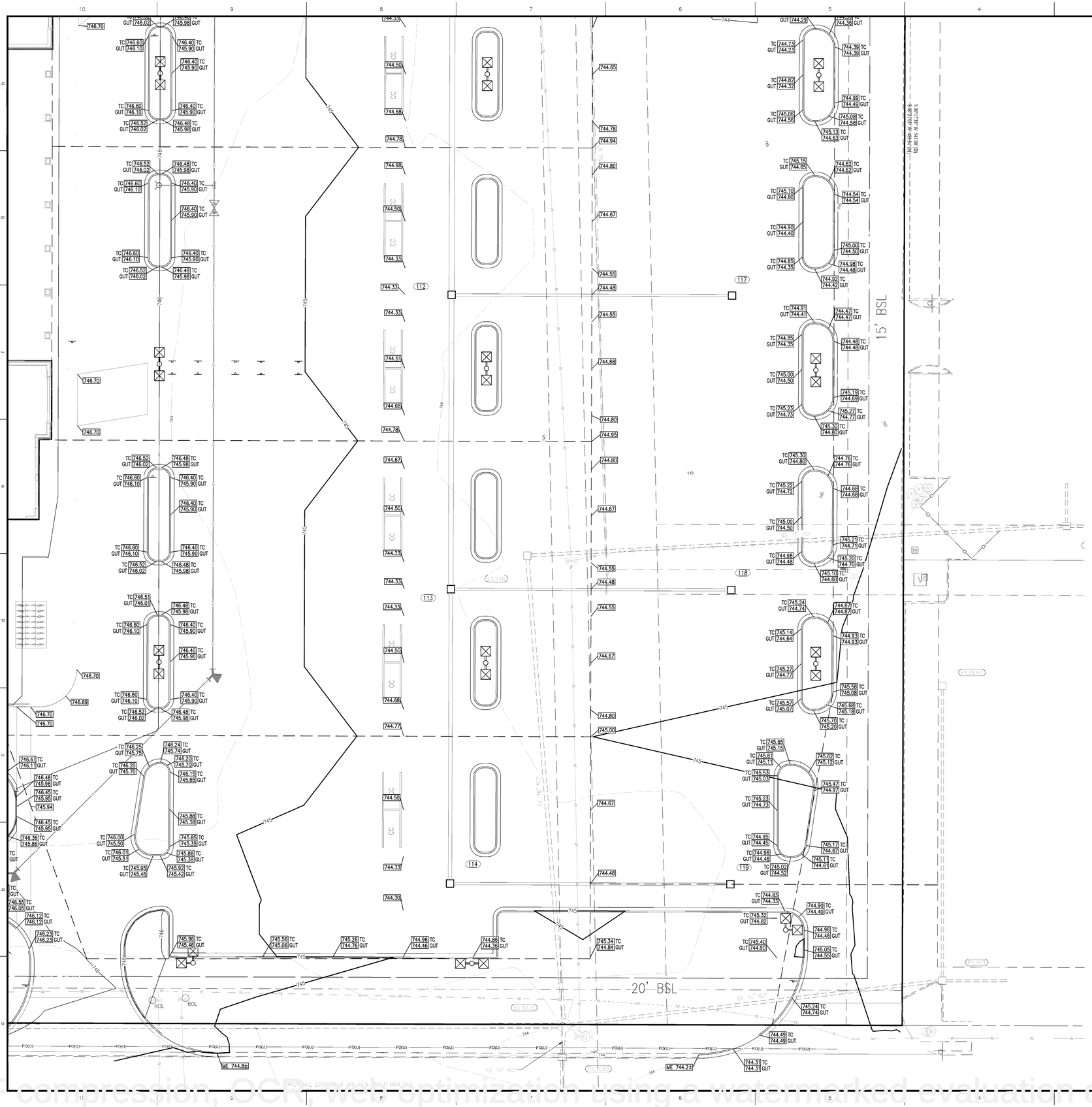

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12. VERTICAL CURVES, WITH A MINIMUM LENGTH OF 50', SHALL BE USED WHERE POSSIBLE BETWEEN VERTICAL CHANGES IN DIRECTION (SLOPE) TO ALLOW FOR POSITIVE DRAINAGE AND SMOOTH TRANSITIONS.
13. CONTRACTOR TO INSTALL CONCRETE CRADLES WHEN THE VERTICAL SEPARATION (AS MEASURED FROM THE EXTERIOR OF THE PIPES) BETWEEN SANITARY SEWER FACILITIES, WATER MAIN, AND STORM SEWERS IS 18" OR LESS.
14. ALL HDPE PIPE SHALL BE DUAL WALLED, HANCOR HQ, ADS N-12 PIPE OR APPROVED EQUAL.
15. ALL FITTINGS AND ACCESSORIES INCLUDING BUT NOT LIMITED TO END CAPS, CLEANOUTS, REDUCERS, ETC., SHALL BE OF HDPE MATERIAL COMPARABLE WITH STORAGE PIPES
16. PROVIDE BACKFILL WITH A MINIMUM OF 4" BEDDING MATERIAL OF #8 AGGREGATE COMPACTED IN 8" LIFTS TO 95% MAXIMUM DRY DENSITY
17. VERIFY EXISTING STORM INVERT ELEVATIONS PRIOR TO STARTING NEW STORM SEWER CONNECTION
18. THE SITE DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL FLOOD INSURANCE PROGRAM, WHEN PLOTTED BY SCALE ON FLOOD INSURANCE RATE MAP #18081C0227 D, DATED AUGUST 2, 2007.

LEGEND

FH	= EXIST. FIRE HYDRANT
WM	= EXIST. WATER METER/VALVE
	= EXIST. SIGN
	= EXIST. MONITOR WELL
PKF	= EXIST. IRON PIN & OR PK (SET/FOUND)
GM	= EXIST. GAS METER
	= EXIST. GAS VALVE
	= EXIST. STORM INLET
MH	= EXIST. STORM/SAN./TELE. MANHOLE
EM	= EXIST. ELECTRIC METER
	= EXIST. POWER POLE/POWER POLE w/ LIGHT
GA	= EXIST. GUY ANCHOR
T.Ped. T	= EXIST. TELEPHONE PEDESTAL
AC	= HVAC UNIT
CO	= CLEANOUT
MB	= MAILBOX
	= LIGHT POLE
BOL	= EXIST. BOLLARD
	= EXIST. SANITARY SEWER LINE
	= EXIST. STORM SEWER LINE
892	= EXIST. CONTOURS
	= CONCRETE END SECTION (C.E.S.)
GP	= GATE POST
	= TRANSFORMER
	= RIGHT-OF-WAY LINE
	= PROPOSED SANITARY SEWER LINE
	= PROPOSED STORM SEWER LINE
STM	= PROPOSED HDPE ROOF DRAIN
	= PROPOSED PIPE BOLLARD
	= PROPOSED MANHOLE (MH)
892	= PROPOSED CONTOURS
894.50	= PROPOSED ELEVATION
	= DRAINAGE FLOW ARROW
	= EXISTING TREE LINE
	= PROPOSED DIRECTIONAL SIGN
F.F.E.	= FINISH FLOOR ELEVATION
TC	= TOP OF (MANHOLE / INLET) CASTING
INV	= INVERT ELEVATION
RCP	= REINFORCED CONCRETE PIPE
CMP	= CORRUGATED METAL PIPE
PVC	= POLYVINYL CHLORIDE PIPE
HDPE	= HIGH DENSITY POLYETHYLENE
	= FLOW LINE
STR.	= STRUCTURE
M.E.G. OR M.E.	= MATCH EXISTING GRADE
TOW OR TW	= TOP OF WALL
SSD	= SUB-SURFACE DRAINAGE
TOC	= TOP OF CURB
GUT	= GUTTER
W	= WATER LINE
G	= GAS LINE
OHU	= OVERHEAD UTILITY LINE
T	= TELEPHONE LINE
E	= ELECTRIC LINE
TBM	= TEMPORARY BENCHMARK
	= PARKING COUNT
	= EMERGENCY FLOOD ROUTE

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 20

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weihe.net
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317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO. W14.0460
DWG NAME: w14046-C300 grading quad.dwg
DESIGNED BY: RJW/BAM
DRAWN BY: RJW/BAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

ENLARGED GRADING PLAN
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO. C3.05
PROJECT NO. W14.0460

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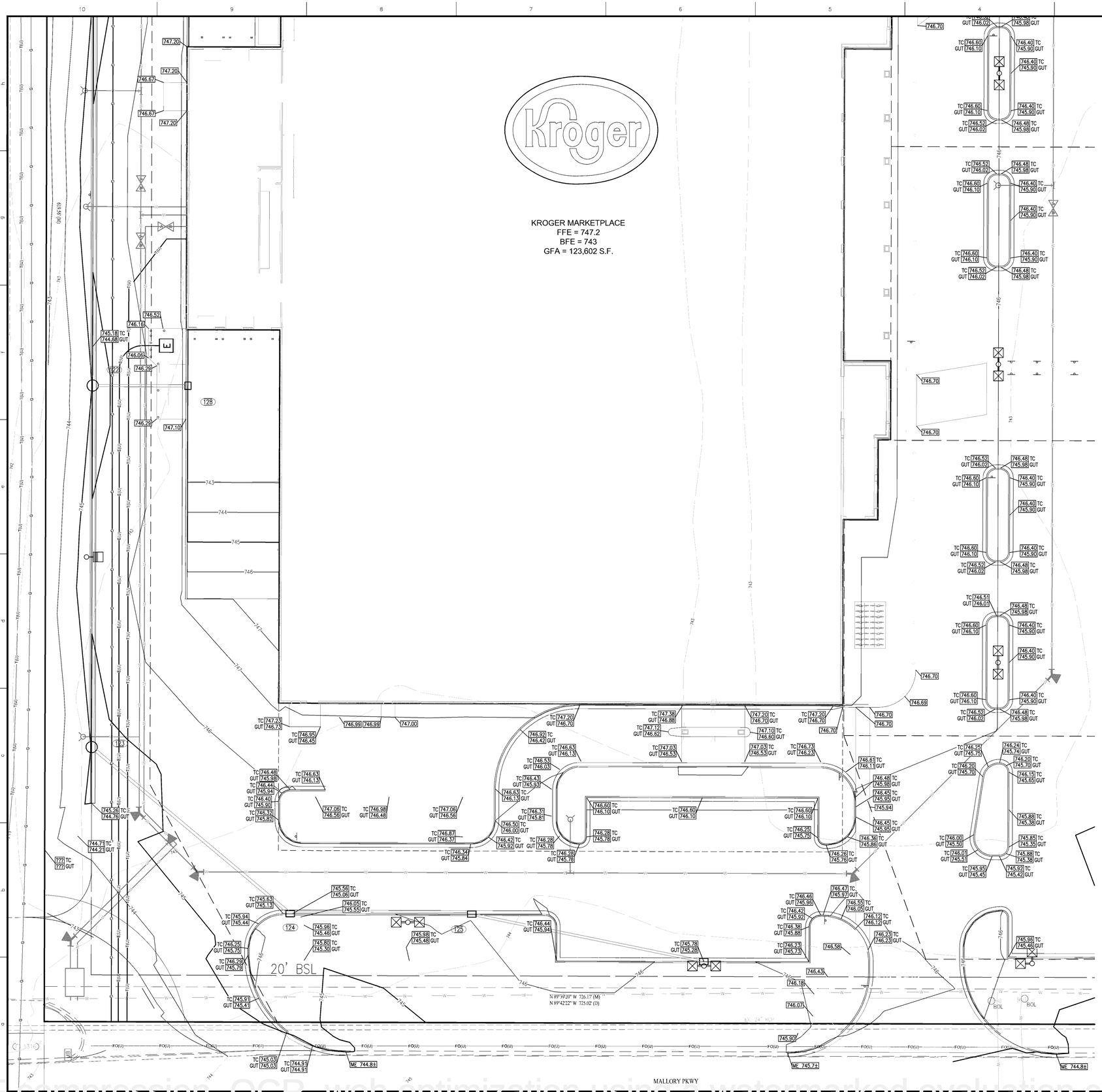

GENERAL GRADING NOTES

1. REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, LATEST EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS. THE SECTIONS BELOW FOR VARIOUS ITEMS ARE TO CLARIFY THE INTENT OF THE REQUIREMENTS FOR THIS PROJECT. PLEASE NOTE THAT OTHER SECTIONS OF THE INDOT STANDARD SPECIFICATIONS MAY ALSO BE APPLICABLE.
2. FILL MATERIAL SHALL CONSIST OF EARTH OBTAINED FROM CUT AREAS, BORROW PITS OR OTHER APPROVED SOURCES. EARTH SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES AND LARGE ROCKS. THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED SIX INCHES FOLLOWING COMPACTION, PROPER MOISTURE CONTENT OF FILL MATERIAL WILL BE SUCH TO ACHIEVE SPECIFIED COMPACTION DENSITY. ALL FILL BENEATH PAVED AREAS, FLOOR SLABS AND FUTURE BUILDINGS SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D-1557. FIELD COMPACTING TEST SHALL BE RUN ON EACH LIFT, IN FILL SECTIONS, AND THE REQUIRED COMPACTION ON EACH LIFT SHALL BE IN ACCORDANCE WITH INDOT SECTION 211.
3. MAXIMUM LAWN SLOPE IS 3:1.
4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE MAINS, CONDUITS, SERVICE LINES, ETC. IN THE AFFECTED CONSTRUCTION AREA. EXISTING UTILITY STRUCTURES ARE SHOWN HERE IN ACCORDANCE WITH AVAILABLE INFORMATION. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION (IN COOPERATION WITH APPLICABLE UTILITY COMPANY) IS THE EXPRESSED RESPONSIBILITY OF THE CONTRACTOR.
5. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE.
6. COMPACTED "B" BORROW BACK FILL REQ'D. OVER ALL UTILITIES IN PAVED AREAS.
7. ALL GRADES AT BOUNDARY SHALL MEET EXISTING.
8. ANY PART OF SANITARY OR STORM SEWER TRENCHES RUNNING UNDER OR WITHIN 5' OF PAVEMENT TO BE BACKFILLED WITH GRANULAR MATERIAL.
9. ALL CONSTRUCTION ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH O.S.H.A. STANDARDS FOR WORKER SAFETY.
10. THE CONTRACTOR SHALL CONFIRM ALL EARTHWORK QUANTITIES PRIOR TO THE START OF CONSTRUCTION. IF AN EXCESS OR SHORTAGE OF EARTH IS ENCOUNTERED, THE CONTRACTOR SHALL CONFIRM WITH THE OWNER AND ENGINEER THE REQUIREMENTS FOR STOCKPILING, REMOVAL OR IMPORTING OF EARTH.
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LEGEND

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WM	EXIST. WATER METER/VALVE
	EXIST. SIGN
	EXIST. MONITOR WELL
PKF	EXIST. IRON PIN & OR PK (SET/FOUND)
GM	EXIST. GAS METER
	EXIST. GAS VALVE
	EXIST. STORM INLET
	EXIST. STORM/SAN./TELE. MANHOLE
EM	EXIST. ELECTRIC METER
	EXIST. POWER POLE/POWER POLE w/ LIGHT
GA	EXIST. GUY ANCHOR
T.Ped.	EXIST. TELEPHONE PEDESTAL
AC	HVAC UNIT
CO	CLEANOUT
MB	MAILBOX
	LIGHT POLE
BOL	EXIST. BOLLARD
	EXIST. SANITARY SEWER LINE
	EXIST. STORM SEWER LINE
892	EXIST. CONTOURS
	CONCRETE END SECTION (C.E.S.)
GP	GATE POST
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	PROPOSED SANITARY SEWER LINE
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	PROPOSED MANHOLE (MH)
892	PROPOSED CONTOURS
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	DRAINAGE FLOW ARROW
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F.F.E.	FINISH FLOOR ELEVATION
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	EMERGENCY FLOOD ROUTE

PLAN CERTIFICATE NOTE:

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SCALE: 1" = 20

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weihe.net
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800 452 - 6408
317 843 - 0546 *fax*
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14-0460
DWG NAME:	w14046-C300 grading quad.dwg
DESIGNED BY:	R.W/RAM
DRAWN BY:	R.W/RAM
CHECKED BY:	JKS
DATE:	02.12.2015

REVISIONS AND ISSUES:	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.S.

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
A PROFESSIONAL ENGINEER WITHOUT A SEAL IS NOT A VALID DOCUMENT

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

ENLARGED GRADING PLAN

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C3.06
PROJECT NO.
W14-0460

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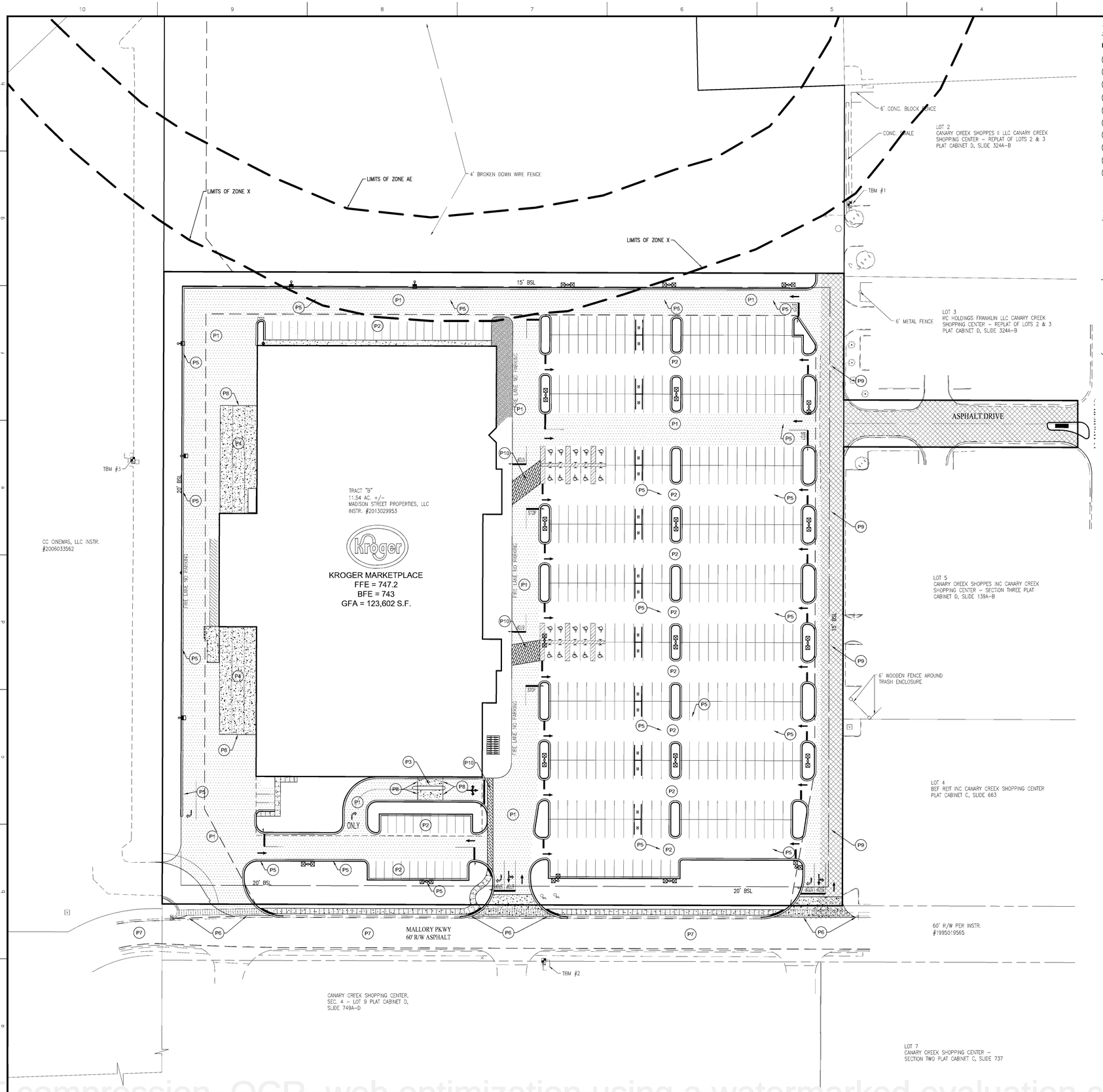

PAVEMENT PLAN NOTES

HARDSCAPE

- P1 HEAVY DUTY ASPHALT PAVING
- P2 STANDARD DUTY ASPHALT PAVING
- P3 HEAVY DUTY CONCRETE WITH 1' CHAMFERED CORNERS
- P4 HEAVY DUTY CONCRETE FOR TRUCK DOCK RAMPS
- P5 STORM INLET WITH CONCRETE APRON SHOWN ON SHEET C609
- P6 MATCH EXISTING PAVEMENT
- P7 EXISTING ROADWAY PAVEMENT
- P8 JOINT BETWEEN ASPHALT AND CONCRETE PAVEMENT
- P9 MILL AND RESURFACING LIMITS (ALONG EXISTING DRIVE)
- P10 DECORATIVE PAVEMENT TREATMENT TO CONSIST OF A DURATHERM INBED OR STAMPED AND COLORED INLAY PATTERN.

HATCH LEGEND

- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- MILL AND RESURFACE EXISTING PAVEMENT

PLAN LEGEND

	=	EXISTING SIGN
MB	=	MAILBOX
	=	EXISTING LIGHT
BOL	=	EXISTING BOLLARD
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
R.O.W.	=	RIGHT-OF-WAY
F.F.E.	=	FINISH FLOOR ELEVATION
12	=	PARKING COUNT
	=	ADA PARKING
BSL	=	BUILDING SETBACK LINE
ESMT	=	EASEMENT
D&UE	=	DRAINAGE AND UTILITY EASEMENT
• PKF	=	EXISTING IRON PIN & OR PK (SET/FOUND)
	=	EXISTING TREE LINE
	=	PROPOSED DIRECTIONAL SIGN

PLAN CERTIFICATE NOTE:

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SCALE: 1" = 50

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317 | 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

		BY
PROJECT NO:	W14-0460	
DWG NAME:	v140460-C400 pave.dwg	
DESIGNED BY:	RLW/SAM	
DRAWN BY:	RLW/SAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

PAVEMENT PLAN
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C4.01

PROJECT NO.
W14.0460

LOCK ON: W:\2014\W14040\Engineering\design\contset\v140460-C400 pave.dwg
LAYOUT: C400 PAVE
LAST EDIT: February 12, 2015 – 7:31am
PLOTTED BY: schoffio

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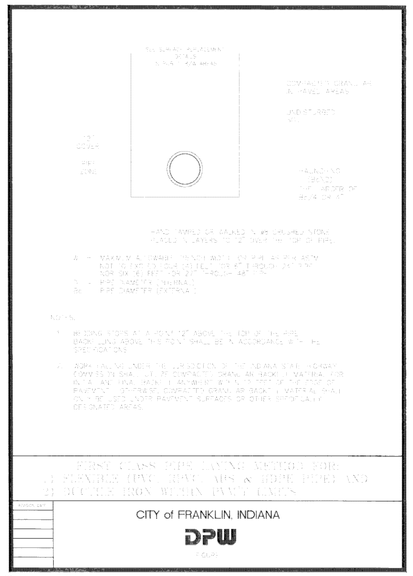

Illustration 7-1

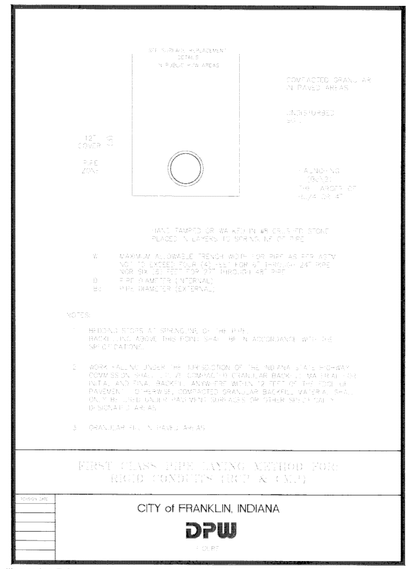

Illustration 7-2

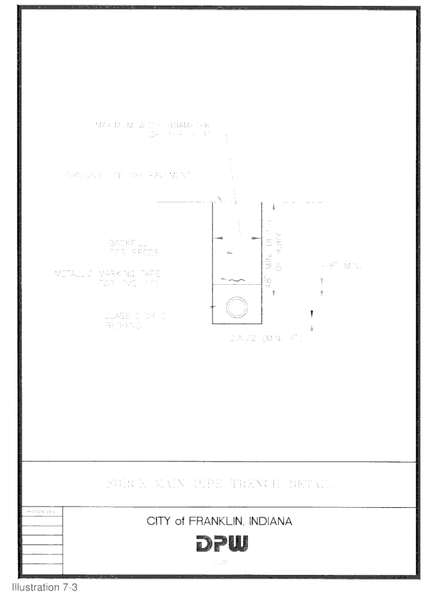

Illustration 7-3

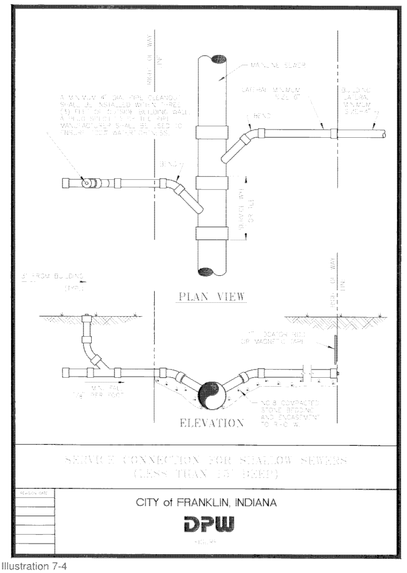

Illustration 7-4

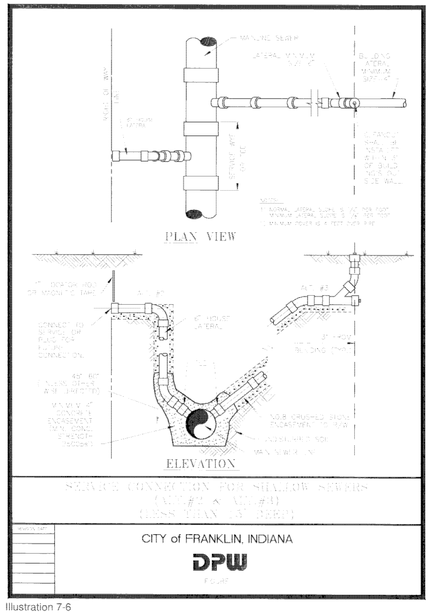

Illustration 7-6

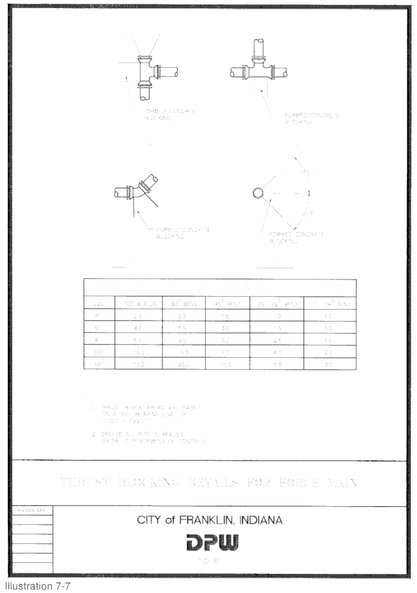

Illustration 7-7

* ALL DETAILS SHOWN ON THIS SHEET WERE PROVIDED BY THE CITY OF FRANKLIN DPW

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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.: W14.0460
DWG NAME: w140460-C600 util det.dwg
DESIGNED BY: RLW/RAM
DRAWN BY: RLW/RAM
CHECKED BY: JKS
DATE: 02.12.2015

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
APPROVED FOR CONSTRUCTION
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SANITARY SEWER DETAILS
Part of the NE4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C5.01
PROJECT NO.
W14.0460

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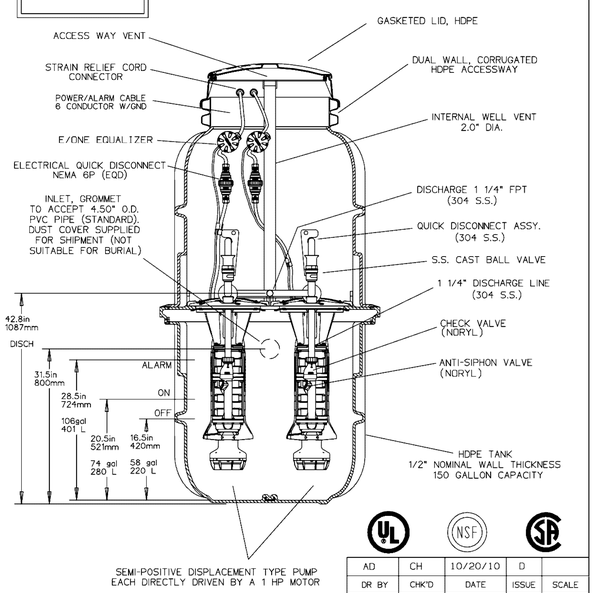
OPTIONS : ☐ DH152 (HARD WIRED LEVEL CONTROLS)
☐ DR152 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

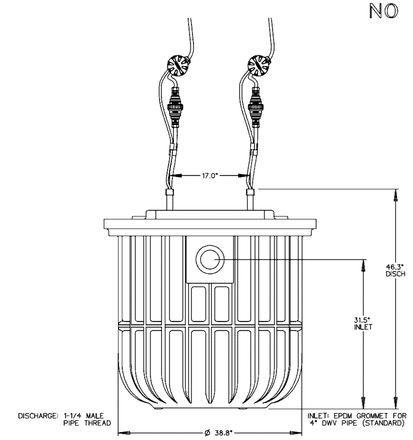
AD	CH	10/20/10	D	
DR BY	CHK'D	DATE	ISSUE	SCALE

e one SEWER SYSTEMS

MODEL DH152 / DR152 DETAIL SHEET

NA0052P02

DH152-38
NO BAFFLE



NOTE: DIMENSIONS ARE FOR REF ONLY

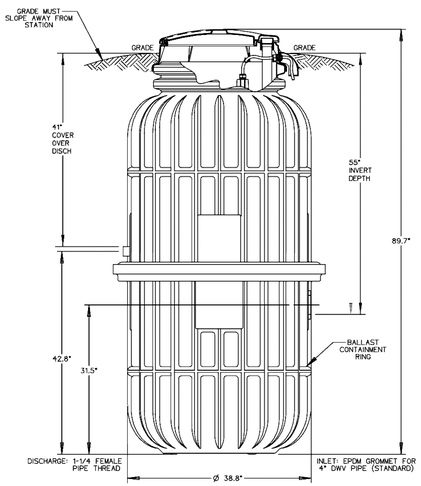
CTT	CH	10/19/12	C	
DR BY	CHK'D	DATE	ISSUE	SCALE

e one SEWER SYSTEMS

MODEL DH152-38, NO BAFFLE

NA0052P03

OPTIONS : ☐ DH152-93 (HARD WIRED LEVEL CONTROLS)
☐ DR152-93 (WIRELESS LEVEL CONTROLS)



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NOTE: DIMENSIONS ARE FOR REF ONLY

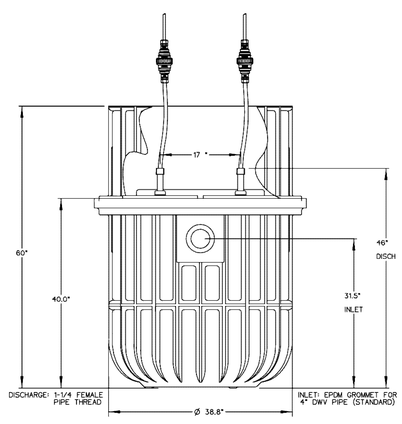
AD	CAH	7/13/07	B	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e one SEWER SYSTEMS

MODEL DH152-93 / DR152-93

NA0052P04

DH152-57
BUILDERS MODEL
STRAIGHT DISCHARGE



NOTE: DIMENSIONS ARE FOR REF ONLY

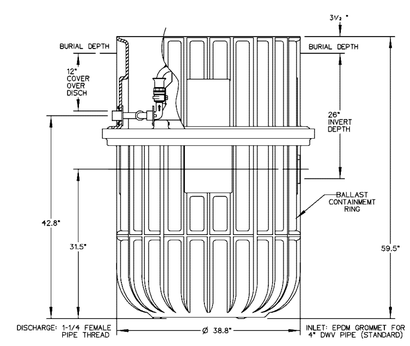
AD	CAH	06-27-07	B	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e one SEWER SYSTEMS

MODEL DH152-57 BUILDERS

NA0052P07

DH152-57
BUILDERS MODEL
DISCHARGE VALVE



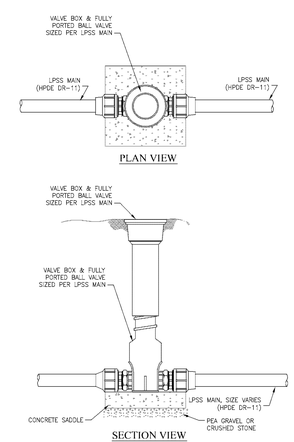
NOTE: DIMENSIONS ARE FOR REF ONLY

AD	CAH	06/27/07	B	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e one SEWER SYSTEMS

MODEL DH152-57 BUILDERS

NA0052P08



CURB STROP DETAIL
(NO SCALE)

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weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
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WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO: W14-0460
DWG NAME: w140460-C800 ull det.dwg
DESIGNED BY: RJW/BAM
DRAWN BY: RJW/BAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
SANITARY SEWER DETAILS
Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C5.02
PROJECT NO.
W14-0460

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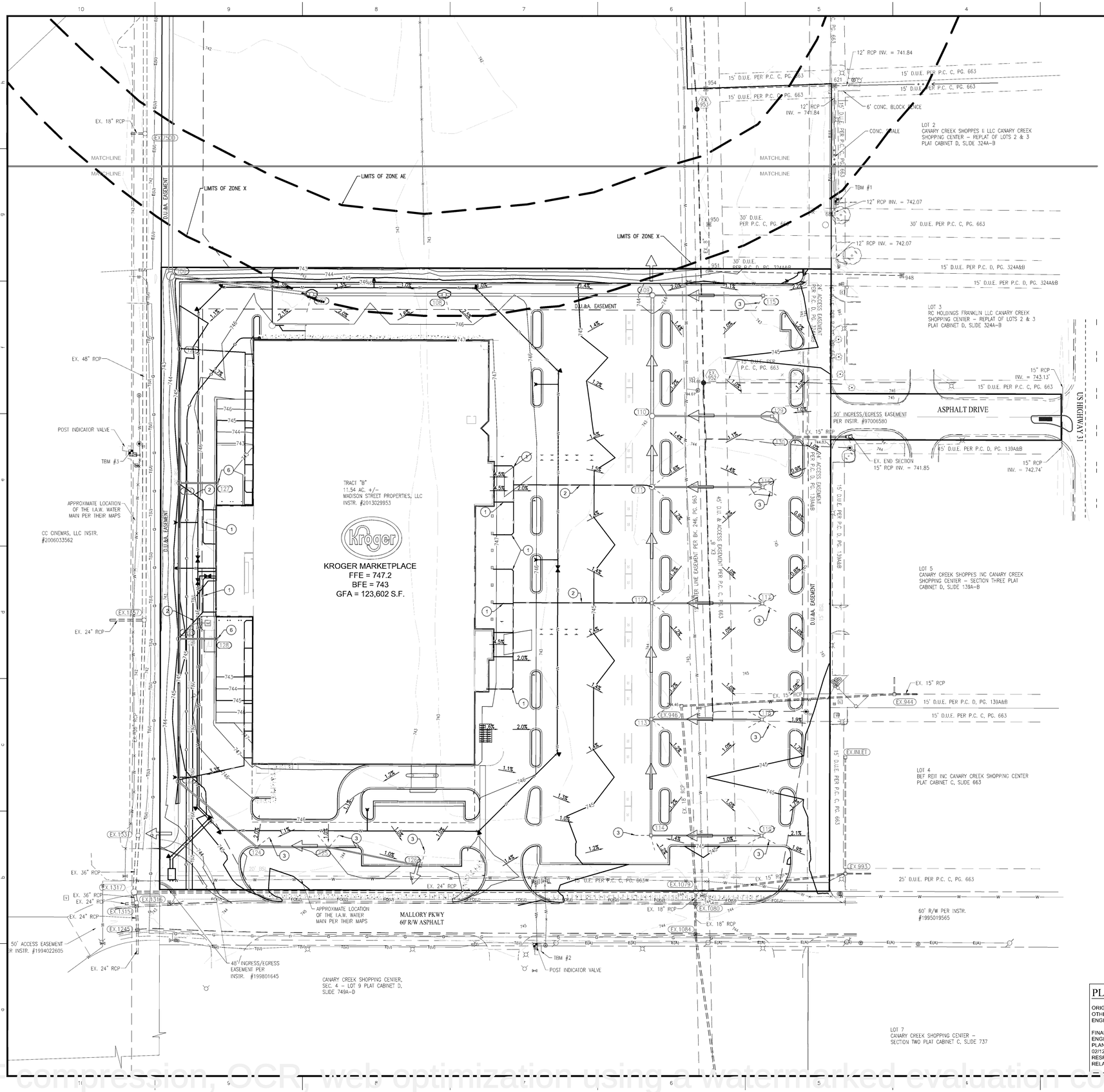

LEGEND

FH	=	EXIST. FIRE HYDRANT
WM	=	EXIST. WATER METER/VALVE
	=	EXIST. SIGN
	=	EXIST. MONITOR WELL
PKF	=	EXIST. IRON PIN & OR PK (SET/FOUND)
GM	=	EXIST. GAS METER
	=	EXIST. GAS VALVE
	=	EXIST. STORM INLET
	=	EXIST. STORM/SAN./TELE. MANHOLE
EM	=	EXIST. ELECTRIC METER
	=	EXIST. POWER POLE/POWER POLE w/ LIGHT
GA	=	EXIST. GUY ANCHOR
T.Ped.	=	EXIST. TELEPHONE PEDESTAL
AC	=	HVAC UNIT
CO	=	CLEANOUT
MB	=	MAILBOX
	=	LIGHT POLE
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	=	EXIST. SANITARY SEWER LINE
	=	EXIST. STORM SEWER LINE
892	=	EXIST. CONTOURS
	=	CONCRETE END SECTION (C.E.S.)
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
	=	PROPOSED SANITARY SEWER LINE
	=	PROPOSED STORM SEWER LINE
STM	=	PROPOSED HDPE ROOF DRAIN
	=	PROPOSED PIPE BOLLARD
	=	PROPOSED MANHOLE (MH)
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PVC	=	POLYVINYL CHLORIDE PIPE
HDPE	=	HIGH DENSITY POLYETHYLENE
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TBM	=	TEMPORARY BENCHMARK
	=	PARKING COUNT
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DRAINAGE PLAN NOTES

1. 6" HDPE ROOF DRAIN @ 1.0% MINIMUM. START INVERT = ~745.0
2. 8" HDPE ROOF DRAIN @ 1.0% MINIMUM
3. 10' OF 4" SUBSURFACE DRAINS
4. INSTALL 10' x 20' x 1.5' REVETMENT RIP-RAP ON FILTER FABRIC
5. STORM WATER DETENTION POND.
6. PROVIDE NEENAH R-3165 STRUCTURES WITHIN THE TRUCK WELL.
7. DETENTION POND OVERFLOW FLOOD ROUTING WITH MAT. SEE PROJECT SPECIFICATIONS FOR FURTHER DETAIL.

GENERAL NOTES

1. ALL HDPE PIPE SHALL BE DUAL WALLED, HANCOR HQ, ADS N-12 PIPE OR APPROVED EQUAL
2. ALL FITTINGS AND ACCESSORIES INCLUDING BUT NOT LIMITED TO END CAPS, CLEANOUTS, REDUCERS, ETC., SHALL BE OF HDPE MATERIAL COMPARABLE WITH STORAGE PIPES
3. PROVIDE BACKFILL WITH A MINIMUM OF 4" BEDDING MATERIAL OF #8 AGGREGATE COMPACTED IN 8" LIFTS TO 95% MAXIMUM DRY DENSITY
4. VERIFY EXISTING STORM INVERT ELEVATIONS PRIOR TO STARTING NEW STORM SEWER CONNECTION
5. THE SITE DOES LIE IN A SPECIAL FLOOD HAZARD AREA 'X' AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL FLOOD INSURANCE PROGRAM, WHEN PLOTTED BY SCALE ON FLOOD INSURANCE RATE MAP #18081C0227 D, DATED AUGUST 2, 2007.

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

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317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO:	W14-0460	
DWG NAME:	w140460-C600 drain.dwg	
DESIGNED BY:	RJ/RFA/AH	
DRAWN BY:	RJ/RFA/AH	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	RJ/JS

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
DRAINAGE PLAN
Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.01
PROJECT NO.
W14-0460

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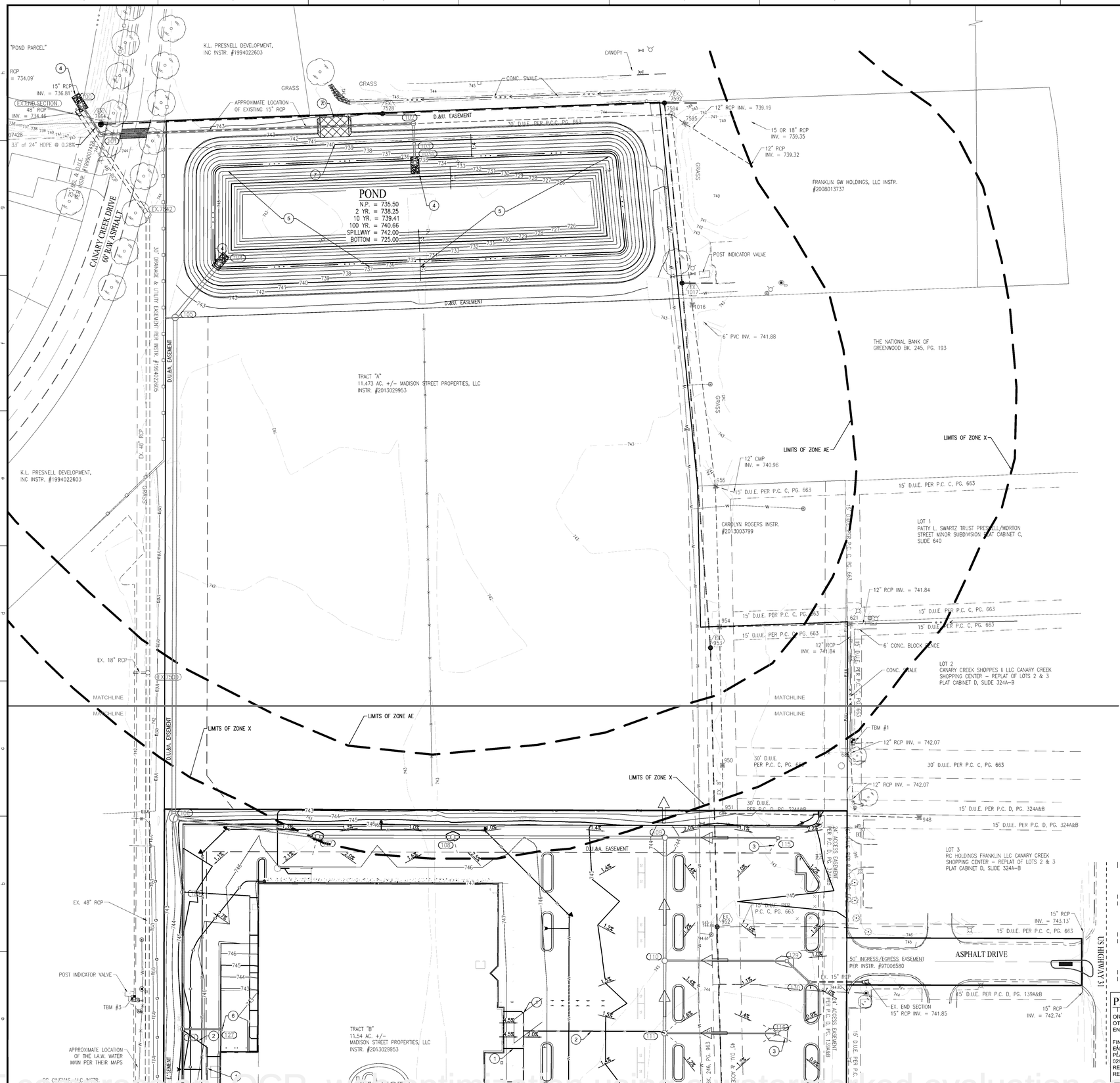

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PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISION NOTES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.S.

PROJECT NO: W14.0460
DWG NAME: w140460-C600 drain.dwg
DESIGNED BY: R.L.W/B.A.M
DRAWN BY: R.L.W/B.A.M
CHECKED BY: J.K.S
DATE: 02.12.2015

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31
DRAINAGE PLAN
Part of the NE4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.02
PROJECT NO.
W14.0460

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STORM SEWER STRUCTURE DATA TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	TOP OF CASTING	CASTING TYPE	INVERT
100	END SECTION	736.66	END SECTION	INV IN = 734.50(SE)
101	MANHOLE	744.09	NEENAH R-1642	INV IN = 734.60(E) INV OUT = 734.60(NW)
102	MANHOLE	743.50	NEENAH R-4215-C	INV IN = 735.29(S) INV OUT = 735.29(W)
103	OUTLET CONTROL	742.00	NEENAH R-4215-C	INV IN = 735.40(S) INV OUT = 735.40(N)
103A	END SECTION	737.40	END SECTION	INV OUT = 735.50(N)
104	END SECTION	739.70	END SECTION	INV IN = 735.50(SW)
105	MANHOLE	742.83	NEENAH R-1642	INV IN = 735.62(S) INV OUT = 735.62(NE)
106	MANHOLE	743.99	NEENAH R-1642	INV IN = 736.68(E) INV IN = 737.67(S) INV OUT = 736.68(N)
107	MANHOLE	744.95	NEENAH R-1642	INV IN = 737.14(E) INV OUT = 737.14(W)
108	MANHOLE	744.95	NEENAH R-1642	INV IN = 737.57(E) INV OUT = 737.57(W)
109	MANHOLE	743.80	NEENAH R-3405	INV IN = 738.17(S) INV IN = 740.39(E) INV OUT = 738.17(W)
110	MANHOLE	744.05	NEENAH R-3405	INV IN = 738.50(S) INV IN = 736.53(E) INV OUT = 738.50(N)
111	MANHOLE	744.05	NEENAH R-3405	INV IN = 738.73(S) INV IN = 737.73(E) INV OUT = 738.73(N)
112	INLET TYPE E	744.05	NEENAH R-3405	INV IN = 739.17(S) INV IN = 738.17(E) INV OUT = 739.17(N)
113	INLET TYPE E	744.05	NEENAH R-3405	INV IN = 739.55(S) INV IN = 741.00(E) INV OUT = 739.55(N)
114	INLET TYPE E	744.05	NEENAH R-3405	INV IN = 740.77(E) INV OUT = 740.00(N)
115	INLET TYPE A	744.05	NEENAH R-3405	INV OUT = 741.36(W)
116	INLET TYPE A	743.90	NEENAH R-3405	INV OUT = 739.75(W)
117	INLET TYPE A	744.05	NEENAH R-3405	INV OUT = 740.00(W)
118	INLET TYPE A	744.05	NEENAH R-3405	INV OUT = 741.75(W)
119	INLET TYPE A	744.05	NEENAH R-3405	INV OUT = 741.35(W)
120	MANHOLE	744.53	NEENAH R-3287	INV IN = 738.12(S) INV OUT = 738.12(N)
121	MANHOLE	744.52	NEENAH R-3287	INV IN = 738.52(S) INV IN = 739.27(E) INV OUT = 738.52(N)
122	MANHOLE	744.52	NEENAH R-3287	INV IN = 739.11(S) INV IN = 740.00(E) INV OUT = 739.11(N)
123	MANHOLE	744.52	NEENAH R-3287	INV IN = 739.73(SE) INV IN = 740.08(SW) INV OUT = 739.73(N)
124	INLET TYPE J	745.05	NEENAH R-3287	INV IN = 740.12(E) INV OUT = 740.12(NW)
125	INLET TYPE J	745.55	NEENAH R-3287	INV IN = 740.35(E) INV OUT = 740.35(W)
126	INLET TYPE J	745.28	NEENAH R-3287	INV OUT = 740.66(W)
127	NEENAH R-3165	742.08	NEENAH TYPE-A	INV OUT = 740.38(W)
128	NEENAH R-3165	742.08	NEENAH TYPE-A	INV OUT = 740.52(W)
129	INLET TYPE E	743.95	NEENAH R-3405	INV IN = 740.00(SE) INV OUT = 737.50(W)
130	INLET TYPE E	744.15	NEENAH R-3405	INV OUT = 741.61(NW)

STORM SEWER PIPE DATA TABLE

DOWNSTREAM STRUCTURE	UPSTREAM STRUCTURE	SIZE	MATERIAL	LENGTH	SLOPE
101	100	24"	HDPE	33'	0.28%
102	101	24"	HDPE	333'	0.21%
102	103	21"	HDPE	22'	0.51%
103A	103	21"	HDPE	16'	0.67%
104	105	48"	HDPE	69'	0.17%
105	106	48"	HDPE	532'	0.20%
106	107	36"	HDPE	154'	0.30%
107	108	36"	HDPE	144'	0.30%
108	109	36"	HDPE	226'	0.27%
109	110	36"	HDPE	131'	0.25%
110	111	33"	STORM PIPE	77'	0.30%
111	112	27"	HDPE	126'	0.35%
112	113	24"	HDPE	126'	0.30%
113	114	18"	HDPE	126'	0.36%
115	109	12"	RCP	120'	0.81%
116	111	12"	RCP	120'	1.68%
117	112	12"	RCP	120'	1.52%
118	113	12"	RCP	120'	0.63%
119	114	12"	RCP	120'	0.48%
120	106	27"	HDPE	80'	0.57%
121	120	27"	HDPE	146'	0.27%
122	121	24"	HDPE	169'	0.35%
123	122	24"	HDPE	155'	0.40%
124	123	15"	HDPE	111'	0.35%
125	124	15"	HDPE	78'	0.30%
126	125	12"	HDPE	101'	0.31%
127	121	12"	HDPE	41'	2.72%
128	122	12"	HDPE	41'	1.28%
129	110	15"	HDPE	130'	0.75%
130	129	15"	RCP	33'	4.90%

PLAN CERTIFICATE NOTE:

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317 | 843 - 0546 *fax*

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WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

DATE	BY	REVISIONS AND NOTES
02.12.2015	B.K.B.	SUBMITTED FOR INITIAL REVIEW

PROJECT NO.: W14-0460
DWG NAME: w14460-C600 STM prp.dwg
DESIGNED BY: R.L.W/B.A.M
DRAWN BY: R.L.W/B.A.M
CHECKED BY: J.K.S
DATE: 02.12.2015

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION UNTIL APPROVED BY ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORM SEWER STRUCTURE DATA TABLES

Part of the NE4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.03

PROJECT NO.
W14-0460

LOCK: OH, JB; \2014\W140460\Engineering\design\cornet\w140460 -C600 STM prp.dwg
LAYOUT: C6.03
PLOTTED ON: February 12, 2015 - 7:33am
PLOTTED BY: schoeffe

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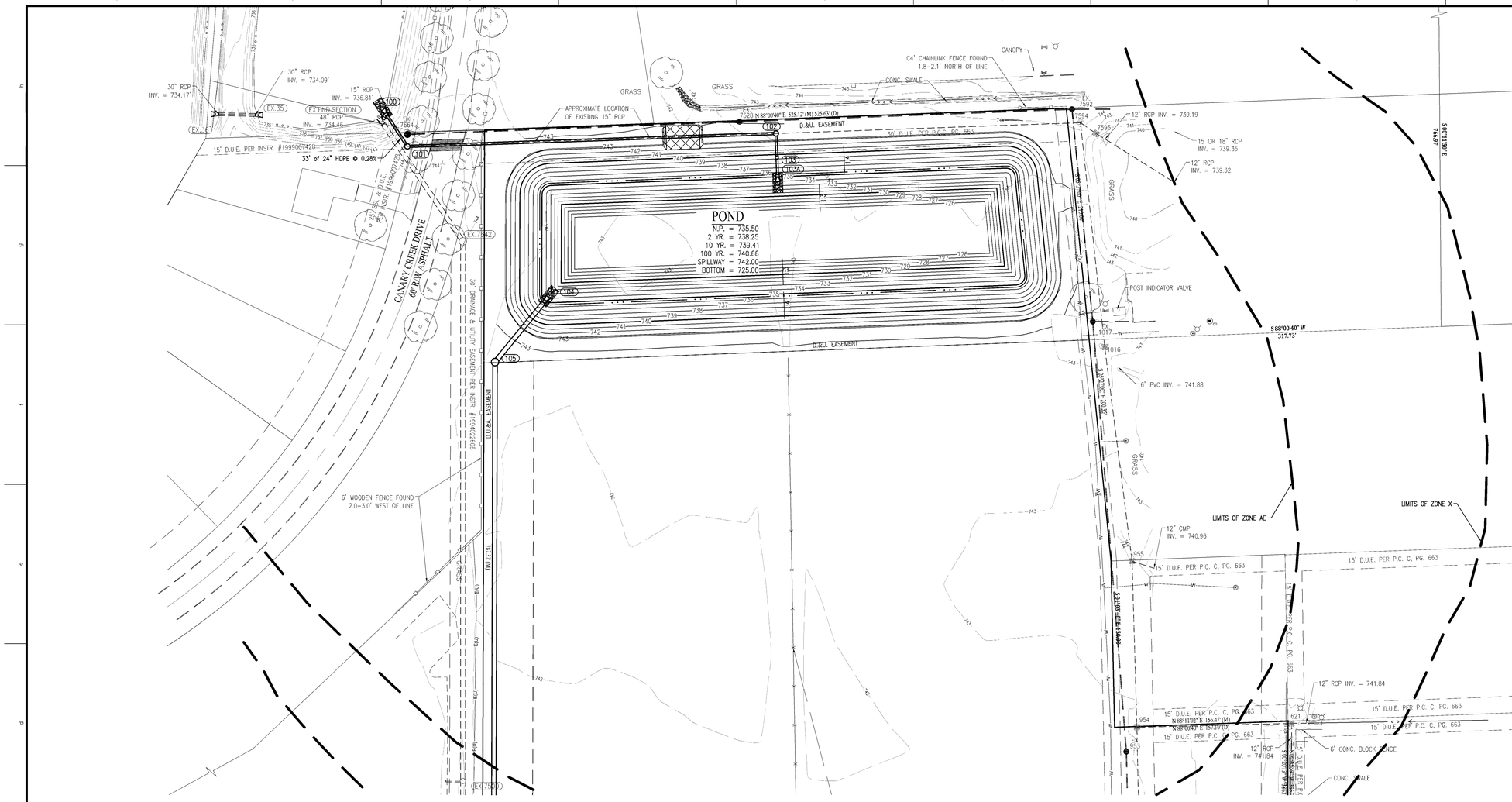

-NOTE-

RUN WATER LINE A MINIMUM OF 54" DEEP.
PROVIDE MINIMUM OF 10' HORIZONTAL & 2' VERTICAL CLEARANCE BETWEEN WATER & SANITARY LINE. SANITARY SEWER LINE IN PROXIMITY OF WATER LINE SHALL BE C900 WATER MAIN GRADE PVC.

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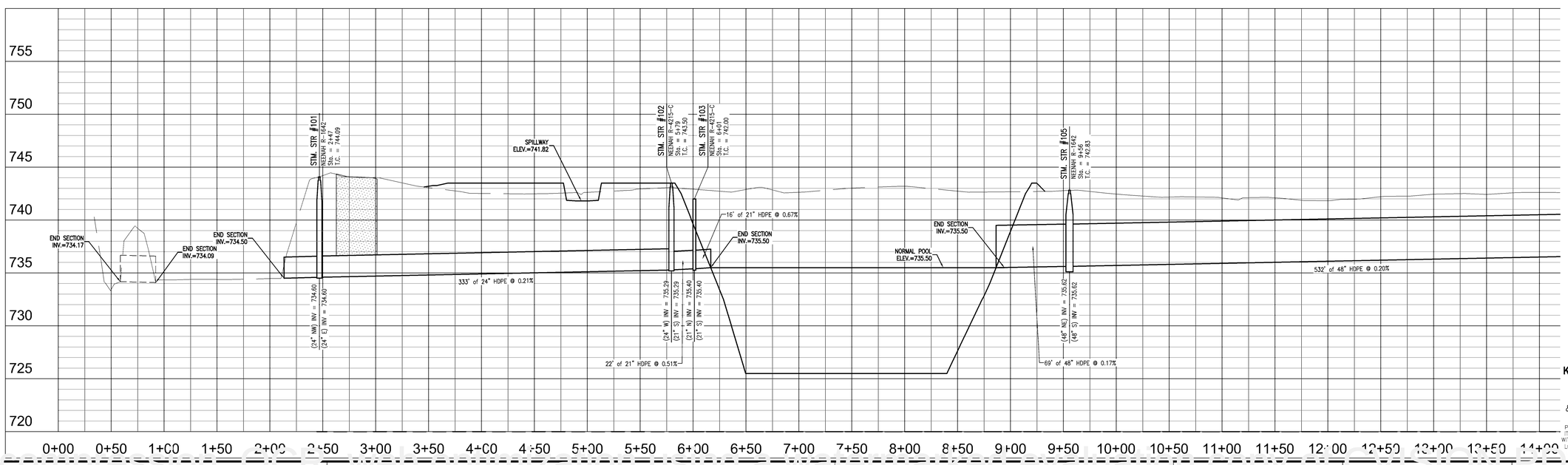
VERTICAL SCALE 1" = 5'

HORIZONTAL SCALE: 1"=50'

PROFILE LEGEND
- EXISTING GRADE
- FINISHED GRADE
- GRANULAR BACKFILL



10505 N. College Avenue
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317 | 843 - 0546 *fax*

ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS

Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS AND ISSUES: SUBMITTED FOR INITIAL REVIEW	DATE 02.12.2015	BY BJB
PROJECT NO: W14-0460		
DWG NAME: w14460-C600 SW prp-dwg		
DESIGNED BY: RLW/BAM		
DRAWN BY: RLW/BAM		
CHECKED BY: JKS		
DATE: 02.12.2015		

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORM SEWER PLAN AND PROFILE

Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.04

PROJECT NO.
W14.0460

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LOCK ON: 11/2014 W:\14-0460\Engineering\design\const\w140460-C600 STM prp.dwg
LAYOUT: C6.04
PLOTTED: February 12, 2015 - 7:33am
PLOTTED BY: schoello

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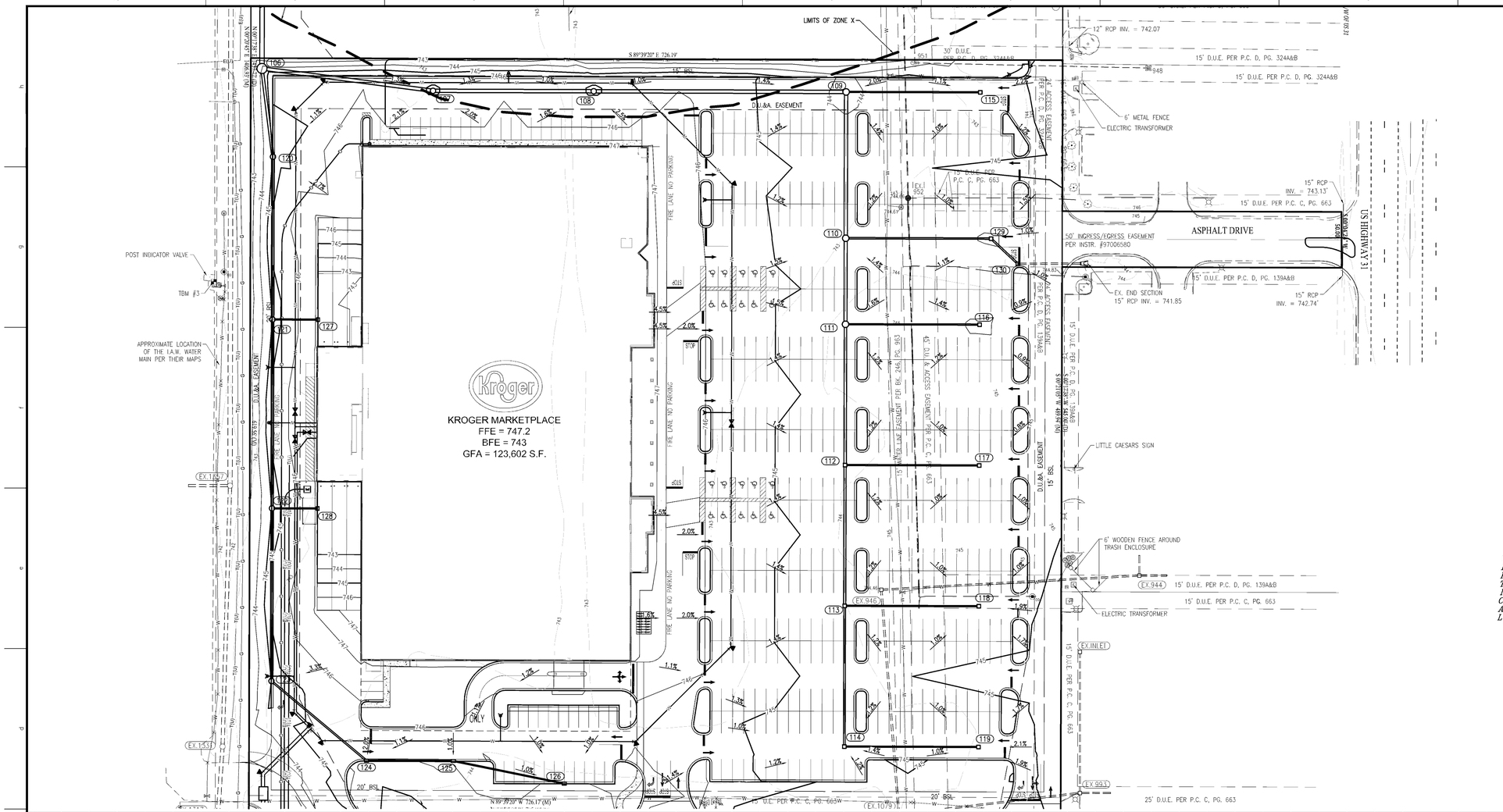


-NOTE-

RUN WATER LINE A MINIMUM OF 54" DEEP.
PROVIDE MINIMUM OF 10' HORIZONTAL & 2' VERTICAL CLEARANCE BETWEEN WATER & SANITARY LINE. SANITARY SEWER LINE IN PROXIMITY OF WATER LINE SHALL BE C900 WATER MAIN GRADE PVC.

PLAN CERTIFICATE NOTE:

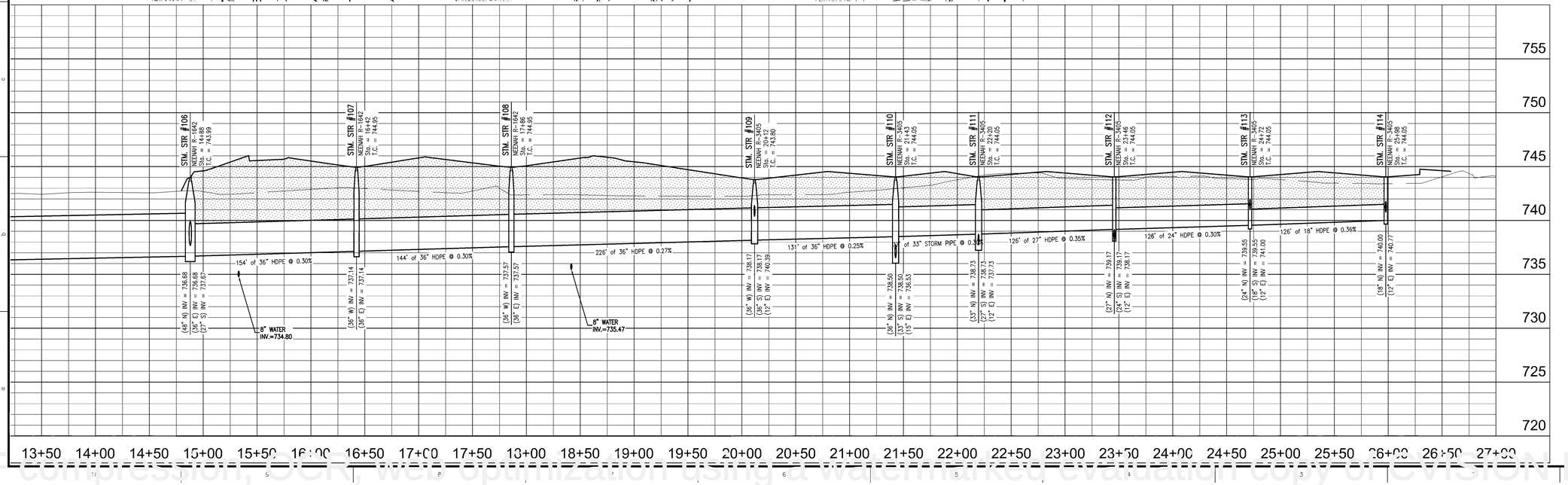
ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

VERTICAL SCALE: 1"=5'

HORIZONTAL SCALE: 1"=50'

PROFILE LEGEND
- EXISTING GRADE
- FINISHED GRADE
- GRANULAR BACKFILL



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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

REVISIONS / NOTES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJB

PROJECT NO. W14.0460
DWG NAME: #140460-C600 STM prop.dwg
DESIGNED BY: RJWP&AH
DRAWN BY: RJWP&AH
CHECKED BY: AKS
DATE: 02.12.2015

REGISTERED PROFESSIONAL ENGINEER
JAMES K. SHINNEMAN
No. 10200392
STATE OF INDIANA
PROPOSED FOR CONSTRUCTION
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORM SEWER PLAN AND PROFILE
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.05
PROJECT NO.
W14.0460

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LDCX Oct. 15, 2014 V14.04 (C) 1989-2014 Land Development Desktop Software, Inc.
Layout: C6.05 - Date/Time: February 12, 2015 - 7:33am
Layout Tab: BH: schedule
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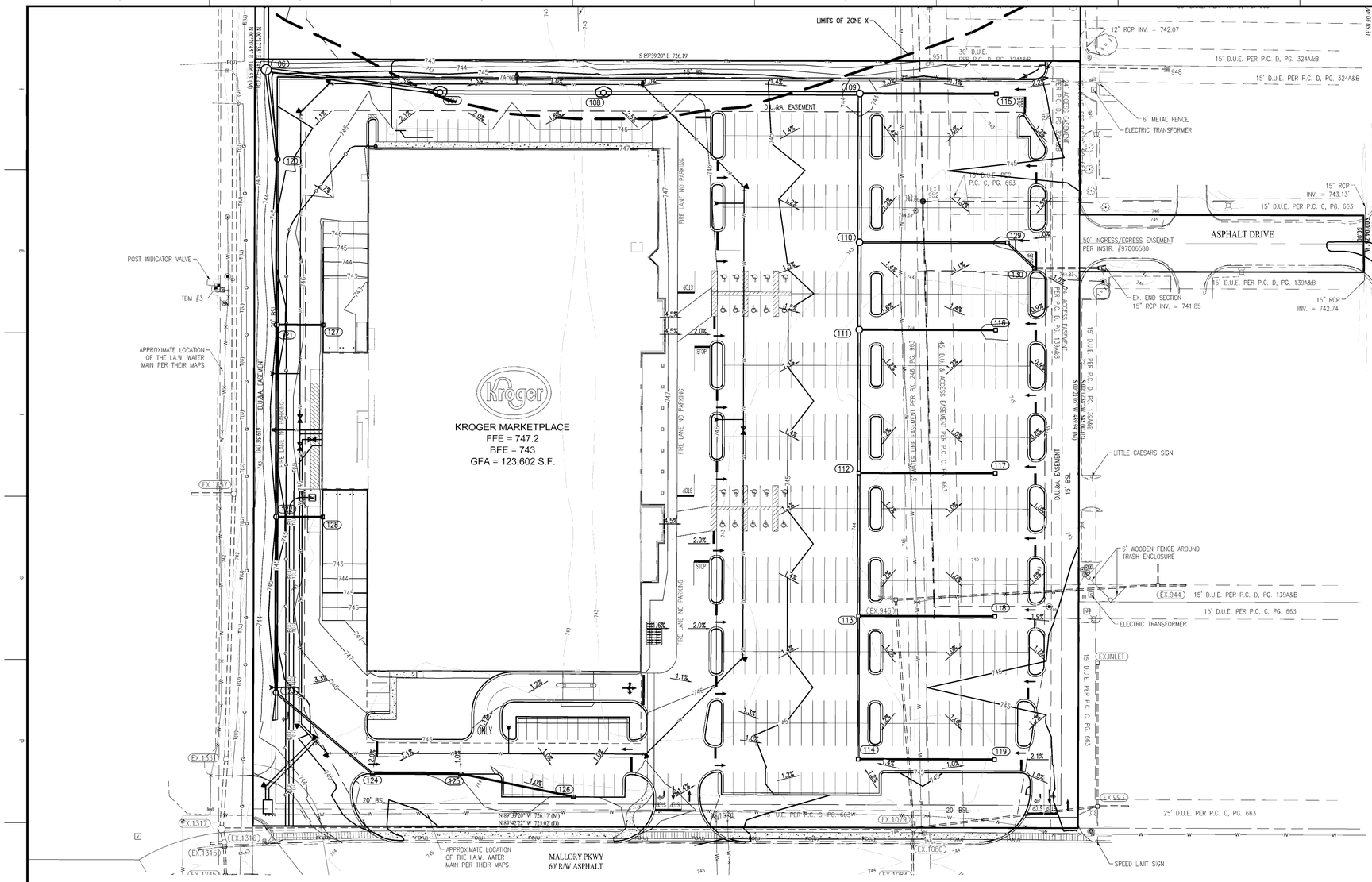

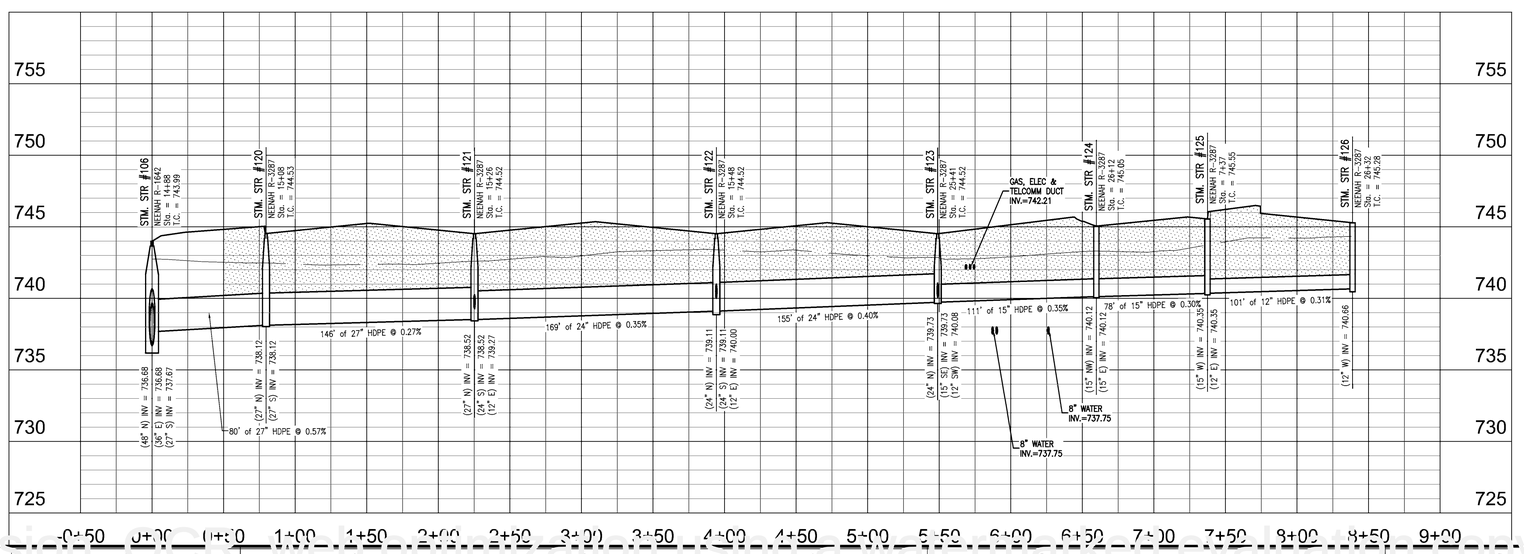

-NOTE-

RUN WATER LINE A MINIMUM OF 54" DEEP.
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PLAN CERTIFICATE NOTE:

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VERTICAL SCALE: 1"=5'
1.0 2.0 3.0 4.0 5.0

HORIZONTAL SCALE: 1"=50'
00 25 50 75 100

PROFILE LEGEND

- EXISTING GRADE
- FINISHED GRADE
- GRANULAR BACKFILL

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317 | 843 - 0546 fax

ALLAN H. WEIHE, P.E., L.S. - FOUNDER

PROJECT NO.	W14-0460
DWG NAME	#140460-C600 SIM prp.dwg
DESIGNED BY	RLW/BAM
DRAWN BY	RLW/BAM
CHECKED BY	AKS
DATE	02.12.2015

REVISIONS AND ISSUES SUBMITTED FOR INITIAL REVIEW	DATE	BY
	02.12.2015	BJB

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
APPROVED FOR CONSTRUCTION
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORM SEWER PLAN AND PROFILE

Part of the NE/4 of Section 15 Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.06

PROJECT NO.
W14.0460

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DATE: February 12, 2015 - 7:33am
PLOTTED BY: schedfo

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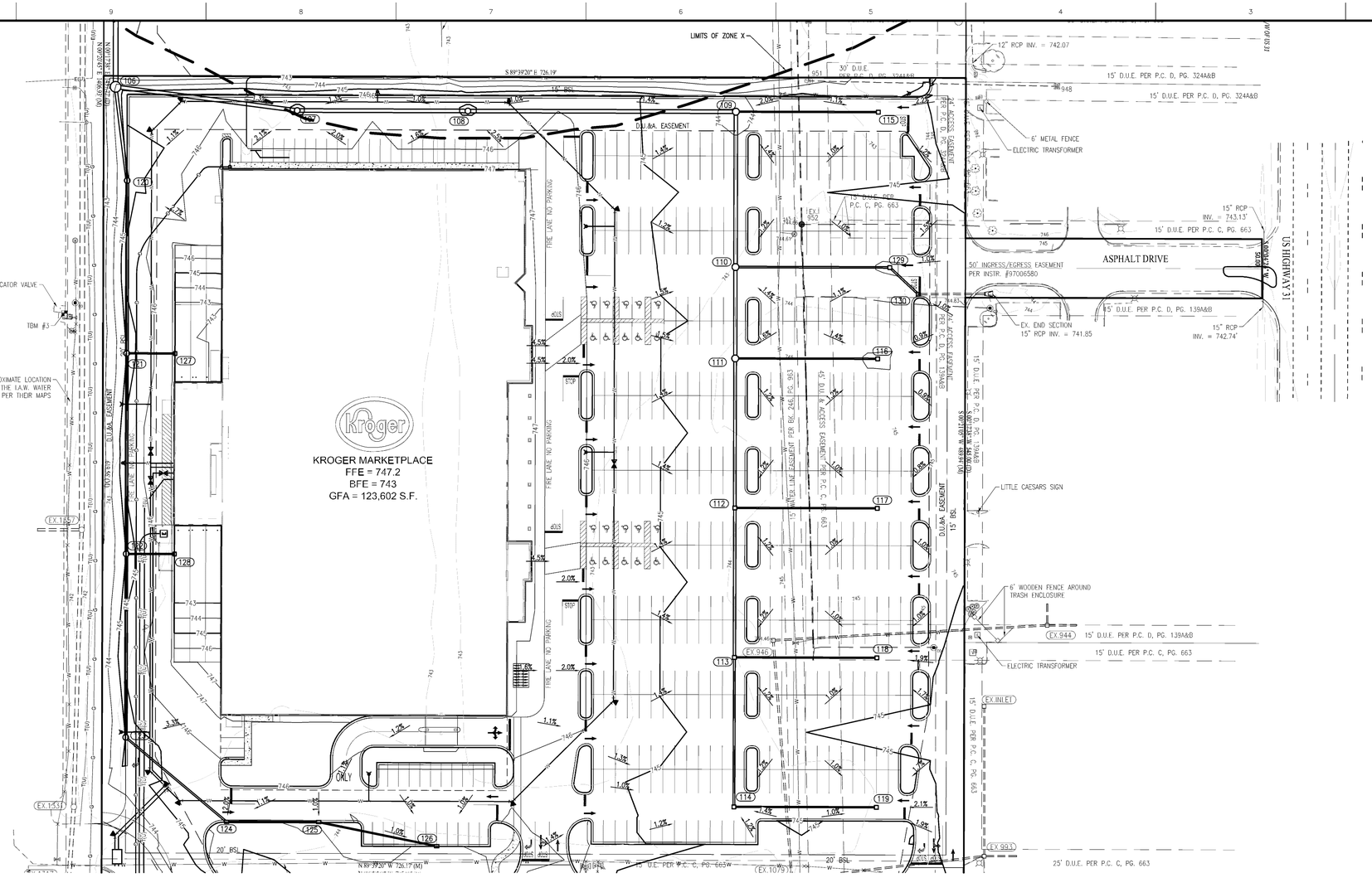

-NOTE-

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PLAN CERTIFICATE NOTE:

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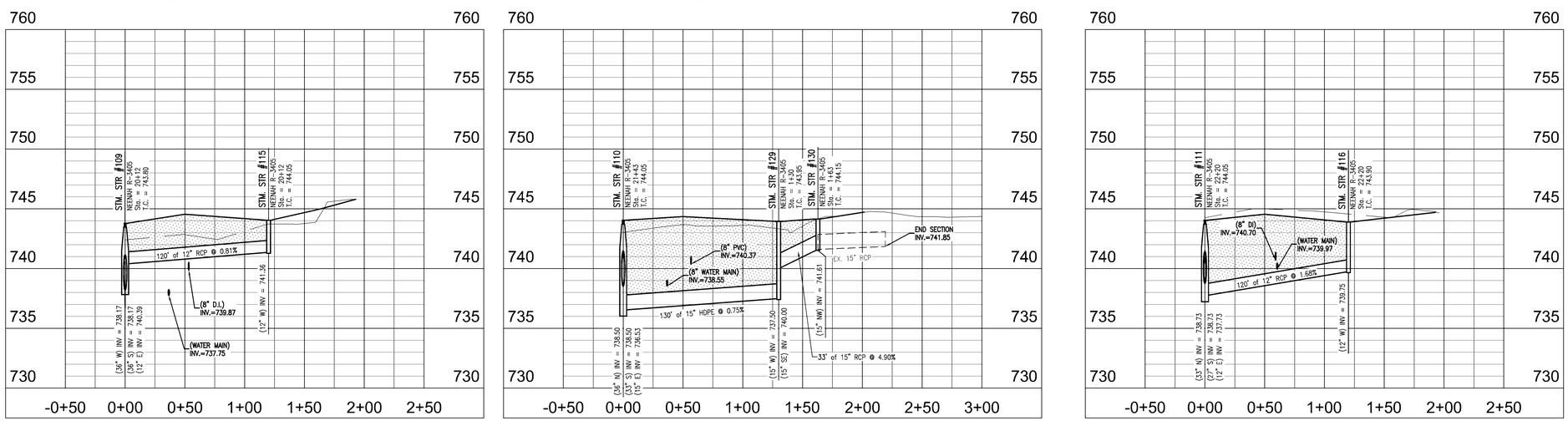
VERTICAL SCALE 1"=5': 5.0, 4.0, 3.0, 2.0, 1.0, 0.0

HORIZONTAL SCALE: 1"=50'
00 25 50 75 100

PROFILE LEGEND
EXISTING GRADE
FINISHED GRADE
GRANULAR BACKFILL



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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS

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Landscape Architecture

PROJECT NO.	W14-0460	
DWG NAME:	#140460-C600 STM prop.dwg	
DESIGNED BY:	RLW/BAM	
DRAWN BY:	RLW/BAM	
CHECKED BY:	AKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES SUBMITTED FOR INITIAL REVIEW	DATE	BY
	02.12.2015	BAB

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORM SEWER PLAN AND PROFILE

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.07

PROJECT NO.
W14.0460

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LOCK: Qc, HS,\2014\W14\0460\Engineering\design\cornet\w140460-C600 STM prop.dwg
LAYOUT: C6.07
PLOTTED BY: February 12, 2015 - 7:33am
Last Saved By: schoeffe

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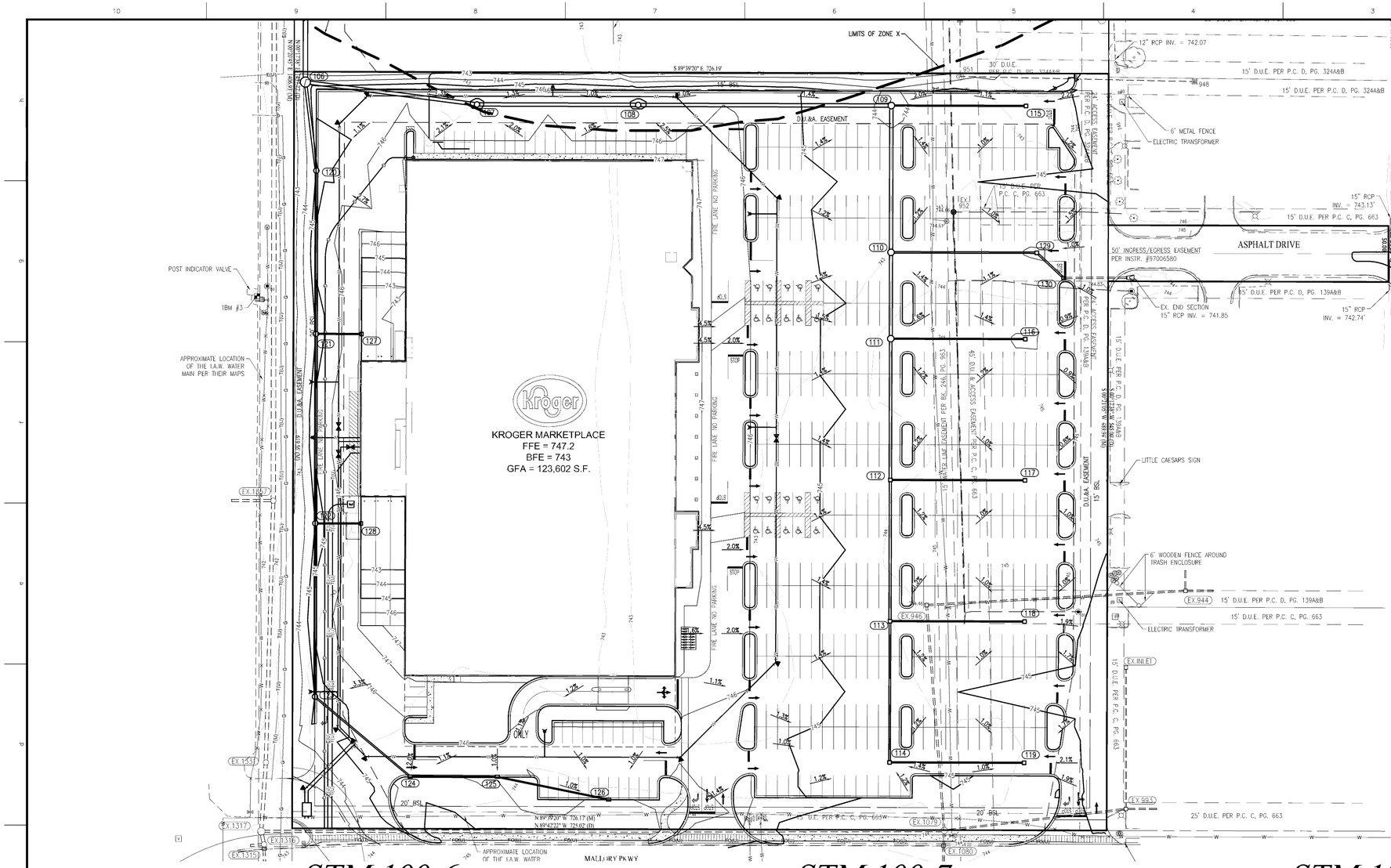

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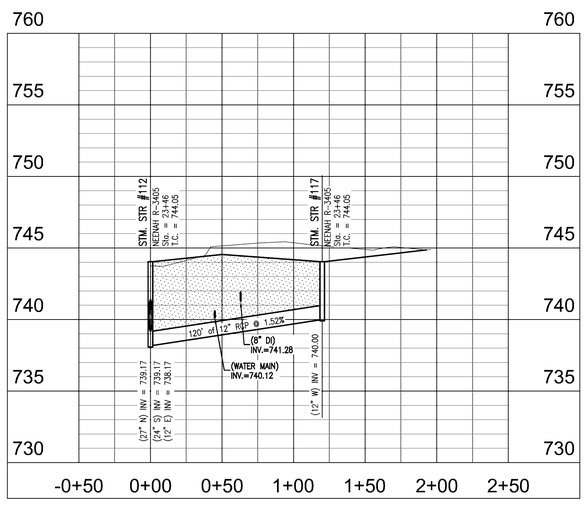
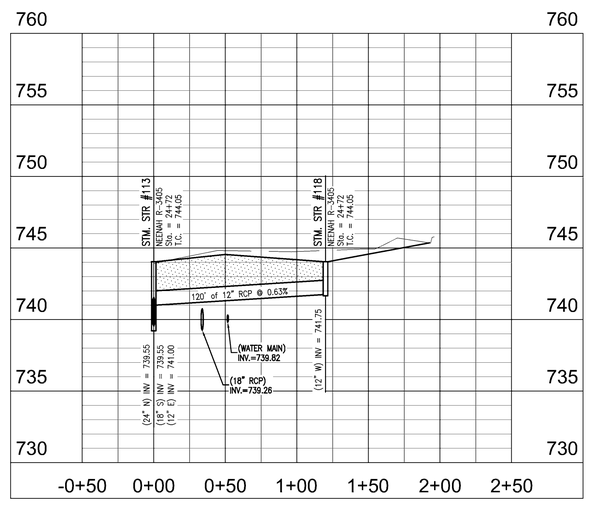
VERTICAL SCALE 1" = 5'

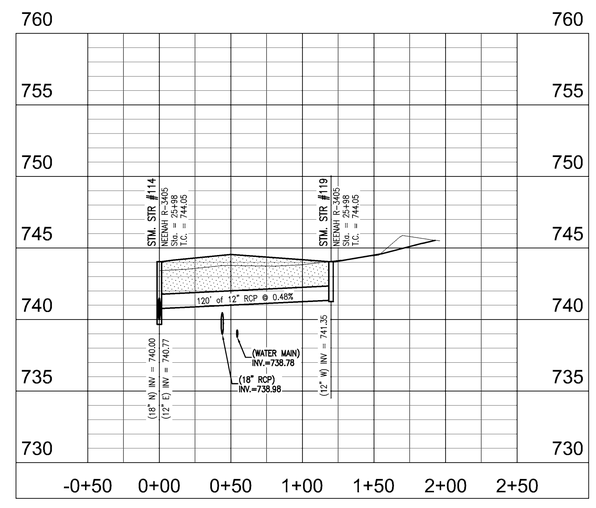
HORIZONTAL SCALE: 1"=50'

PROFILE LEGEND

- EXISTING GRADE
- FINISHED GRADE
- GRANULAR BACKFILL







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ALLAN H. WEIHE, P.E., L.S. - FOUNDER

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Landscape Architecture

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	BJS

PROJECT NO: W14.0460
DWG NAME: #140460-C600 STM prp.dwg
DESIGNED BY: RJW/BAM
DRAWN BY: RJW/BAM
CHECKED BY: JKS
DATE: 02.12.2015

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

STORM SEWER PLAN AND PROFILE
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.08

PROJECT NO.
W14.0460

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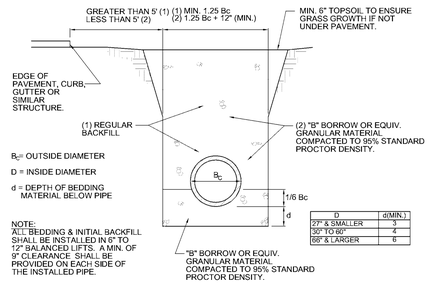
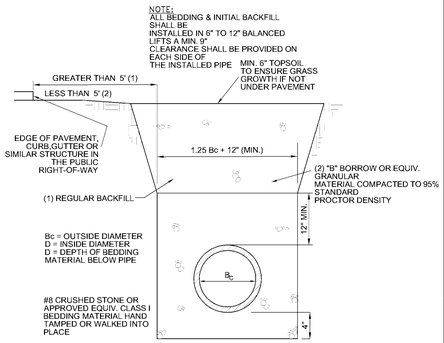


D	d(MIN.)
27" & SMALLER	3
30" TO 66"	4
66" & LARGER	6

TYPICAL BEDDING SECTION - RCP PIPE

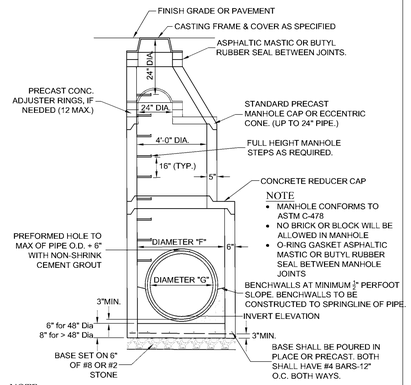
(NO SCALE)



TYPICAL BEDDING SECTION - PVC & HDPE

(NO SCALE)

PIPE SIZE (DIA. "G")	MANHOLE (DIA. "F") PIPES ENTERING/ LEAVING AT 0-45 DEGREES	MANHOLE (DIA. "F") PIPES ENTERING/ LEAVING AT 45-90 DEGREES	UP TO 60 DEGREES
12"-21"	48"	48"	N/A
24"	48"	60"	N/A
27"-30"	60"	60"	N/A
33"-36"	60"	72"	N/A
42"	72"	84"	N/A
48"	84"	96"	N/A
54"	N/A	N/A	96"
60"	N/A	N/A	96"
66"	N/A	N/A	96"

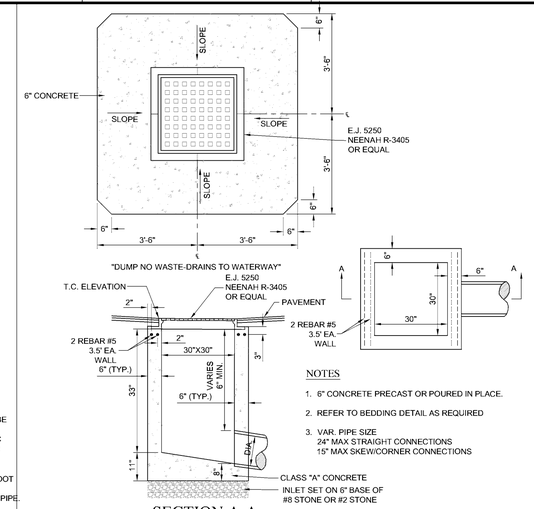


NOTE
- MANHOLE CONFORMS TO ASTM C-478
- NO BRICK OR BLOCK WILL BE ALLOWED IN MANHOLE
- O-RING GASKET ASPHALTIC MASTIC OR BUTYL RUBBER SEAL BETWEEN MANHOLE JOINTS

NOTE
MANHOLE STEPS SHALL BE POLYPROPYLENE, POLYPROPYLENE COATED STEEL REINFORCING OR AN APPROVED NON-CORROSIVE FIBERGLASS MATERIAL. THE COPOLYMER POLYPROPYLENE SHALL MEET THE REQUIREMENTS OF ASTM D-4101 REINFORCED WITH DEFORMED ½" MIN. DIAMETER REINFORCED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615, GRADE 60. NON-COATED CAST IRON STEPS ARE NOT ACCEPTABLE.

STANDARD STORM MANHOLE

(NO SCALE)



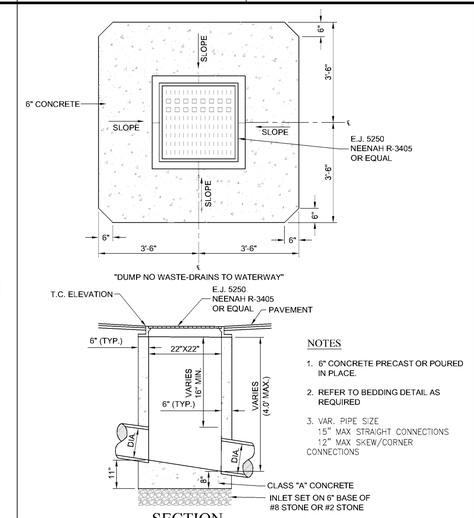
NOTES
1. 6" CONCRETE PRECAST OR POURED IN PLACE.
2. REFER TO BEDDING DETAIL AS REQUIRED
3. VAR. PIPE SIZE
   24" MAX STRAIGHT CONNECTIONS
   15" MAX SKEW/CORNER CONNECTIONS

SECTION A-A

1. STRAIGHT-OUT CONNECTIONS SHOULD NOT BE MADE TO EITHER PRECAST BOX OR INLET WALL TOUCHED BY A SKEW/CORNER CONNECTION UNLESS SUFFICIENT BOX INLET WALL AREA REMAINS ON EACH SIDE OF THE CONNECTING PIPE TO ENSURE STRUCTURAL INTEGRITY OF THE PRECAST BOX.
2. A MAXIMUM OF TWO (2) SKEW/CORNER CONNECTIONS WILL BE ALLOWED FOR EACH PRECAST BOX INLET.
3. REFER TO PRECAST CONCRETE ADJUSTING RING DETAIL AS REQUIRED

PAVED AREA INLET TYPE "E"

(NO SCALE)



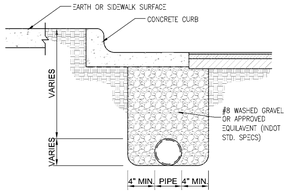
NOTES
1. 6" CONCRETE PRECAST OR POURED IN PLACE.
2. REFER TO BEDDING DETAIL AS REQUIRED
3. VAR. PIPE SIZE
   15" MAX STRAIGHT CONNECTIONS
   12" MAX SKEW/CORNER CONNECTIONS

SECTION

1. STRAIGHT-OUT CONNECTIONS SHOULD NOT BE MADE TO EITHER PRECAST BOX OR INLET WALL TOUCHED BY A SKEW/CORNER CONNECTION UNLESS SUFFICIENT BOX INLET WALL AREA REMAINS ON EACH SIDE OF THE CONNECTING PIPE TO ENSURE STRUCTURAL INTEGRITY OF THE PRECAST BOX.
2. A MAXIMUM OF TWO (2) SKEW/CORNER CONNECTIONS WILL BE ALLOWED FOR EACH PRECAST BOX INLET.
3. REFER TO PRECAST CONCRETE ADJUSTING RING DETAIL AS REQUIRED

PAVED AREA INLET TYPE "A"

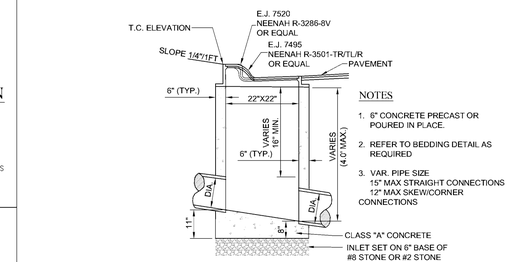
PIPE SIZES 12" TO 15" (NO SCALE)



CURB UNDERDRAIN DETAIL

(NO SCALE)

NOTE:
INSTALLATION REQUIRED: BOTH SIDES OF ALL PAVEMENT.



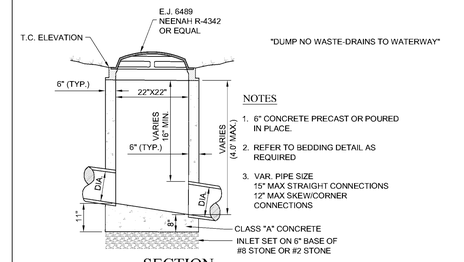
NOTES
1. 6" CONCRETE PRECAST OR POURED IN PLACE.
2. REFER TO BEDDING DETAIL AS REQUIRED
3. VAR. PIPE SIZE
   15" MAX STRAIGHT CONNECTIONS
   12" MAX SKEW/CORNER CONNECTIONS

SECTION

1. STRAIGHT-OUT CONNECTIONS SHOULD NOT BE MADE TO EITHER PRECAST BOX OR INLET WALL TOUCHED BY A SKEW/CORNER CONNECTION UNLESS SUFFICIENT BOX INLET WALL AREA REMAINS ON EACH SIDE OF THE CONNECTING PIPE TO ENSURE STRUCTURAL INTEGRITY OF THE PRECAST BOX.
2. A MAXIMUM OF TWO (2) SKEW/CORNER CONNECTIONS WILL BE ALLOWED FOR EACH PRECAST BOX INLET.
3. REFER TO PRECAST CONCRETE ADJUSTING RING DETAIL AS REQUIRED

CURB INLET TYPE "A"

PIPE SIZES 12" TO 15" (NO SCALE)



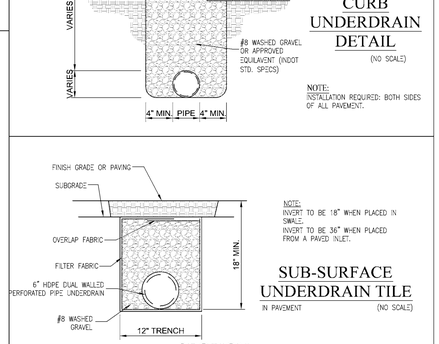
NOTES
1. 6" CONCRETE PRECAST OR POURED IN PLACE.
2. REFER TO BEDDING DETAIL AS REQUIRED
3. VAR. PIPE SIZE
   15" MAX STRAIGHT CONNECTIONS
   12" MAX SKEW/CORNER CONNECTIONS

SECTION

1. STRAIGHT-OUT CONNECTIONS SHOULD NOT BE MADE TO EITHER PRECAST BOX OR INLET WALL TOUCHED BY A SKEW/CORNER CONNECTION UNLESS SUFFICIENT BOX INLET WALL AREA REMAINS ON EACH SIDE OF THE CONNECTING PIPE TO ENSURE STRUCTURAL INTEGRITY OF THE PRECAST BOX.
2. A MAXIMUM OF TWO (2) SKEW/CORNER CONNECTIONS WILL BE ALLOWED FOR EACH PRECAST BOX INLET.
3. REFER TO PRECAST CONCRETE ADJUSTING RING DETAIL AS REQUIRED

BEEHIVE INLET TYPE "A"

PIPE SIZES 12" TO 15" (NO SCALE)



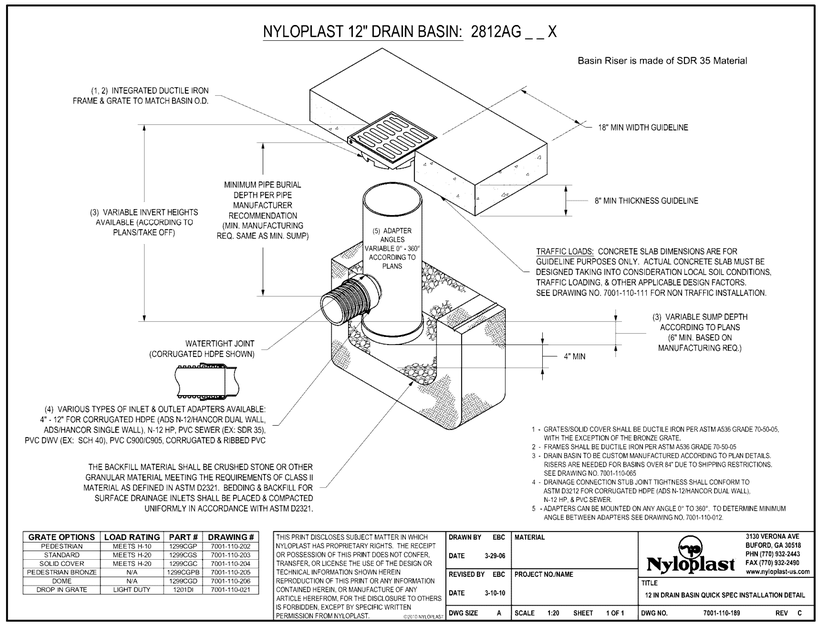
NOTE:
INVERT TO BE 18" WHEN PLACED IN SWALE.
INVERT TO BE 36" WHEN PLACED FROM A PAVED INLET.

SUB-SURFACE UNDERDRAIN TILE

IN PAVEMENT (NO SCALE)

SECTION

NYLOPLAST 12" DRAIN BASIN: 2812AG _ _ X



1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 64" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1299CGP	7001-110-202
STANDARD	MEETS H-20	1299CGS	7001-110-203
SOLID COVER	MEETS H-20	1299CGC	7001-110-204
PEDESTRIAN BRONZE	N/A	1299CGPB	7001-110-205
DOME	N/A	1299CGD	7001-110-206
DROP IN GRATE	LIGHT DUTY	1201DI	7001-110-021

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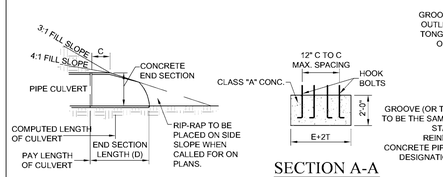
DRAWN BY	EBC	MATERIAL	
DATE	3-29-06		
REVISED BY	EBC	PROJECT NO./NAME	
DATE	3-10-10		
DWG SIZE	A	SCALE 1:20	SHEET 1 OF 1

Nyloplast — 3130 VERONA AVE, BUFORD, GA 30518, PHN (770) 932-2443, FAX (770) 932-2490, www.nyloplast-us.com

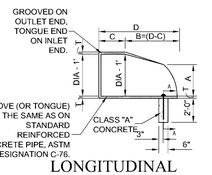
TITLE: 12 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-189 REV C



SLOPE DETAIL

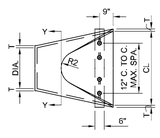
SECTION A-A
CONC. PIPE TOE ANCHOR



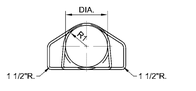
LONGITUDINAL SECTION

DIA.	T (MIN)	A=	C=	D=	E=	K=	R 1	R 2	APPROX. WEIGHT
12"	2"	5"	4'-3"	6'-2"	2'-0"	1.3	10 1/8"	9"	800
15"	2 1/4"	7"	4'-0"	6'-3"	2'-6"	1.5	12 1/2"	11"	1100
18"	2 1/2"	11"	4'-1"	6'-2"	3'-0"	1.8	15 1/2"	12"	1300
21"	2 3/4"	11"	3'-6"	6'-3"	3'-6"	2.1	16 1/8"	13"	1500
24"	3"	1'-0"	2'-6"	6'-3"	4'-0"	2.3	16 3/16"	14"	1800
27"	3 1/4"	1'-1"	2'-5"	6'-3"	4'-6"	2.6	18 9/16"	14 1/2"	2100
30"	3 1/2"	1'-2"	1'-10"	6'-3"	5'-0"	2.9	18 1/2"	15"	2400
33"	3 3/4"	1'-3"	3'-6"	8'-3"	5'-6"	3.1	23 3/4"	17 1/2"	4100
36"	4"	1'-5"	3'-1"	8'-3"	6'-0"	3.4	24 5/16"	20"	4200
TOLERANCE ± 1"									

NOTE:
METAL PIPE END SECTIONS MAY BE USED WITH CONCRETE PIPE, PROVIDING THE METHOD OF CONNECTION IS APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OF PIPE. (EXCEPT IN INDIANAPOLIS)



PLAN VIEW



SECTION Y-Y

PRECAST CONCRETE END SECTION DETAIL

(NO SCALE)

CONCRETE IN THESE END SECTIONS SHALL BE THE SAME GRADE AND STRENGTH AS SPECIFIED FOR REINFORCED CONCRETE PIPE, A.S.T.M. DESIGNATION C-76 CLASS II, (AS SET OUT IN INDOT STANDARD SPECIFICATIONS).

REINFORCEMENT IN THE "C" PORTION SHALL BE THE SAME AS SPECIFIED FOR REINFORCED CONCRETE, A.S.T.M. DESIGNATION C-76 CLASS II, FOR THE SIZE OF CONNECTING PIPE.

REINFORCEMENT IN THE "B" PORTION SHALL HAVE A CROSS SECTIONAL AREA EQUAL TO THAT OF ONE LAYER OF STEEL IN THE "C" PORTION.

THE END OF THE PIPE CULVERT SHALL BE PLACED IN THE CONCRETE END SECTION SO THAT THE FLOW LINES ARE FLUSH. THE JOINT SHALL BE COMPLETELY FILLED WITH MORTAR.

IN 3:1 OR 4:1 FILL SLOPE, CHANGE TO THE SLOPE OF THE END SECTION IN A SMOOTH, PLEASING TRANSITION APPROXIMATELY 10'-0" IN LENGTH.

VARIATIONS IN DIMENSIONS - THE THICKNESS OF THE CONCRETE, THE POSITION OF STEEL, AND THE INTERNAL DIAMETER OF THE PIPE SHALL CONFORM WITH THE VARIATIONS IN DIMENSIONS AS PROVIDED IN THE SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, A.S.T.M. DESIGNATION C-???

WHERE VITRIFIED CLAY CULVERT OR CAST IRON CULVERT PIPE IS USED, A "PIPE END SECTION" COMPARABLE TO THAT AS SHOWN FOR METAL OR CONCRETE SHALL BE FURNISHED AND SHALL BE AS APPROVED BY THE ENGINEER, EXCEPT IN AREAS OF ACID OR MINE WATER THEN THE USE OF METAL END SECTION IS PROHIBITED.

END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "PIPE END SECTION" COMPLETE.

CONCRETE PIPE TOE ANCHORS SHALL BE REQUIRED ON ALL CONCRETE PIPE END SECTIONS. THE COST THEREOF SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER EACH FOR "PIPE END SECTION."

REQUIREMENTS FOR ALL STORM SEWER BENCH WALLS

BENCH WALLS SHALL BE SHAPED AND FORMED FOR A CLEAN TRANSITION WITH PROPER HYDRAULICS TO ALLOW THE SMOOTH CONVEYANCE OF FLOWS THROUGH THE MANHOLE OR BOX INLET. THE BENCH WALL SHALL FORM A DEFINED CHANNEL, TO A MINIMUM HEIGHT OF 80-PERCENT OF THE INSIDE DIAMETER OF THE INLET AND OUTLET PIPES TO FORM A "U" SHAPED CHANNEL, CONSTRUCTED AT A MINIMUM ½-INCH PER FOOT SLOPE TO THE MANHOLE WALL.

WHERE A FLOW CHANNEL IS CONSTRUCTED AS AN INTEGRAL PART OF THE PRE-CAST BASE, IT SHALL BE SHAPED AND FORMED AS DESCRIBED ABOVE, WITH THE EXCEPTION THAT THE BOTTOM OF THE FLOW CHANNEL MAY BE FORMED FROM THE BOTTOM OF INLET AND OUTLET PIPES IF THE PIPE WALL THICKNESS IS NOT GREATER THAN ONE (1) INCH.

FOR CAST-IN-PLACE FLOW CHANNELS, THE BOTTOM INVERT OF ALL PIPES ENTERING A MANHOLE SHALL BE AT LEAST THREE (3) INCHES ABOVE THE TOP OF THE BASE SLAB TO THE OUTLET INVERT SO THE FINISHED SEWER CHANNEL MAY BE INSTALLED AND SHAPED.
FOR CONNECTIONS TO EXISTING STORM SEWER STRUCTURES, FLOW CHANNELS SHALL BE SHAPED, AS SPECIFIED HEREIN, AS IF IT WERE A NEW MANHOLE OR BOX INLET STRUCTURE.

SPECIFICATIONS FOR ALL STORM SEWER CASTINGS

ALL STORM WATER INLETS AND CATCH BASINS SHALL HAVE THE WORDS "NO DUMPING, DRAINS TO STREAM", OR SIMILARLY APPROVED MESSAGE, CAST IN RAISED OR RECESSED LETTERS AT A MINIMUM OF 1" IN HEIGHT. IN ADDITION, A SYMBOL OF A FISH SHALL ALSO BE CAST WITH THE LETTERS.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

		BY
PROJECT NO.	W140460	
DWG NAME	w140460-C600-details.dwg	
DESIGNED BY:	RJW/RAM	
DRAWN BY:	RJW/RAM	
CHECKED BY:	JKS	
DATE:	02.12.2015	

DATE	BY	REVISIONS AND NOTES
02.12.2015	BJS	SUBMITTED FOR INITIAL REVIEW

JAMES K. SHINNEMAN
REGISTERED
NO. 10200392
STATE OF INDIANA
PROFESSIONAL ENGINEER
NOT FOR CONSTRUCTION

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

DRAINAGE DETAILS
Part of the NE¼ of Section: 15, Township: 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C6.09
PROJECT NO.
W14.0460

LOCK: (N) 2014\W140460\Engineering\design\const\w140460-C600-details.dwg
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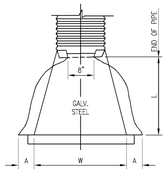
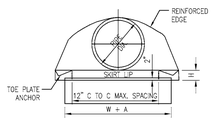


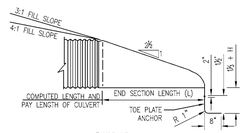
PLAN

PIPE ARCH DIMEN.		G.A.	DIMENSIONS						SLOPE (APP.)	BODY
SPAN	RISE		A 1"±	B	H 1"±	B MAX.	L 1.5±	W 2±		
17	13	16	6.5	8.5	6	20	30		2.5	1 PC.
21	15	16	7.5	11	6	24	36		2.5	1 PC.
24	18	16	8	12	6	28	42		2.5	1 PC.
28	20	16	8	16	6	32	48		2.5	1 PC.
35	24	14	10	16	6	39	60		2.5	1 PC.
42	29	14	12	12	7.5	46	75		2.5	1 PC.

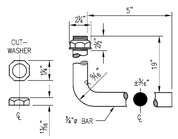


END

PIPE DIA.	G.A.	DIMENSIONS						SLOPE (APP.)	BODY
		A 1"±	B MAX.	H 1"±	L 1.5±	W 2±			
12	16	6	6	6	21	24		2.5	1 PC.
15	16	7	8	6	26	30		2.5	1 PC.
18	16	8	10	6	31	36		2.5	1 PC.
21	16	9	12	6	36	42		2.5	1 PC.
24	16	10	13	6	41	48		2.5	1 PC.
30	14	12	16	8	51	60		2.5	1 PC.
36	14	14	19	9	60	72		2.5	1 PC.



SIDE



METAL END SECTION

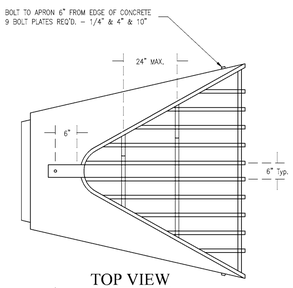
(NO SCALE)

NOTES:

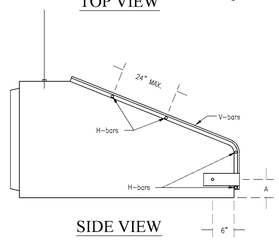
1. END SECTIONS AND TOE PLATE ANCHORS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS AS SET OUT IN THE INDOT STANDARD SPECIFICATIONS.
2. IF ALUMINUM ALLOY PIPE CULVERT IS FURNISHED, ALUMINUM ALLOY END SECTIONS SHALL ALSO BE USED AND ALL COMPONENT PARTS SHALL BE ALUMINUM ALLOY AS SET OUT IN THE STANDARD SPECIFICATIONS.
3. MULTIPLE PANEL BODIES SHALL HAVE LAP SEAMS WHICH SHALL BE TIGHTLY JOINED WITH 3/8" DIA. GALVANIZED RIVETS OR BOLTS. THE TOE PLATE ANCHOR SHALL BE CONSTRUCTED OR 10 GAGE.
4. GALVANIZED STEEL AND BE REQUIRED ON ALL STEEL PIPE END SECTIONS. IT SHALL BE MATCHED-PUNCHED TO FIT HOLES IN SKIRT LIP, AND SUPPLIED LOOSE, COMPLETE WITH 3/8" DIA. GALVANIZED BOLTS. COST THEREOF SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER EACH FOR "PIPE END SECTION."
5. WHERE VITRIFIED CLAY CULVERT OR CAST IRON CULVERT PIPE IS USED A "PIPE END SECTION" COMPARABLE TO THAT AS SHOWN FOR METAL OR CONCRETE SHALL BE FURNISHED AND SHALL BE AS APPROVED BY THE ENGINEER.
6. END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "PIPE END SECTION" COMPLETE IN PLACE AND ACCEPTED.
7. PIMPLED CONNECTION BAND MAY BE USED TO CONNECT PIPE END SECTION TO HELICALLY CORRUGATED PIPE.
8. MECHANICAL RESTRAINTS TO BE USED PER LOCAL REQUIREMENTS.

SPECIFICATIONS FOR HOOK BOLT AND NUT:

HOOK BOLT MATERIAL SHALL MEET THE CURRENT A.S.T.M. A-307. THREADS SHALL BE AMERICAN STANDARD COARSE THREAD SERIES, CLASS II FREE FIT, BOLTS SHALL BE GALVANIZED TO MEET CURRENT A.S.T.M. SPECIFICATION A-153. THE THREADED PORTION SHALL NOT PREVENT TURNING THE NUT BY HAND. NUT AND WASHERS SHALL BE CARBON STEEL HOT DIP GALVANIZED TO MEET A.S.T.M. SPECIFICATION A-153. NUT THREADS SHALL BE AMERICAN STANDARD COARSE THREAD SERIES (1/64 MAXIMUM OVERSIZE), CLEANED AFTER GALVANIZING TO PROVIDE A FREE RUNNING FIT ON THE CLASS II BOLT. NUTS SHALL BE 1 1/4" ACROSS FLATS, 13/16" THICK, CURVE CROWNED TO APPROX. 1" RADIUS.



TOP VIEW



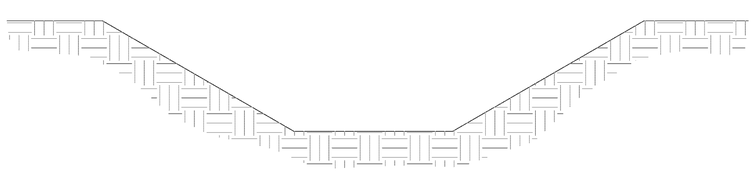
SIDE VIEW

	Apron Size	V-bar Size	H-bar Size	No. of H-bars Req'd.	Bolt Dia.	"A" Dim.
		Inches			Inches	
Arch Pipe Aprons	18	1/2 ø	5/8 ø	3	1/2	5
	24	5/8 ø	3/4 ø	4	1/2	7
	30	5/8 ø	3/4 ø	4	1/2	7 1/2
	36	3/4 ø	1 ø	4	1/2	10 1/2
	42	3/4 ø	1 ø	4	3/4	11
	48	3/4 ø	1 1/2 Pipe	4	3/4	12
	54	3/4 ø	1 1/2 Pipe	4	3/4	12
	60	3/4 ø	1 1/2 Pipe	5	3/4	14
	72	3/4 ø	1 1/2 Pipe	5	3/4	14
	84	3/4 ø	1 1/2 Pipe	6	3/4	15
Round Pipe Aprons	12	1/2 ø	5/8 ø	3	1/2	4
	15	1/2 ø	5/8 ø	3	1/2	4 1/2
	18	1/2 ø	5/8 ø	4	1/2	4 1/2
	21	1/2 ø	5/8 ø	4	1/2	5
	24	5/8 ø	3/4 ø	4	1/2	5
	27	5/8 ø	3/4 ø	4	1/2	5 1/2
	30	5/8 ø	3/4 ø	4	1/2	5 1/2
	36	3/4 ø	1 ø	4	3/4	8
	42	3/4 ø	1 ø	4	3/4	8
	48	3/4 ø	1 ø	5	3/4	8
	54	3/4 ø	1 1/2 Pipe	5	3/4	8
	60	3/4 ø	1 1/2 Pipe	5	3/4	8
	66	3/4 ø	1 1/2 Pipe	6	3/4	8
	72	3/4 ø	1 1/2 Pipe	6	3/4	9
	84	3/4 ø	1 1/2 Pipe	7	3/4	10
	90	3/4 ø	1 1/2 Pipe	7	3/4	14

NOTES:
1. BARS & PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES, & PIPE ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANIZED.
4. NO REBAR THROUGH PIPES WILL BE ALLOWED.
5. DEBRIS GUARD SHALL BE REMOVABLE.

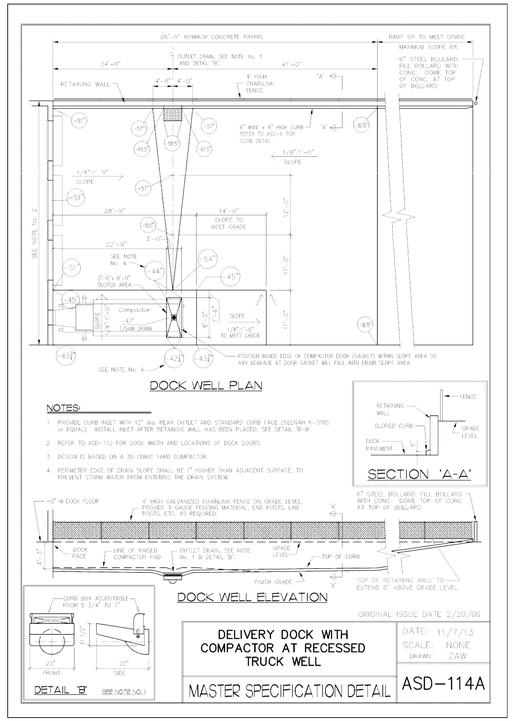
TRASH GUARDS FOR CONC. END SECTIONS

(NO SCALE)



EMERGENCY SPILLWAY DETAIL

(NO SCALE)



DOCK WELL PLAN

NOTES:

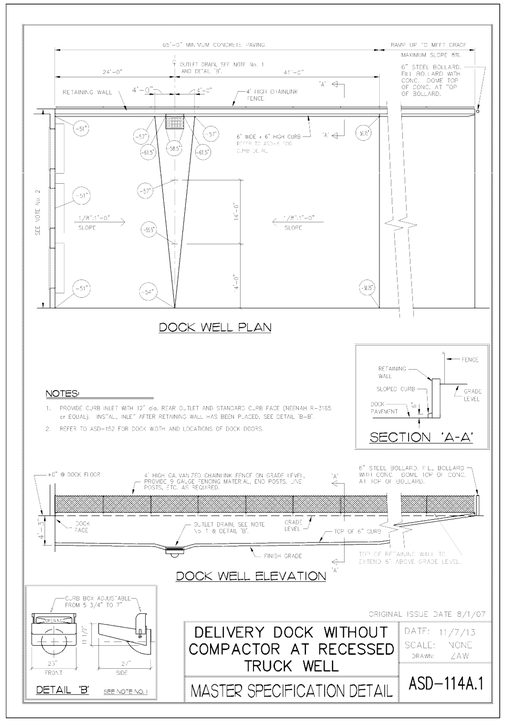
1. PROVIDE CURB INLET WITH 12" dia. REAR OUTLET AND STANDARD CURB FACE (NEENAH R-3165 or EQUAL). INSTALL INLET AFTER RETAINING WALL HAS BEEN PLACED. SEE DETAIL "B-B".
2. REFER TO ASD-152 FOR DOCK WIDTH AND LOCATIONS OF DOCK DOORS.
3. DESIGN IS BASED ON A 35 CUBIC YARD COMPACTOR.
4. PERIMETER EDGE OF DRAIN SLOPE SHALL BE 1" HIGHER THAN ADJACENT SURFACE, TO PREVENT STORM WATER FROM ENTERING THE DRAIN SYSTEM.

DOCK WELL ELEVATION

DETAIL "B" (SEE NOTE NO.)

ORIGINAL ISSUE DATE 2/20/06

DELIVERY DOCK WITH COMPACTOR AT RECESSED TRUCK WELL	DATE: 11/7/13 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATION DETAIL	ASD-114A



DOCK WELL PLAN

NOTES:

1. PROVIDE CURB INLET WITH 12" dia. REAR OUTLET AND STANDARD CURB FACE (NEENAH R-3165 or EQUAL). INSTALL INLET AFTER RETAINING WALL HAS BEEN PLACED. SEE DETAIL "B-B".
2. REFER TO ASD-152 FOR DOCK WIDTH AND LOCATIONS OF DOCK DOORS.

SECTION 'A-A'

DOCK WELL ELEVATION

DETAIL "B" (SEE NOTE NO.)

ORIGINAL ISSUE DATE 8/1/07

DELIVERY DOCK WITHOUT COMPACTOR AT RECESSED TRUCK WELL	DATE: 11/7/13 SCALE: NONE DRAWN: ZAW
MASTER SPECIFICATION DETAIL	ASD-114A.1

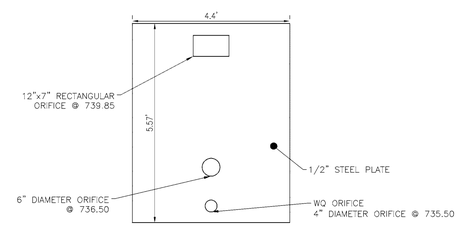
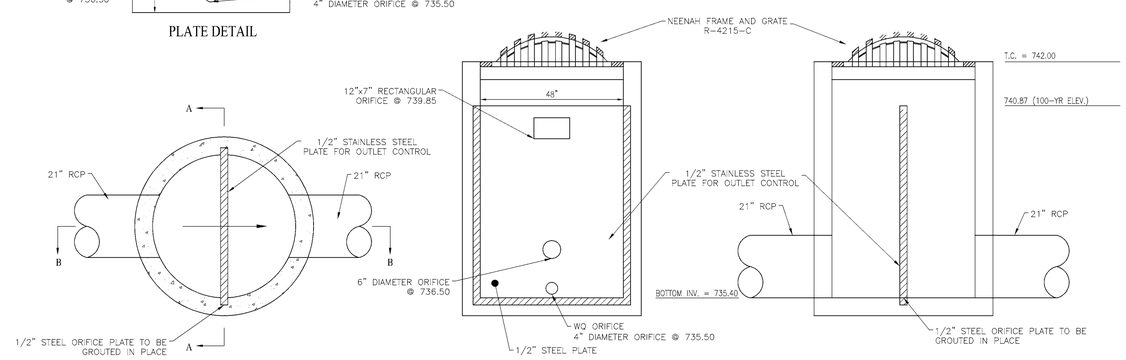


PLATE DETAIL



RESTRICTOR PLATE INSTALLATION DETAIL
OUTLET SPECIAL STRUCTURE POND "1"

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net

317 846 - 6611
800 452 - 6408
317 843 - 0546 *fax*

ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS

Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO. W14.0460			
DWG NAME: w140460-C600-details.dwg			
DESIGNED BY: RLW/RAM			
DRAWN BY: RLW/RAM			
CHECKED BY: JKS			
DATE: 02.12.2015	DATE 02.12.2015	BY RLB	REVISIONS AND ISSUES SUBMITTED FOR INITIAL REVIEW

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

DRAINAGE DETAILS

Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.

C6.10

PROJECT NO.

W14.0460

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Layout: C6.10
Plotting By: schoeffo

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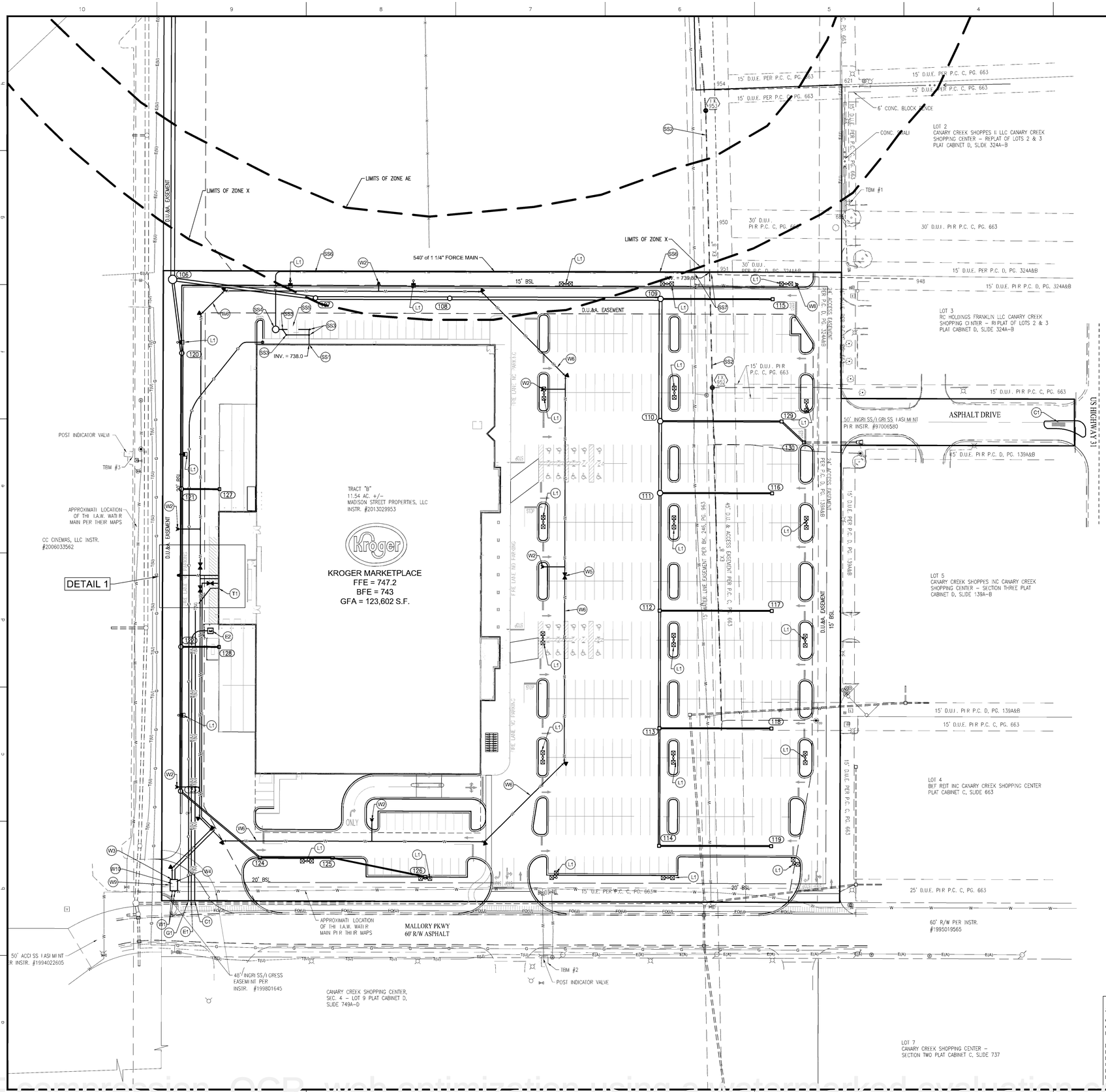


UTILITY PLAN NOTES

SANITARY SEWER NOTES

(SS1) CONNECT PROPOSED SANITARY FORCEMAIN TO THE EXISTING SANITARY MAIN WITH A MANUFACTURED MAINLINE FITTING. THE FORCEMAIN IS TO HAVE TRACER WIRE INSTALLED ON THE TOP OF THE PIPE FROM THE GREASE INTERCEPTOR TO THE SERVICE TAP.

(SS2) EXISTING 8" SANITARY SEWER

(SS3) PROPOSED SANITARY LATERAL CLEANOUT TYPE 1. REFER TO DETAIL ON SHEET C8.04.

(SS4) E-ONE GRINDER PUMP. REFER TO DETAILS ON SHEET C8.02 FOR DESIGN DATA AND PUMP TYPE.

(SS5) GREASE INTERCEPTOR. REFER TO PLUMBING PLANS FOR DETAILS

(SS6) 1 1/4" PVC SDR-17 SANITARY FORCE MAIN

(SS7) PROVIDE 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY/STORM SEWER PIPES AND ALL OTHER PIPES. INSTALL CONCRETE CRADLE IF CLEARANCE IS LESS THAN 18"

WATER SERVICE NOTES

(W1) COORDINATE AND CONNECT THE 3" AND 8" WATER SERVICES SEPARATELY TO THE EXISTING 12" WATER MAIN WITH A TAPPING SLEEVE AND VALVE. THIS MAIN MUST BE TESTED AND ACCEPTED BEFORE THE ONSITE PRIVATE MAIN CAN TAP AND CONNECT FROM THE METER VAULT. CONTACT INDIANA AMERICAN WATER PRIOR TO ANY INSTALLATION.

(W2) PROPOSED FIRE HYDRANT ASSEMBLY

(W3) WATER METER AND ASSOCIATED BACKFLOW PREVENTER, VALVES, ETC. TO BE LOCATED INSIDE THE METER VAULT ALONG MALLORY PARKWAY.

(W4) FIRE DEPARTMENT CONNECTION (6" PVC, C900 D.R.18) TO BE LOCATED ON THE METER VAULT.

(W5) PROPOSED WATER VALVE

(W6) PROPOSED 8" PVC, C900 D.R. 18 FIRE SERVICE LINE

(W7) PROPOSED 3" SDR 21 CLASS 200 DOMESTIC SERVICE LINE

(W8) RELOCATED FIRE HYDRANT PER INDIANA AMERICAN WATER DIRECTION.

(W9) PROVIDE POST INDICATOR VALVE (P.I.V.)

(W10) WATER VAULT PER INDIANA AMERICAN WATER DETAILS AND SPECIFICATIONS

ELECTRIC NOTES

(E1) COORDINATE AND CONNECT BUILDING ELECTRICAL LINE TO ELECTRICAL TRANSFORMER. COORDINATE CONNECTION WITH POWER COMPANY AND ELECTRICAL DRAWINGS. ADJUST AS REQUIRED. 4" EC CONDUITS TO BE INSTALLED WITH PULL STRINGS. 277/480 VOLT SYSTEM, 2000 - 4000 AMPS REQUIRED.

(E2) TRANSFORMER PAD LOCATION. COORDINATE WITH IPL. CONTRACTOR TO COORDINATE WITH BUILDING ELECTRICIAN AND PROVIDE A MINIMUM OF TEN FEET (10') EXTRA LENGTH OF CABLES FOR FINAL CONNECTION

TELEPHONE NOTES

(T1) COORDINATE AND CONNECT BUILDING TELEPHONE SERVICE LINE TO CONNECTION POINT AS PROVIDED. COORDINATE CONNECTION WITH SITE DRAWINGS AND SERVICE PROVIDER. ADJUST AS REQUIRED. TWO (2) 4" PVC CONDUIT TO BE INSTALLED WITH FOUR(4) PULL STRINGS. CONTRACTOR TO PROVIDE #6 GROUND WIRE AT THE D-MARC LOCATION.

GAS SERVICE NOTES

(G1) CONNECT PROPOSED 2" GAS SERVICE TO EXISTING GAS LINE WITH STANDARDIZED PRESSURE OF 7" WATER COLUMN. REFER TO ARCHITECTURAL DRAWINGS AND COORDINATE WITH SERVICE PROVIDER. PROVIDE TRACE WIRE ALONG PATH.

LIGHTING CONDUIT NOTES

(L1) INSTALL SCHEDULE 40 PVC PLASTIC CONDUIT AND TYPE TW WIRE, AND BE LOCATED BELOW ANY PAVING AND AGGREGATE SUBGRADE.

SIGNAGE CONDUIT NOTES

(C1) INSTALL TWO (2) 3/4" PVC CONDUIT SCHEDULE 40 (WITH PULL STRINGS) FROM THE KROGER BUILDING TO THE PYLON SIGN.

LEGEND

FH	=	EXIST. FIRE HYDRANT
WM	=	EXIST. WATER METER/VALVE
	=	EXIST. SIGN
	=	EXIST. MONITOR WELL
PKF	=	EXIST. IRON PIN & OR PK (SET/FOUND)
GM	=	EXIST. GAS METER
	=	EXIST. GAS VALVE
	=	EXIST. STORM INLET
	=	EXIST. STORM/SAN./TELE. MANHOLE
EM	=	EXIST. ELECTRIC METER
	=	EXIST. POWER POLE/POWER POLE w/ LIGHT
GA	=	EXIST. GUY ANCHOR
T.Ped.	=	EXIST. TELEPHONE PEDESTAL
AC	=	HVAC UNIT
CO	=	CLEANOUT
MB	=	MAILBOX
	=	LIGHT POLE
BOL	=	EXIST. BOLLARD
	=	EXIST. SANITARY SEWER LINE
	=	EXIST. STORM SEWER LINE
892	=	EXIST. CONTOURS
	=	CONCRETE END SECTION (C.E.S.)
GP	=	GATE POST
	=	TRANSFORMER
	=	RIGHT-OF-WAY LINE
	=	PROPOSED SANITARY SEWER LINE
	=	PROPOSED STORM SEWER LINE
STM	=	PROPOSED HDPE ROOF DRAIN
	=	PROPOSED PIPE BOLLARD
	=	PROPOSED MANHOLE (MH)
892	=	PROPOSED CONTOURS
894.50	=	PROPOSED ELEVATION
	=	DRAINAGE FLOW ARROW
	=	EXISTING TREE LINE
	=	PROPOSED DIRECTIONAL SIGN
F.F.E.	=	FINISH FLOOR ELEVATION
TC	=	TOP OF (MANHOLE / INLET) CASTING
INV	=	INVERT ELEVATION
RCP	=	REINFORCED CONCRETE PIPE
CMP	=	CORRUGATED METAL PIPE
PVC	=	POLYVINYL CHLORIDE PIPE
HDPE	=	HIGH DENSITY POLYETHYLENE
	=	FLOW LINE
STR.	=	STRUCTURE
M.E.G. OR M.E.	=	MATCH EXISTING GRADE
TOW OR TW	=	TOP OF WALL
SSD	=	SUB-SURFACE DRAINAGE
TOC	=	TOP OF CURB
GUT	=	GUTTER
W	=	WATER LINE
G	=	GAS LINE
OHU	=	OVERHEAD UTILITY LINE
T	=	TELEPHONE LINE
E	=	ELECTRIC LINE
TBM	=	TEMPORARY BENCHMARK
XX	=	PARKING COUNT

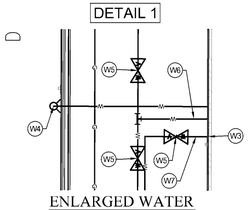
GENERAL UTILITY NOTES

1. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITIES AND VERIFY ANY AND ALL FEES ASSOCIATED WITH THE INSTALLATION OF ALL UTILITIES.
2. PROVIDE THRUST BLOCKS FOR ALL WATER LINE BENDS AND TEES, INCLUDING TAP CONNECTION.
3. CONTRACTOR SHALL COORDINATE WITH WATER COMPANY FOR DOMESTIC AND FIRE SERVICE. CONNECT TO BUILDING DOMESTIC AND FIRE LINE. COORDINATE WITH PLUMBING DRAWINGS.
4. COORDINATE LOCATION OF ELECTRICAL AND TELEPHONE LINES WITH LOCAL UTILITIES.
5. COORDINATE LOCATION AND SIZE OF GAS SERVICE CONNECTION AND INSTALLATION OF SERVICE LINE AND METER WITH GAS COMPANY.
6. COORDINATE LOCATIONS AND CONNECTIONS OF BUILDING STORM LINES WITH MECHANICAL DRAWINGS.
7. VERIFY EXISTING INVERT AND LOCATION OF SANITARY SEWER. ADJUST INVERTS AS REQUIRED. DOCUMENT ANY CHANGES.
8. MAINTAIN 10' HORIZONTAL AND 18" VERTICAL CLEARANCE BETWEEN STORM / SANITARY SEWER SYSTEMS AND DOMESTIC/FIRE LINE SERVICE.
9. FOLLOW ALL LOCAL AND STATE CODES IN REFERENCE TO DOMESTIC/FIRE LINE INSTALLATION AND STORM SEWER / SANITARY SEWER INSTALLATION.
10. COORDINATE LOCATION OF REQUIRED CONDUITS FOR LIGHT POLES, TELEPHONE SERVICE AND IRRIGATION SYSTEM (AS APPLICABLE).
11. COORDINATE UTILITY CONDUITS WITH SERVICE PROVIDERS.
12. SANITARY SEWER LATERAL, WATER SERVICE, & ELECTRICAL/TELEPHONE CONDUITS SHALL BE GRANULAR BACKFILL FOR ENTIRE RUN.
13. RUN WATER LINE A MINIMUM OF 54" DEEP. PROVIDE MINIMUM OF 10' HORIZONTAL & 2' VERTICAL CLEARANCE BETWEEN WATER & SANITARY LINE. SANITARY SEWER LINE IN PROXIMITY OF WATER LINE SHALL BE C900 WATER MAIN GRADE PVC.

DEPARTMENT OF PUBLIC WORKS
70 EAST MONROE STREET
FRANKLIN, IN 46131
(317) 736-3631

CITY OF FRANKLIN STANDARD SPECIFICATIONS LATEST EDITION TO BE USED WITH THESE PLANS.

DETAIL 1



ENLARGED WATER CONNECTION PLAN
SCALE: 1" = 20'

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

Know what's below. Call before you dig.
Within Indiana Call 811 or 800-382-5544
24 Hours a Day, 7 Days a Week.
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14-0460
DWG NAME:	w14046(0-C800 utl.dwg
DESIGNED BY:	RLW/BAM
DRAWN BY:	RLW/BAM
CHECKED BY:	JKS
DATE:	02.12.2015

REVISIONS AND ISSUES	BY	DATE
SUBMITTED FOR INITIAL REVIEW	B.I.S.	02.12.2015

JAMES K. SHINNEMAN
REGISTERED NO. 10200392
STATE OF INDIANA
A PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

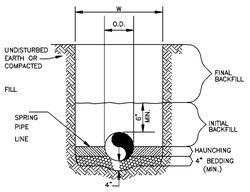
UTILITY PLAN
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C8.01

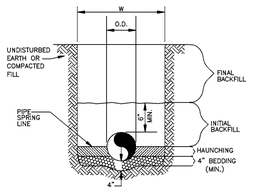
PROJECT NO.
W14-0460

PDF compression, OCR, web optimization using a watermarked evaluation copy of DVISION PDF Compressor

PIPE DIA.	W
≤12"	O.D. OF PIPE + (12" TO 18")
>12"	≥ O.D. OF PIPE + 18"



WATER LINE
(NO SCALE)



SANITARY SEWER
(NO SCALE)

GENERAL NOTES

1. BEDDING SHALL BE CLASS I–A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I–B COMPACTED TO 85% STANDARD PROCTOR.

2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I–A OR CLASS I–B OR CLASS II COMPACTED TO 85% PROCTOR.

3. INITIAL BACKFILL SHALL BE CLASS I–A WORKED BY HAND, OR CLASS I–B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.

4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.

5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.

6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV–A COMPACTED TO 95% STANDARD PROCTOR.

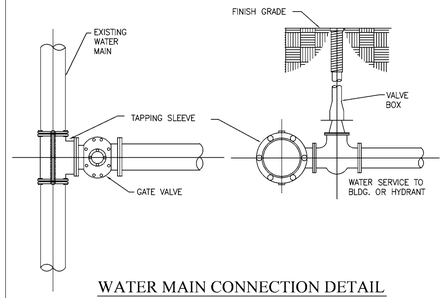
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321–89.

8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV–A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.

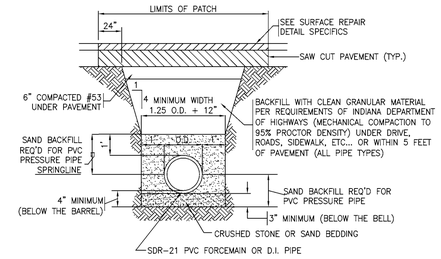
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".

10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

UTILITY TRENCH AND BEDDING
(NO SCALE)

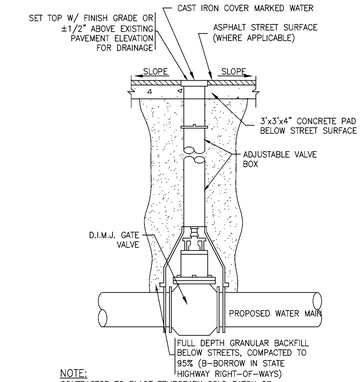


WATER MAIN CONNECTION DETAIL
(NO SCALE)



NOTE:
1. BITUMINOUS PAVEMENT TACK COAT SHALL BE PLACED BETWEEN THE SUBSURFACE AND ALONG THE SAW CUTS.
2. TRENCH WIDTHS AND BACKFILL REQUIREMENTS SHALL BE IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.

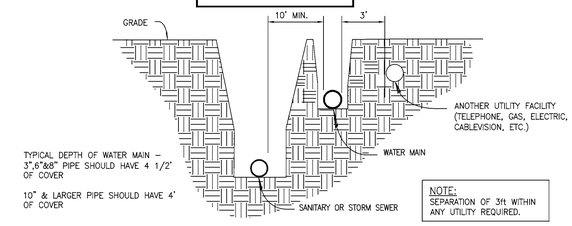
TYPICAL WATERMAIN TRENCH DETAIL
(NO SCALE)



NOTE:
CONTRACTOR TO PLACE TEMPORARY COLD PATCH OR CONCRETE RAMP AROUND VALVE BOXES IF NOT ASPHALTED PRIOR TO SEASONAL ASPHALT SHUT–DOWN

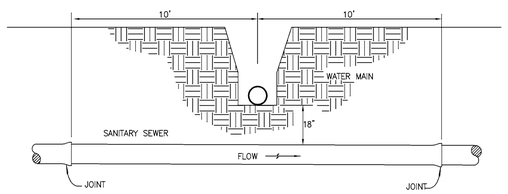
GATE VALVE AND BOX DETAIL
(NO SCALE)

WATER MAIN SHALL NOT BE LOCATED IN THE SAME TRENCH AS SANITARY SEWERS.



NOTE:
SEPARATION OF 3ft WITHIN ANY UTILITY REQUIRED.

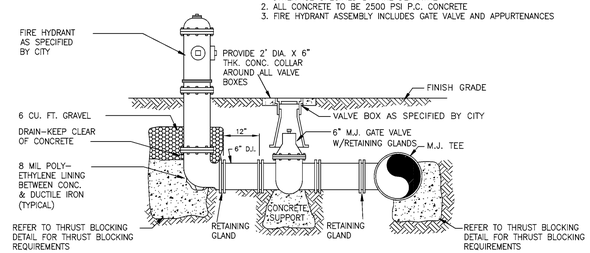
WATER MAIN LYING PARALLEL TO SEWER



WATER MAIN CROSSING SEWER

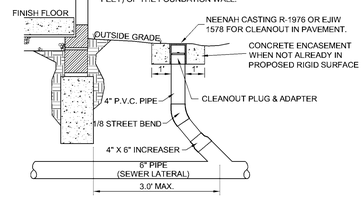
WATER & SEWER DETAIL
(NO SCALE)

NOTE:
1. ALL HYDRANTS TO BE SET PLUMB W/ NOZZLE FACING STREET UNLESS OTHERWISE SPECIFIED BY FIRE DEPARTMENT
2. ALL CONCRETE TO BE 2500 PSI P.C. CONCRETE
3. FIRE HYDRANT ASSEMBLY INCLUDES GATE VALVE AND APPURTENANCES



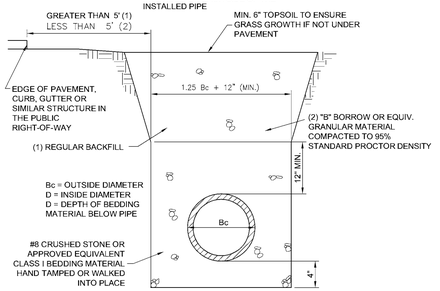
FIRE HYDRANT ASSEMBLY
(NO SCALE)

NOTE:
LATERAL CONNECTION TO CLEANOUT STRUCTURE TO BE WITHIN 3.0' (THREE FEET) OF THE FOUNDATION WALL.

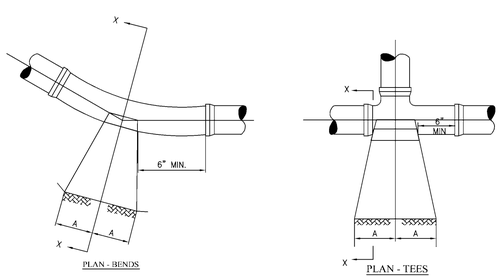


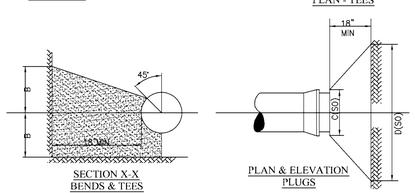
TYPICAL CLEANOUT SECTION
TYPE I (NO SCALE)

NOTE:
ALL BEDDING & INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS A MIN. 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE



TYPICAL BEDDING SECTION - PVC & HDPE
(NO SCALE)





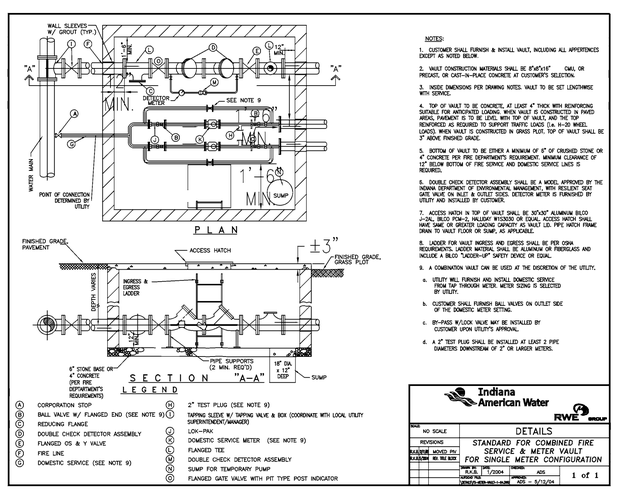
SECTION X-X BENDS & TEES

PLAN & ELEVATION PLUGS

TYPE	SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
		A	B	A	B	A	B	A	B	C	D
TYPE I 4000 PSF SOIL	6"	6"	10"	6"	8"	3"	8"	8"	8"	10"	15"
	8"	12"	12"	8"	10"	5"	9"	9"	12"	12"	20"
TYPE II 2000 PSF SOIL	6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	20"
	8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"

NOTE:
BASED ON 100 PSI STATIC PRESSURE PLUS A W W A WATER HAMMER CONCRETE TO BE CAST AGAINST UNDISTURBED BEARING SURFACE

THRUST BLOCKS FOR WATER MAINS
(NO SCALE)



NOTES:
1. CUSTOMER SHALL FURNISH & INSTALL VAULT, INCLUDING ALL APPURTENCES EXCEPT AS NOTED BELOW.
2. VAULT CONSTRUCTION MATERIALS SHALL BE 8"x8"x16" CMU, OR PRECAST, OR CAST–IN–PLACE CONCRETE AT CUSTOMER'S SELECTION.
3. INSIDE DIMENSIONS PER DRAWING NOTES. VAULT TO BE SET LENGTHWISE WITH SERVICE.
4. TOP OF VAULT TO BE CONCRETE, AT LEAST 4" THICK WITH REINFORCING SUITABLE FOR ANTICIPATED LOADING. WHEN VAULT IS CONSTRUCTED IN PAVED AREAS, PAVEMENT TO TO BE LEVEL WITH TOP OF VAULT, AND THE TOP REINFORCED AS REQUIRED TO SUPPORT TRAFFIC LOADS (i.e. H–20 WHEEL LOADS). WHEN VAULT IS CONSTRUCTED IN GRASS PLOT, TOP OF VAULT SHALL BE 3" ABOVE FINISHED GRADE.
5. BOTTOM OF VAULT TO BE EITHER A MINIMUM OF 6" OF CRUSHED STONE OR 4" CONCRETE PER FIRE DEPARTMENT'S REQUIREMENT. MINIMUM CLEARANCE OF 12" BELOW BOTTOM OF FIRE SERVICE AND DOMESTIC SERVICE LINES IS REQUIRED.
6. DOUBLE CHECK DETECTOR ASSEMBLY SHALL BE A MODEL APPROVED BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, WITH RESILIENT SEAT GATE VALVE ON INLET & OUTLET SIDES. DETECTOR METER IS FURNISHED BY UTILITY AND INSTALLED BY CUSTOMER.
7. ACCESS HATCH IN TOP OF VAULT SHALL BE 30"x30" ALUMINUM BILCO J–20AL BILCO PCM–2, HALLIDAY W130030 OR EQUAL. ACCESS HATCH SHALL HAVE SAME OR GREATER LOADING CAPACITY AS VAULT LID. PIPE HATCH FRAME DRAIN TO VAULT FLOOR OR SUMP, AS APPLICABLE.
8. LADDER FOR VAULT INGRESS AND EGRESS SHALL BE PER OSHA REQUIREMENTS. LADDER MATERIAL SHALL BE ALUMINUM OR FIBERGLASS AND INCLUDE A BILCO "LADDER–UP" SAFETY DEVICE OR EQUAL.
9. A COMBINATION VAULT CAN BE USED AT THE DISCRETION OF THE UTILITY.
a. UTILITY WILL FURNISH AND INSTALL DOMESTIC SERVICE FROM TAP THROUGH METER. METER SIZING IS SELECTED BY UTILITY.
b. CUSTOMER SHALL FURNISH BALL VALVES ON OUTLET SIDE OF THE DOMESTIC METER SETTING.
c. BY–PASS W/LOCK VALVE MAY BE INSTALLED BY CUSTOMER UPON UTILITY'S APPROVAL.
d. A 2" TEST PLUG SHALL BE INSTALLED AT LEAST 2 PIPE DIAMETERS DOWNSTREAM OF 2" OR LARGER METERS.

LEGEND

A	CORPORATION STOP	H	2" TEST PLUG (SEE NOTE 9)
B	BALL VALVE W/ FLANGED END (SEE NOTE 9)	I	TAPPING SLEEVE W/ TAPPING VALVE & BOX (COORDINATE WITH LOCAL UTILITY SUPERINTENDENT/MANAGER)
C	REDUCING FLANGE	J	LOK–PAK
D	DOUBLE CHECK DETECTOR ASSEMBLY	K	DOMESTIC SERVICE METER (SEE NOTE 9)
E	FLANGED OS & Y VALVE	L	FLANGED TEE
F	FIRE LINE	M	DOUBLE CHECK DETECTOR ASSEMBLY
G	DOMESTIC SERVICE (SEE NOTE 9)	N	SUMP FOR TEMPORARY PUMP
		O	FLANGED GATE VALVE WITH PIT TYPE POST INDICATOR

Indiana American Water — RWE GROUP

SCALE: NO SCALE	DETAILS
REVISIONS	STANDARD FOR COMBINED FIRE SERVICE & METER VAULT FOR SINGLE METER CONFIGURATION
MARK/DATE/BY: MOVED ITM / MARK/DATE/BY: RB 10/8/04	DRAWN BY: LOCAL / DATE: 10/8/2004 / DESIGN: ADS / DESIGNER–KEEN–REC1–0.DWG / ADS – 5/13/04
	1 of 1

** COORDINATE DETAILS OF THE VAULT WITH IAW
** PIV AND FDC TO BE LOCATED ON THE BUILDING FACADE
*** MODIFIED TO SHOW SEWERED AND UNSEWERED METER

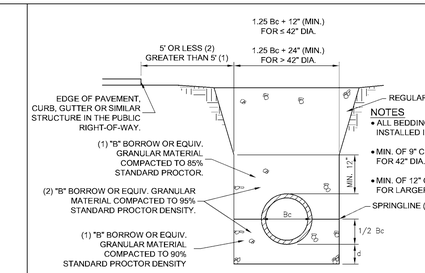
METER VAULT DETAIL
NOT TO SCALE

INDIANA AMERICAN WATER ASBUILT REQUIREMENTS:

1) CONTRACTOR IS AWARE OF THE REQUIREMENTS SET FORTH BY THE LOCAL REPRESENTATIVE OF IAW AND THE MEANS OF THE INDIANA AMERICAN WATER COMPANY, INC. DEVELOPER PACKET FOR WATER MAIN EXTENSIONS FOR ALL ITEMS TO BE FULFILLED PRIOR TO GETTING WATER SERVICE TURNED ON FOR THE STORE.

CONTACT PERSON:
TROY BRYANT
425 WEST MAIN STREET
MOORESVILLE, IN 46158
317.831.3385 EXT. 2

2) CONTRACTOR TO HAVE THE WATER MAIN EXTENSION AND ALL APPURTENANCES ASSOCIATED WITH SERVICE TO BE COORDINATED WITH WEIHE ENGINEERS,INC. FOR SURVEYING DURING INSTALLATION TO PREPARE ASBUILT DRAWING AND CERTIFICATION TO IAW PRIOR TO GETTING WATER SERVICE TURNED ON FOR THE STORE.

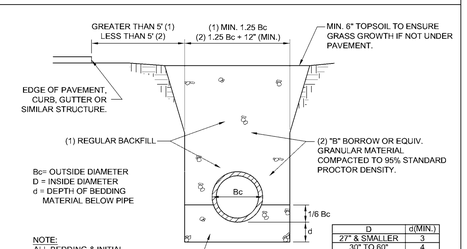


NOTES
• ALL BEDDING & INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.
• MIN. OF 9" CLEARANCE EACH SIDE OF PIPE FOR 42" DIA. AND LESS.
• MIN. OF 12" CLEARANCE EACH SIDE OF PIPE FOR LARGER THAN 42" DIA.

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

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

TYP. BEDDING SECTION - CMP
(NO SCALE)

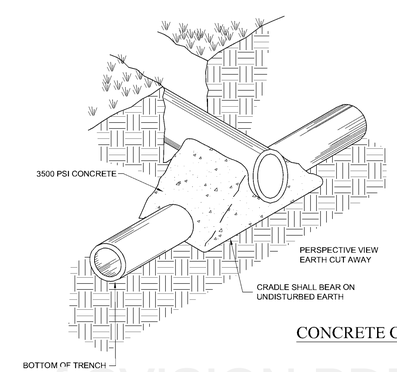


D	d(MIN.)
27" & SMALLER	3
30" TO 60"	4
66" & LARGER	6

NOTE:
ALL BEDDING & INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS. A MIN. OF 9" CLEARANCE SHALL BE PROVIDED ON EACH SIDE OF THE INSTALLED PIPE.

TYPICAL BEDDING SECTION - RCP PIPE
(NO SCALE)

NOTE: TO BE USED WHEN CLEAR DISTANCE (FROM EXTERIOR PIPE DIAMETER TO EXTERIOR PIPE DIAMETER) BETWEEN SANITARY SEWER PIPING (MAINS, LATERALS, FORCE MAINS, ETC.) AND ALL OTHER PIPES IS 18" OR LESS, PER INSPECTOR'S DIRECTION, OR WHERE NOTED ON THE DRAWINGS. A MINIMUM CLEAR DISTANCE OF 3" MUST BE PROVIDED TO MAINTAIN STRUCTURAL INTEGRITY OF THE CONCRETE.



CONCRETE CRADLE DETAIL
(NO SCALE)

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

		BY
PROJECT NO.	W14-0460	
DWG NAME:	w14046c-C800 utl det.dwg	
DESIGNED BY:	RJ/RFA/AH	
DRAWN BY:	RJ/RFA/AH	
CHECKED BY:	JKS	
DATE:	02.12.2015	

REVISIONS AND ISSUES SUBMITTED FOR INITIAL REVIEW	DATE	BY
	02.12.2015	B.B.

JAMES K. SHINNEMAN REGISTERED NO. 10200392 STATE OF INDIANA PROFESSIONAL ENGINEER

JAMES K. SHINNEMAN P.E. 10200392

PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

UTILITY DETAILS
Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
C8.02

PROJECT NO.
W14-0460

LOCK ON: H:\2014\W14046D\Engineering\design\construct\w14046c-C800 util det.dwg
LAYOUT: C8.02
LAST PLOT: February 12, 2015 – 7:35am
LAYOUT BY: schoettle

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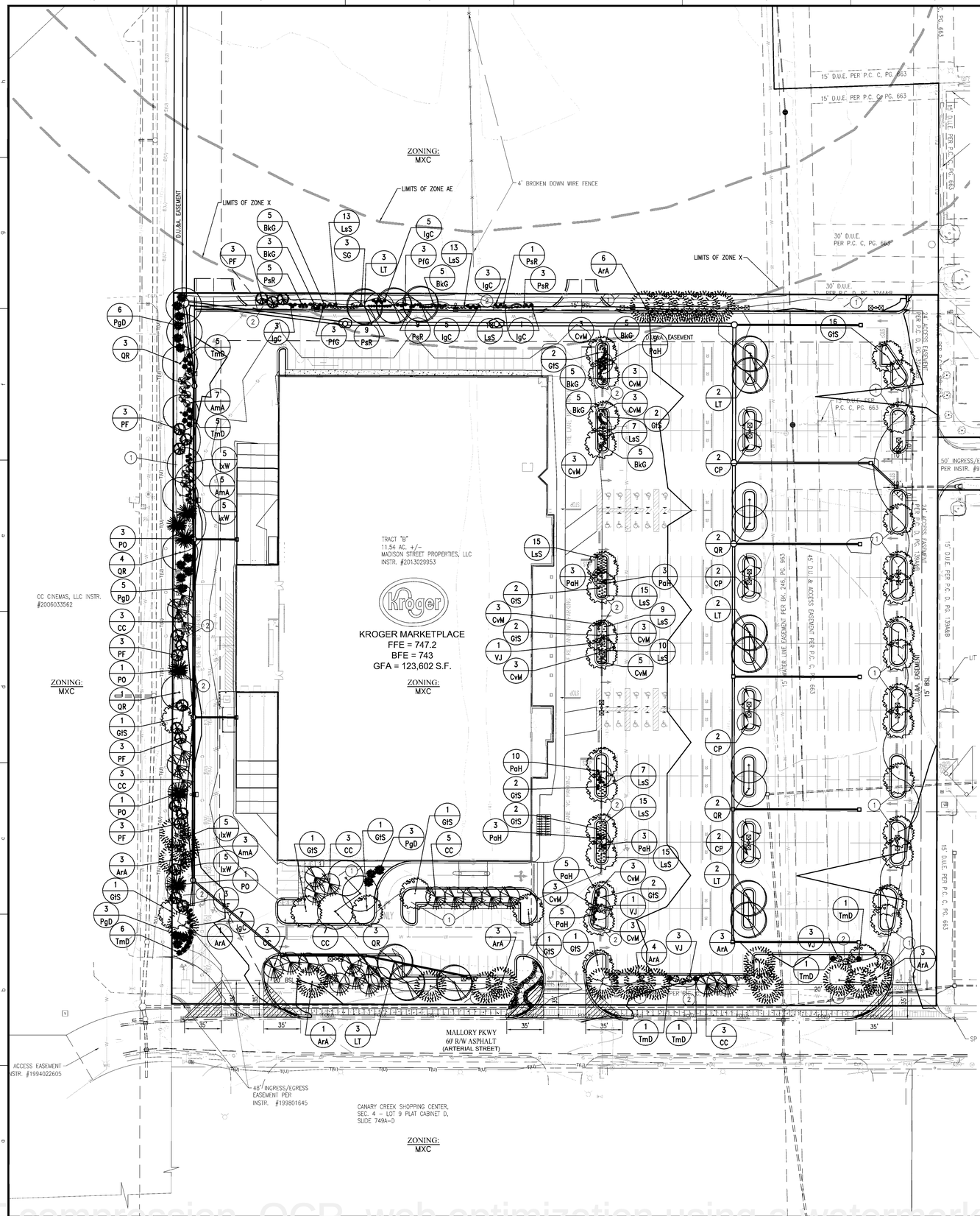


LANDSCAPE PLAN NOTES

1. SOD (ALTERNATE)- ALL SOD SHALL BE CERTIFIED GRADE CULTIVATED GRASS SOD; OF "ADVENTURE BLEND" TURF TYPE TALL FESCUE (BY GENERAL CONTRACTOR)
2. MULCH
3. REPLACE ALL DAMAGED AND REMOVED STREET TREES ASSOCIATED WITH THE STORM SEWER OUTFALL SCOPE OF WORK. THESE 3 TREES SHOWN ARE EXCLUDED FROM THE PLANTING SCHEDULE IN CASE THEY CAN BE PRESERVED IN PLACE.

LEGEND

SITE TRIANGLE

- 35' DISTANCE FOR ARTERIAL STREETS
- 10' DISTANCE FOR PRIVATE ENTRANCES

GENERAL NOTES

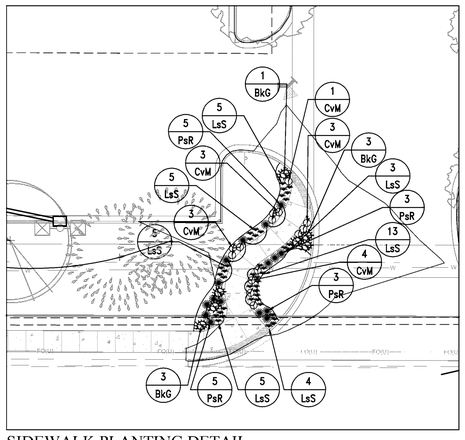
1. IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE. IF IN QUESTION, CONTACT THE LANDSCAPE DESIGNER.
2. ALL SHRUBS PLANTING AREAS TO BE COVERED WITH 4" THICK LAYER OF SHREDDED HARDWOOD BARK MULCH. ALL GROUND COVER BEDS SHALL BE COVERED WITH 1" SHREDDED HARDWOOD BARK MULCH. BARK MULCH SHALL BE APPROVED BY LANDSCAPE DESIGNER AND SHALL BE UNIFORM IN TEXTURE AND COLOR AND SHALL BE OBTAINED FROM SAWMILL OR LUMBERING OPERATIONS. NO UTILITY MULCH OR PROCESSED TREE TRIMMINGS WILL BE ALLOWED.
3. AN APPROVED PRE-EMERGENT HERBICIDE SHALL BE APPLIED IN ALL PLANTING AND GROUND COVER BEDS AT RATES SPECIFIED BY MANUFACTURER FOR EACH VARIETY OF PLANT.
4. FINAL PLACEMENT OF PLANT MATERIALS, ETC. SHALL BE APPROVED BY LANDSCAPE DESIGNER BEFORE PLANTING OPERATIONS ARE TO PROCEED. ALL TREE LOCATIONS SHALL BE MARKED WITH A WOODED STAKE INDICATING VARIETY AND SIZE OF TREE. ALL GROUND COVER AND MULCH BED LINES SHALL BE MARKED BY A HIGHLY VISIBLE PAINT LINE WITH OCCASIONAL WOOD STAKES FOR REFERENCE. ALL STAKES SHALL BE REMOVED FOLLOWING PLANTINGS OPERATIONS. LANDSCAPE DESIGNER RESERVES THE RIGHT TO ADJUST PLANT LOCATIONS ON SITE.
5. NO SUBSTITUTIONS OF PLANT MATERIAL WILL BE ALLOWED. IF PLANTS ARE SHOWN TO BE UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY LANDSCAPE DESIGNER PRIOR TO BID DATE IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT IDENTIFICATION AT NURSERY OR CONTRACTORS OPERATION PRIOR TO MOVING TO JOB SITE. PLANTS MAY ALSO BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE.
6. ALL PLANTS ARE TO MEET OR EXCEED AMERICAN STANDARDS FOR NURSERY STOCK, LATEST EDITION, AS SET FORTH BY AMERICAN ASSOCIATION OF NURSERYMEN.
7. PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE PLACED WHERE THEY WILL NOT CONFLICT WITH CONSTRUCTION OPERATIONS AND AS DIRECTED BY OWNER.
8. ALL NEW LANDSCAPE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY LANDSCAPE DESIGNER. AT THE END OF THIS PERIOD, PLANT MATERIAL TERMED DEAD OR UNSATISFACTORY BY LANDSCAPE DESIGNER SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR.
9. THE LANDSCAPE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES THAT MAY BE REQUIRED FOR HIS PORTION OF WORK.
10. PEAT MOSS TO BE USED ON PROJECT SHALL BE A DOMESTIC OR IMPORTED MATERIAL, CHOCOLATE BROWN IN COLOR AND COMPOSED OF PARTIALLY DECOMPOSED VEGETABLE MATERIAL. PEAT MOSS TO ALSO BE MILDLY ACIDIC IN CHARACTER AND SHALL MEET APPROVAL OF LANDSCAPE DESIGNER.
11. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE DESIGNER IN WRITING PRIOR TO BID DATE OF ANY PLANTS THAT HE FEELS MAY NOT SURVIVE IN LOCATIONS NOTED.
12. ALL LANDSCAPING PLANTINGS TO BE MAINTAINED FOR 1 YEAR FOLLOWING TURNOVER. MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATION, MULCHING, MOWING AND ALL OTHER NECESSARY OPERATIONS REQUIRED FOR PROPER ESTABLISHMENT OF PLANTINGS. NOTE: AT END OF MAINTENANCE PERIOD, CONTRACTOR TO REMOVE GUYING AND STAKING FROM TREES.
13. CONTRACTOR TO SUBMIT UNIT PRICES ON EVERY TYPE OF WORK AS REQUESTED BY LANDSCAPE DESIGNER.
14. BACKFILL FOR TREE AND SHRUB PLANTING SHALL BE 75% APPROVED TOPSOIL AND 25% APPROVED PEAT MOSS. TOP LAYER OF BACKFILL SHALL BE 100% EXISTING TOPSOIL. A 5-10-5 ANALYSIS SLOW RELEASE FERTILIZER SHALL BE INCORPORATED INTO BACKFILL AT APPROVED RATES.
15. PROVIDE MINIMUM 4" PLANTING SOIL IN ALL GROUND COVER AND FLOWER AREAS WITH MIXTURE COMPRISING OF ONE PART COMMERCIAL GRADE "POTTING SOIL," 5 PARTS TOPSOIL AND 4 PARTS PEAT MOSS. A FULL 4" LAYER OF APPROVED SHREDDED FIBROUS PEAT MOSS MAY BE USED IN LIEU OF PLANTING MIX.
16. PLANTS SHALL BEAR A TAG SHOWING GENUS, SPECIES AND VARIETY.
17. PLANTS SHALL BE CERTIFIED BY THE STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES AND FREE FROM DISEASE OR HAZARDOUS INSECTS.
18. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PERTAINING TO THEIR PHASE OF WORK. UTILITIES ARE SHOWN TO BE APPROXIMATE. CALL UTILITY LOCATE PRIOR TO ANY PLACEMENT OF PLANT MATERIAL OR OTHER LANDSCAPE MATERIAL.

PLANT SCHEDULE

PLAN KEY	BOTANICAL NAME	COMMON NAME (AVERAGE MATURE HT.)	SIZE	QUANTITY	ROOT CONDITION B & B	BARE ROOT	CONTAIN	ON CENTER SPACING	SPECIAL INSTRUCTIONS
	CANOPY DECIDUOUS TREES								
ArA	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE (40')	2 1/2"	24	X			SEE PLAN	X
CC	CARPINUS CAROLINIANA	AMERICAN HORNBEAM (25')	2 1/2"	27	X			SEE PLAN	X
GIS	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE'	SKYLINE HONEYLOCUST (40')	2 1/2"	37	X			SEE PLAN	X
LT	LIRIODENDRON TULIPIFERA	TULIP TREE (45')	2 1/2"	12	X			SEE PLAN	X
QR	QUERCUS RUBRA	RED OAK (45')	2 1/2"	15	X			SEE PLAN	X
	ORNAMENTAL TREES								
CP	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN (30')	2 1/2"	8			X	SEE PLAN	MIN. 24"
	EVERGREEN TREES								
PgD	PICEA GLAUCA 'DENSATA'	BLACK HILLS SPRUCE (12')	5'	17			X	SEE PLAN	MIN. 24"
PO	PICEA OMORIKA	SERBIAN SPRUCE (25')	5'	6			X	SEE PLAN	MIN. 24"
PF	PINUS FLEXILIS	LIMBER PINE (15')	5'	18			X	SEE PLAN	MIN. 24"
	DECIDUOUS SHRUBS								
AmA	ARONIA MELANOCARPA 'AUTUMN MAGIC'	AUTUMN MAGIC BLACK CHOKEBERRY (5')	#5	15			X	SEE PLAN	MIN. 24"
PfG	POTENTILLA FRUTICOSA 'GOLDFINGER'	GOLDFINGER POTENTILLA (3')	#2	6			X	SEE PLAN	MIN 18"
SG	SPIRAEA X 'GOLD MOUND'	GOLD MOUND SPIREA (3')	#3	3			X	SEE PLAN	MIN 18"
VJ	VIBURNUM X JUDDII	JUDD'S VIBURNUM (6')	#5	8			X	SEE PLAN	MIN 24"
	EVERGREEN SHRUBS								
BkG	BUXUS X KOREANA 'GREEN GEM'	GREEN GEM BOXWOOD (3.5')	18"	40	X			SEE PLAN	MIN 18"
IgC	ILEX GLABRA 'CHAMZIN'	NORDIC HOLLY (3')	18"	24	X			SEE PLAN	MIN 18"
IxW	ILEX X 'WILLEMER'	EMERALD MAGIC HOLLY (3.5')	#3	20			X	SEE PLAN	MIN 18"
TmD	TAXUS X MEDIA 'DENSIFORMIS'	DENSE YEW (5')	18"	20	X			SEE PLAN	MIN 18"
	ORNAMENTAL GRASSES								
PaH	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS (2.5')	#1	41			X	2.5'	X
PsR	PENNISETUM SETACEUM 'RUBRUM'	PURPLE FOUNTAIN GRASS (2.5')	#1	43			X	2.5'	X
	PERENNIALS								
CvM	COREOPSIS VERTICILLATA 'MOONBEAM'	MOONBEAM COREOPSIS	#1	55			X	1.5'	X
LsS	LIRIOPE SPICATA 'SILVER DRAGON'	SILVER DRAGON LILYTUFT	#1	197			X	1'	X

LANDSCAPE RECOMMENDATIONS

REQUIREMENT:	REQUIRED:	PROVIDED:
SECTION 3.3: STANDARDS (MXC) - MAXIMUM LOT COVERAGE (ALL HARD SURFACES)	75% MAX.	88%
SECTION 5.4: GATEWAY (GW-OL) C.2.i. SIDEWALKS & PEDESTRIAN WALKWAYS - WALKWAYS SHALL BE BORDERED ON EACH SIDE BY A PLANTING AREA THAT IS A MINIMUM OF 2' IN WIDTH. - THE PLANTING AREAS ON EACH SIDE OF THE WALKS SHALL EACH INCLUDE FLOWERS, SHRUBS, AND TREES A MIMIMUM OF 50% OF THEIR LENGTH.	- 44 LINEAR FT. x 50% = 22 L.F. FOR PLANTING	- 44 L.F. ON EACH SIDE OF THE SIDEWALK
SECTION 5.4: GATEWAY (GW-OL) C.2.iv. SIDEWALKS & PEDESTRIAN WALKWAYS - WALKWAYS ALONG THE FACADES OF THE BUILDING SHALL BE CONCRETE, 5' WIDE AND SEPARATED FROM THE BUILDING BY A LANDSCAPE AREA THAT I S A MINIMUM OF 5' IN WIDTH. - THE LANDSCAPE AREA SHALL INCLUDE BENCHES AND SEATING AREAS, AND BE PLANTED WITH FLOWERS, TREES, AND SHRUBS FOR A MINIMUM OF 50% OF ITS LENGTH.	- 715 LINEAR FT. x 50% = 357.5 L.F. FOR PLANTING	- 160 LF RELOCATED ACROSS NORTH DRIVE - 197.5 LF RELOCATED TO PARKING ISLANDS
SECTION 7.16: LANDSCAPING STANDARDS D. PROPERTY INTERIOR REQUIREMENTS - PROVIDE 1 BROADLEAF, DECIDUOUS TREE AND/OR EVERGREEN CONIFER FOR EVERY1,500 SQ. FT. OF REQUIRED YARD AREA.	(125,670 SF) - 84 TREES	- 84 TREES
SECTION 7.16: LANDSCAPING STANDARDS E. PARKING LOT PERIMETER REQUIREMENTS - A MINIMUM OF 1 TREE SHALL BE PROVIDED FOR EVERY 80 LINEAR FEET OF LANDSCAPED AREA. - A MINIMUM OF 1 SHRUB SHALL BE PROVIDED FOR EVERY 1 TREE REQUIRED.	**SOUTH (~546')** - 7 TREES - 7 SHRUBS	**SOUTH (~546')** - 7 TREES - 10 SHRUBS
SECTION 7.16: LANDSCAPING STANDARDS F. PARKING LOT INTERIOR REQUIREMENTS - LANDSCAPE ISLANDS WITH A SURFACE AREA EQUAL TO 5% OF THE AREA OF THE PAVED SURFACE SHALL BE PROVIDED IN ALL PARKING LOTS. - ALL LANDSCAPE ISLANDS MUST BE A MINIMUM OF 300 SQ. FT. IN AREA. - A MINIMUM OF 1 BROADLEAF/DECIDUOUS TREE SHALL BE PROVIDED FOR EVERY 300 SQ.FT. OF LANDSCAPED AREA REQ'D.	- 309,529 SF PAVED AREA x 5% = 15,476 SF ISLANDS - 52 TREES	- 16,886 SF ISLANDS - 52 TREES
SECTION 6.15: STREET TREE STANDARDS - 1 TREE PER 35 FEET OF FRONTAGE	**MALLORY PKWY (~726')** - 21 TREES	**MALLORY PKWY (~726')** - 21 TREES



SIDEWALK PLANTING DETAIL

SCALE: 1" = 20'

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

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

Within Indiana Call 811 or 800-382-5544

24 Hours a Day, 7 Days a Week.

PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net

317 846 - 6611
800 452 - 6408
317 843 - 0546 fax

ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS

Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W140460
DWG NAME:	w140460-L101.dwg
DESIGNED BY:	R.LWF&AM
DRAWN BY:	R.LWF&AM
CHECKED BY:	AKS
DATE:	02.12.2015

REVISIONS AND ISSUES:	DATE:	BY:
SUBMITTED FOR INITIAL REVIEW	02.12.2015	B.JS

ROBERT A. MEZYKOWSKI REGISTERED LANDSCAPE ARCHITECT No. 80050080 STATE OF INDIANA

ROBERT A. MEZYKOWSKI L.A.80050080

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

LANDSCAPE PLAN

Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.

L1.01

PROJECT NO.

W14.0460

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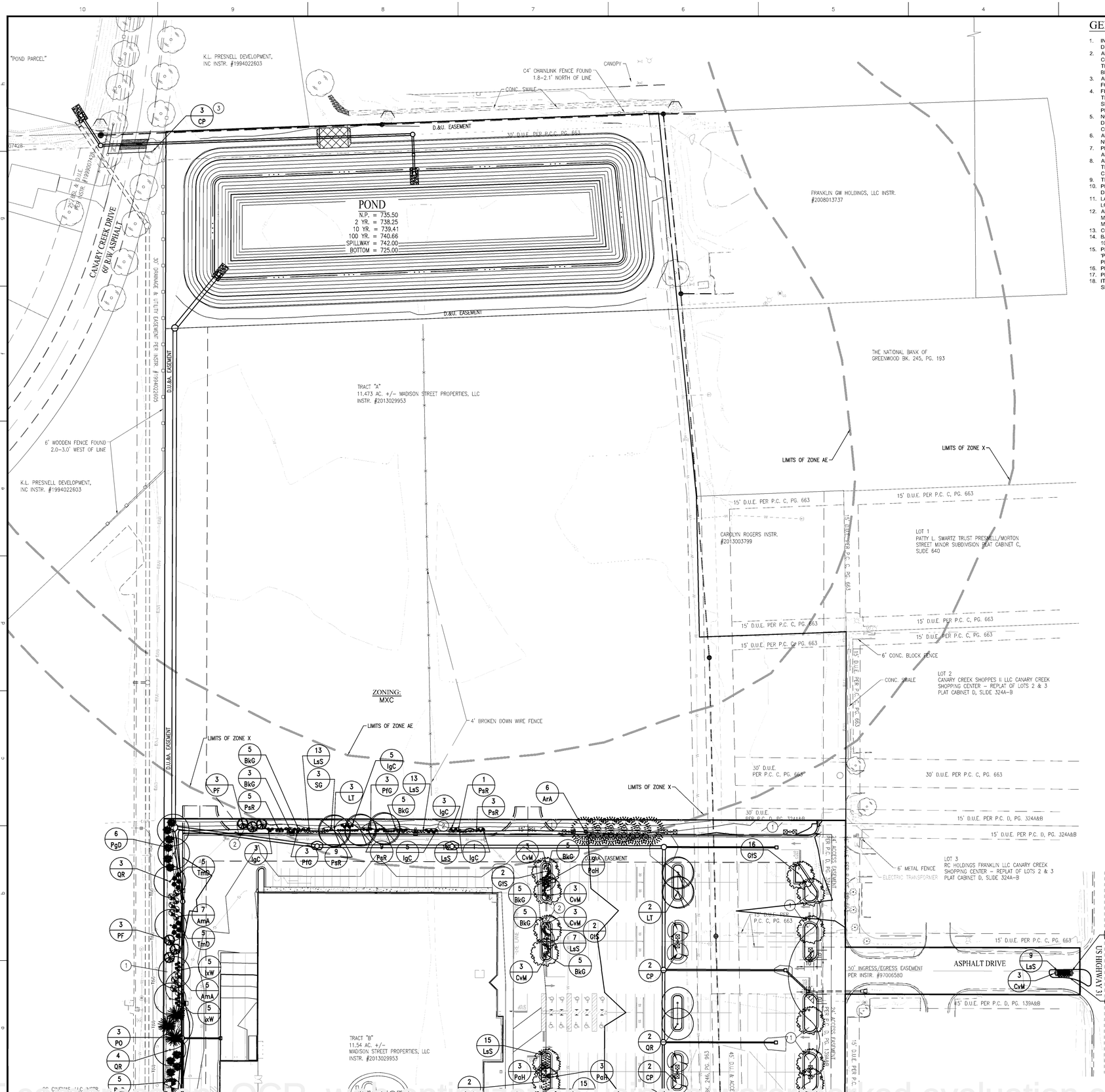

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15. PROVIDE MINIMUM 4" PLANTING SOIL IN ALL GROUND COVER AND FLOWER AREAS WITH MIXTURE COMPRISING OF ONE PART COMMERCIAL GRADE "POTTING SOIL," 5 PARTS TOPSOIL AND 4 PARTS PEAT MOSS. A FULL 4" LAYER OF APPROVED SHREDDED FIBROUS PEAT MOSS MAY BE USED IN LIEU OF PLANTING MIX.
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PLANT SCHEDULE

PLAN KEY	BOTANICAL NAME	COMMON NAME (AVERAGE MATURE HT.)	SIZE	QUANTITY	ROOT CONDITION B & B	BAREROOT	ON CENTER SPACING	SPECIAL INSTRUCTIONS
	CANOPY DECIDUOUS TREES							
ArA	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE (40')	2 1/2"	24	X		SEE PLAN	X
CC	CARPINUS CAROLINIANA	AMERICAN HORNBEAM (25')	2 1/2"	27	X		SEE PLAN	X
GtS	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE'	SKYLINE HONEYLOCUST (40')	2 1/2"	37	X		SEE PLAN	X
LT	LIRIODENDRON TULIPIFERA	TULIP TREE (45')	2 1/2"	12	X		SEE PLAN	X
QR	QUERCUS RUBRA	RED OAK (45')	2 1/2"	15	X		SEE PLAN	X
	ORNAMENTAL TREES							
CP	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN (30')	2 1/2"	8		X	SEE PLAN	MIN. 24"
	EVERGREEN TREES							
PgD	PICEA GLAUCA 'DENSATA'	BLACK HILLS SPRUCE (12')	5'	17		X	SEE PLAN	MIN. 24"
PO	PICEA OMORIKA	SERBIAN SPRUCE (25')	5'	6		X	SEE PLAN	MIN. 24"
PF	PINUS FLEXILIS	LIMBER PINE (15')	5'	18		X	SEE PLAN	MIN. 24"
	DECIDUOUS SHRUBS							
AmA	ARONIA MELANOCARPA 'AUTUMN MAGIC'	AUTUMN MAGIC BLACK CHOKEBERRY (5')	#5	15		X	SEE PLAN	MIN. 24"
PfG	POTENTILLA FRUTICOSA 'GOLDFINGER'	GOLDFINGER POTENTILLA (3')	#2	6		X	SEE PLAN	MIN 18"
SG	SPIRAEA X 'GOLD MOUND'	GOLD MOUND SPIREA (3')	#3	3		X	SEE PLAN	MIN 18"
VJ	VIBURNUM X JUDDII	JUDD'S VIBURNUM (6')	#5	8		X	SEE PLAN	MIN 24"
	EVERGREEN SHRUBS							
BkG	BUXUS X KOREANA 'GREEN GEM'	GREEN GEM BOXWOOD (3.5')	18"	40	X		SEE PLAN	MIN 18"
IgC	ILEX GLABRA 'CHAMZIN'	NORDIC HOLLY (3')	18"	24	X		SEE PLAN	MIN 18"
IxW	ILEX X WILLEMER'	EMERALD MAGIC HOLLY (3.5')	#3	20		X	SEE PLAN	MIN 18"
TmD	TAXUS X MEDIA 'DENSIFORMIS'	DENSE YEW (5')	18"	20	X		SEE PLAN	MIN 18"
	ORNAMENTAL GRASSES							
PaH	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS (2.5')	#1	41		X	2.5'	X
PsR	PENNISETUM SETACEUM 'RUBRUM'	PURPLE FOUNTAIN GRASS (2.5')	#1	43		X	2.5'	X
	PERENNIALS							
CvM	COREOPSIS VERTICILLATA 'MOONBEAM'	MOONBEAM COREOPSIS	#1	55		X	1.5'	X
LsS	LIRIOPE SPICATA 'SILVER DRAGON'	SILVER DRAGON LILYTUFT	#1	197		X	1'	X

LANDSCAPE PLAN NOTES

1. SOD (ALTERNATE)- ALL SOD SHALL BE CERTIFIED GRADE CULTIVATED GRASS SOD; OF "ADVENTURE BLEND" TURF TYPE TALL FESCUE (BY GENERAL CONTRACTOR)
2. MULCH
3. REPLACE ALL DAMAGED AND REMOVED STREET TREES ASSOCIATED WITH THE STORM SEWER OUTFALL SCOPE OF WORK. THESE 3 TREES SHOWN ARE EXCLUDED FROM THE PLANTING SCHEDULE IN CASE THEY CAN BE PRESERVED IN PLACE.

PLAN CERTIFICATE NOTE:

ORIGINAL ALTA, TOPOGRAPHY, UTILITIES, STORM SEWERS, AND ALL OTHER EXISTING CONDITIONS ITEMS WERE PREPARED BY BANNING ENGINEERING.

FINAL DRAWINGS FOR THE KROGER SITE WERE PREPARED BY WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN. FINAL CONSTRUCTION PLANS ARE THOSE PLANS CONTAINING A FINAL REVISION DATE AFTER 02/12/2015. WEIHE ENGINEERS, INC. AND JAMES K. SHINNEMAN ACCEPT RESPONSIBILITY ONLY FOR THE KROGER SITE IMPROVEMENTS RELATED TO THE ENGINEERING WORK SHOWN ON THESE PLANS.

SCALE: 1" = 50

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24 Hours a Day, 7 Days a Week.
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net
317 846 - 6611
800 452 - 6408
317 843 - 0546 fax
ALLAN H. WEIHE, P.E., L.S. - FOUNDER
WEIHE ENGINEERS
Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO:	W14-0460
DWG NAME:	w140460-L101.dwg
DESIGNED BY:	RJ/RFA/AH
DRAWN BY:	RJ/RFA/AH
CHECKED BY:	AKS
DATE:	02.12.2015

REVISIONS AND DATES SUBMITTED FOR INITIAL REVIEW	DATE	BY
	02.12.2015	B.S

ROBERT A. MEZYKOWSKI REGISTERED LANDSCAPE ARCHITECT No. LA80050080 STATE OF INDIANA

ROBERT A. MEZYKOWSKI LA.80050080

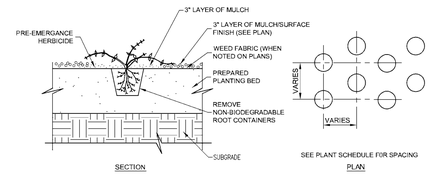
PREPARED FOR:
KROGER STORE J-979
KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

LANDSCAPE PLAN
Part of the NE/4 of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.
L1.02
PROJECT NO.
W14.0460

LOCA: ON, I:\2014\W140460\Engineering\Design\Xconsat\w140460-L101.dwg
LUPDT: 02/12/2015
LAYTIME: February 12, 2015 - 7:35am
LAYOUT: L1.02
PLOTTED BY: ashoff@

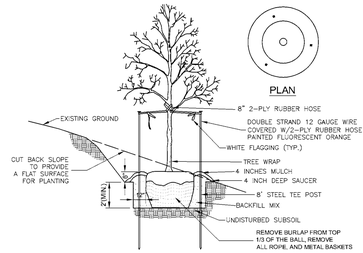
PDF compression, OCR, web optimization using a watermarked evaluation copy of CVISION PDFCompressor



PLANTING SOIL SHALL BE EQUAL PARTS SPHAGNUM PEAT MOSS, COMPOSTED MANURE, AND EXISTING SOIL. TAMPED FIRMLY.

GROUNDCOVER PLANTING

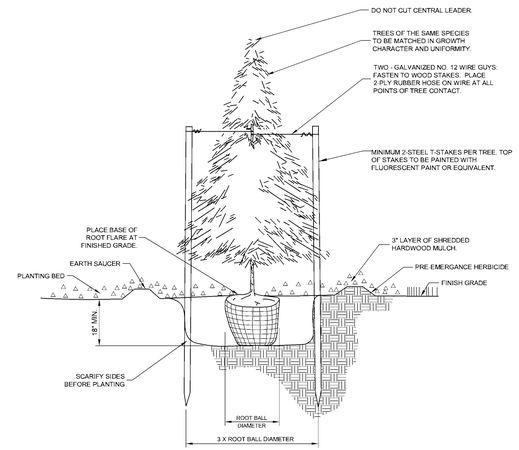
(NO SCALE)



NOTES:
- SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
- TOP OF ROOT BALL TO BE SET 4" HIGHER THAN ADJACENT EARTH GRADE.

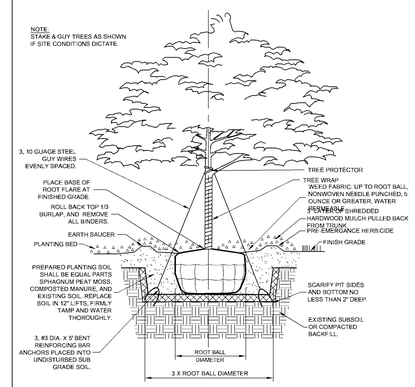
TREE PLANTING ON SLOPE

(NO SCALE)



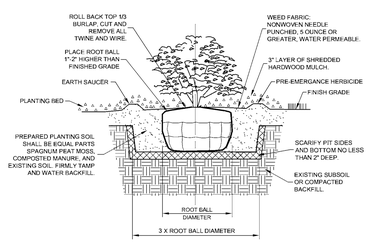
EVERGREEN PLANTING & STAKING

(NO SCALE)



SHADE TREE PLANTING DETAIL

(NO SCALE)



SHRUB & SMALL TREE PLANTING DETAIL

(NO SCALE)

10505 N. College Avenue
Indianapolis, Indiana 46280
weihe.net

317 846 - 6611
800 452 - 6408
317 843 - 0546 *fax*

ALLAN H. WEIHE, P.E., L.S. - FOUNDER

WEIHE ENGINEERS

Land Surveying | Civil Engineering
Landscape Architecture

PROJECT NO.	W14-0460
DWG NAME:	w14046G-L101.dwg
DESIGNED BY:	RLW/SAM
DRAWN BY:	RLW/SAM
CHECKED BY:	AKS
DATE:	02.12.2015

REVISIONS AND ISSUES	DATE	BY
SUBMITTED FOR INITIAL REVIEW	02.12.2015	RLB

ROBERT A. MEZYKOWSKI REGISTERED No. 80050080 STATE OF INDIANA LANDSCAPE ARCHITECT
APPROVAL BY THE LANDSCAPE ARCHITECT IS NOT A GUARANTEE OF PERFORMANCE

ROBERT A. MEZYKOWSKI L.A.80050080

PREPARED FOR:

KROGER STORE J-979

KROGER MARKETPLACE - MALLORY PARKWAY AND U.S. 31

LANDSCAPE DETAILS

Part of the NE¼ of Section 15, Township 12 North, Range 4 East, Franklin Township, Johnson County, Indiana

SHEET NO.

L2.01

PROJECT NO.

W14.0460

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LOCK: ON; XR:2014\W14046G\Engineering\design\contset\w14046G-L101.dwg
XREF: 2014\...
Layout: TIME: February 12, 2015 - 7:35am
Layout by: schoeffb

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