



160 West Carmel Drive, Suite 240
Carmel, IN 46032
Phone: 317-810-1677
Fax: 317-810-1679

August 8, 2016

Mr. Ed Garrison, PE
City of West Lafayette Engineer's Office
222 S Chauncey, Room 102
West Lafayette, IN 47906

**Subject: Storm Water Variance Request
Blackbird III Apartments – SW Corner of McCormick and Lindberg**

Dear Mr. Garrison:

I am writing this letter to formally request variances from Table 4-4 of the City of West Lafayette Stormwater Technical Standards Ordinance establishing minimum freeboard requirements between buildings and anticipated storm water overflow water surface elevations. More specifically, the required 2 feet of freeboard for drainage areas less than 3 acres.

The ordinance required 2 feet of freeboard for the storm water overflow path creates conflicts meeting the ADA accessible route and parking maximum slopes. In addition, the project contains small basin areas (micro-basins) routed to drainage swales and beehive inlets. These micro-basin areas range from 0.16 to 0.46 acres. The design has provided a minimum of 1 foot of freeboard above the emergency overflow path. Based upon the capacity of the storm inlets being provided and the small size of the drainage basins, there are no indications that providing 1 foot of freeboard above the emergency overflow path will negatively impact the subject property, adjacent properties, vehicular or pedestrian access, be injurious to public health and safety, nor hinder emergency response capabilities.

Please call or email me with any questions. Thank you for your consideration.

Sincerely,
Civil Site Group, INC.

A handwritten signature in black ink that reads "Brian S. Cross". The signature is written in a cursive, flowing style.

Brian S. Cross, P.E.
Principal
bcross@civilsite.net

Attachments: Grading Plan, Storm Sewer Drainage Basin Map

TOPOGRAPHIC & BOUNDARY NOTE

ALL EXISTING VERTICAL & HORIZONTAL INFORMATION HAS BEEN SHOWN PER AN ALTA/C&M LAND TITLE SURVEY PREPARED BY MILLER SURVEYING, INC. DATED 12/16/2013 (JOB #: B34933); THEREFORE, CIVIL SITE GROUP, INC. CANNOT BE HELD RESPONSIBLE IF INFORMATION FOUND IN THE FIELD DOES NOT AGREE WITH THESE CONSTRUCTION PLANS. CONTRACTOR TO FIELD VERIFY ALL EXISTING INFORMATION PRIOR TO COMMENCING WITH CONSTRUCTION.

NOTE

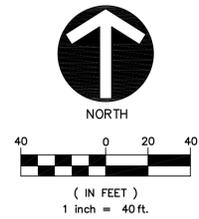
DEPENDING ON THE CONSTRUCTION SEASON, MOISTURE CONTENT AND PROPERTIES OF THE SOILS ON SITE, CHEMICAL MODIFICATIONS AND/OR LIME STABILIZATION MAY BE REQUIRED. SEE SHEET C9.0 FOR SPECIFICATIONS.

CONTRACTOR NOTE

NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED LAND ALTERATION PERMIT.

PLAN NOTES:

- (FL) FLUSH WITH PAVEMENT
- (V) CONTRACTOR TO REMOVE ALL SEDIMENT AND DEBRIS FROM DOWNSTREAM DEFENDER BMP USING VAC-TRUCK AFTER ALL SITE CONSTRUCTION AND LANDSCAPING IS COMPLETED
- (SR) STORM RIPRAP AROUND END SECTION SEE SHEET 14 OF THE CITY OF WEST LAFAYETTE CONSTRUCTION DETAILS
- (RW) 82± L.F. OF RETAINING WALL. REFER TO ARCH. PLANS FOR DETAILS
- (SW) POND EMERGENCY SPILLWAY



LEGEND:

- PROPERTY BOUNDARY
- - - PROPOSED GRADE BREAK
- DRY POND 100-YEAR ELEVATION
- PROPOSED CONCRETE
- G UNDERGROUND GAS LINE
- W UNDERGROUND WATER LINE
- E UNDERGROUND ELECTRIC & TELEPHONE
- SS SANITARY SEWER
- ST STORM SEWER
- GAS METER
- GAS VALVE
- FIRE HYDRANT
- POST INDICATOR VALVE
- SIAMESE CONNECTION
- WATER VALVE
- WATER METER
- CURB INLET
- SQUARE STORM SEWER INLET
- LIGHT POLE
- SIGN
- CENTERLINE
- B.S.L. BUILDING SETBACK LINE
- D. & U.E. DRAINAGE & UTILITY EASEMENT
- S.S.E. SANITARY SEWER EASEMENT
- N/A NOT APPLICABLE
- R/W RIGHT OF WAY
- SPC STATE PLANE COORDINATES
- 792.23 TOP OF CURB GRADE
- 798.25 PAVEMENT OR EARTH GRADE
- M.E. MATCH EXISTING GRADE
- - - PROPOSED GRADE BREAK
- - - PROPOSED CONTOUR
- - - 847- - - EXISTING CONTOUR
- PROPOSED STORM SEWER
- PROPOSED STORM STRUCTURE
- DRAINAGE FLOW ARROW
- - - PROPOSED ROOF DRAIN
- EMERGENCY OVERFLOW ROUTE
- S.B.E. SPILLWAY BREAKOUT ELEVATION

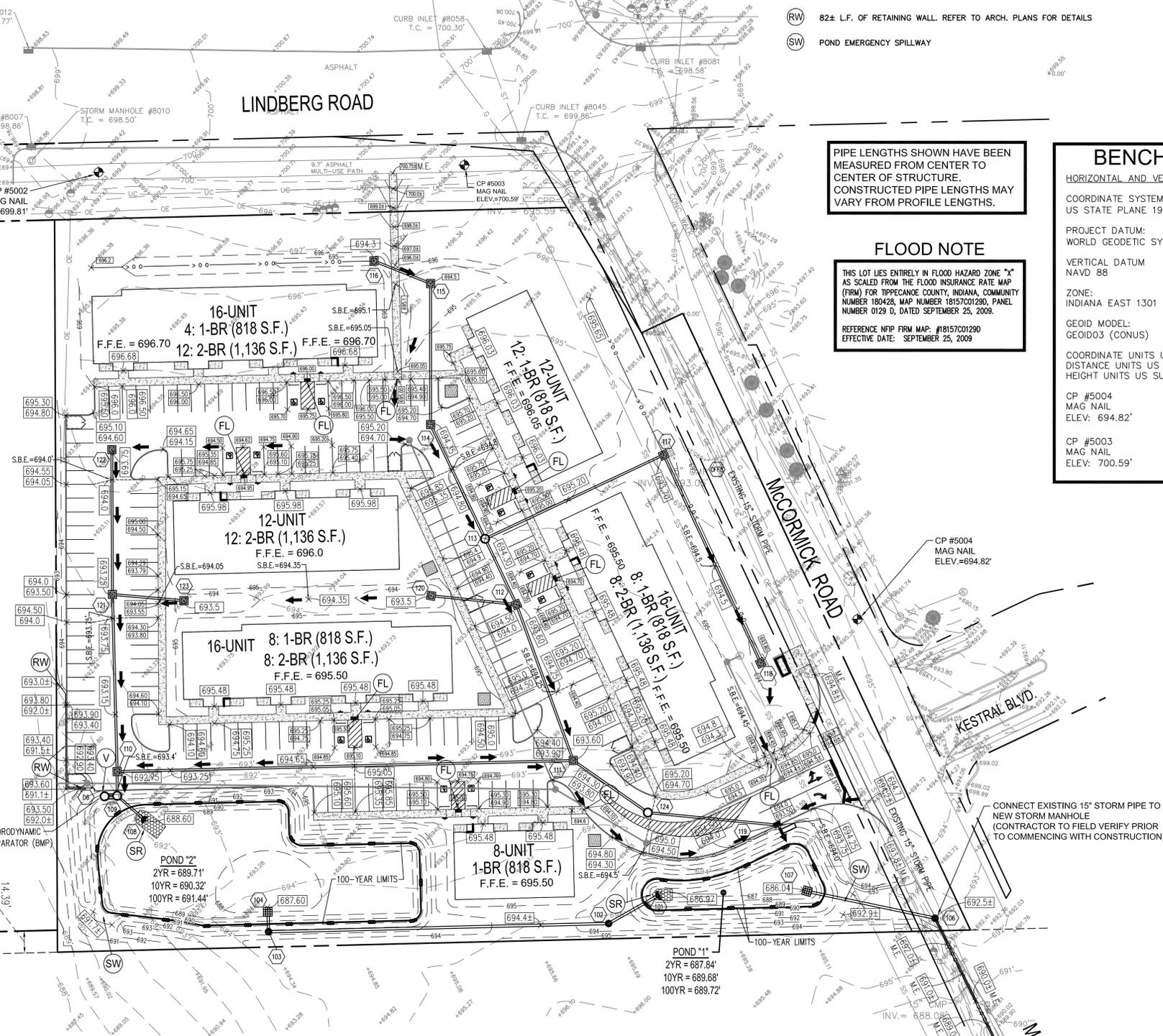
BENCHMARK

HORIZONTAL AND VERTICAL CONTROL:
 COORDINATE SYSTEM: US STATE PLANE 1983 (AT GROUND)
 PROJECT DATUM: WORLD GEODETIC SYSTEM (WGS 1984)
 VERTICAL DATUM: NAVD 88
 ZONE: INDIANA EAST 1301
 GEOD MODEL: GEOD03 (CONUS)
 COORDINATE UNITS US SURVEY FEET
 DISTANCE UNITS US SURVEY FEET
 HEIGHT UNITS US SURVEY FEET
 CP #5004
 MAG NAIL
 ELEV: 694.82'
 CP #5003
 MAG NAIL
 ELEV: 700.59'
 CP #5002
 MAG NAIL
 ELEV: 699.81'

FLOOD NOTE

THIS LOT LIES ENTIRELY IN FLOOD HAZARD ZONE "X" AS SCALED FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR TIPPECANOE COUNTY, INDIANA, COMMUNITY NUMBER 180428, MAP NUMBER 18157001290, PANEL NUMBER 0129 D, DATED SEPTEMBER 25, 2009.
 REFERENCE NFIP FIRM MAP: #18157001290
 EFFECTIVE DATE: SEPTEMBER 25, 2009

PIPE LENGTHS SHOWN HAVE BEEN MEASURED FROM CENTER TO CENTER OF STRUCTURE. CONSTRUCTED PIPE LENGTHS MAY VARY FROM PROFILE LENGTHS.



NOTE

REFER TO ARCHITECTURAL & FOUNDATION PLANS FOR ALL BUILDING DIMENSIONS.

ALL CONCRETE PIPE JOINTS SHALL BE CONTINUOUS O-RING RUBBER GASKET CONFORMING TO ASTM C 443

STORM STRUCTURE RECEIVING SUB-SURFACE DRAIN (SSD) SHALL HAVE BOTH PORTS CORE DRILLED. "T" OR "Y" BLIND CONNECTIONS ARE NOT ALLOWED.

GENERAL NOTES

- CONTRACTOR TO KEEP EXISTING PAVEMENT SURROUNDING THE SITE (I.E. LINDBERG ROAD & MCCORMICK ROAD) "BROOM CLEAN" AND FREE OF SOIL OR AGGREGATE THAT MIGHT BE BROUGHT OFF-SITE.
- DEPENDING ON THE CONSTRUCTION SEASON, MOISTURE CONTENT AND PROPERTIES OF THE SOILS ON SITE, CHEMICAL MODIFICATIONS AND/OR LIME STABILIZATION MAY BE REQUIRED. SEE SHEET C9.0 FOR SPECIFICATIONS.
- ALL CONCRETE PIPE JOINTS SHALL BE CONTINUOUS O-RING RUBBER GASKET CONFORMING TO ASTM C 443
- CONTRACTOR TO SUBMIT PRECAST SHOP DRAWINGS FOR ENGINEER REVIEW / APPROVAL 30 DAYS PRIOR TO MANUFACTURE DATE.

GRADING NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM THE ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START. TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH) SHALL BE MADE BY APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
- TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH ENGINEERED GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
- AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL WITH A MEDIUM WEIGHT ROLLER TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED PARKING AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
- DETERMINE POSITIVE DRAINAGE WITHOUT PONDING IN ALL AREAS, AFTER INSTALLATION, CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, "BIRD BATH" CONDITIONS.
- ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
- SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
- FLOW LINE ELEVATIONS GIVEN AT END OF CONCRETE END SECTIONS.
- SIDEWALK AGAINST BUILDING SHALL SLOPE AWAY FROM BUILDING AT 1.04% SLOPE MIN.

DEVELOPER:
 BLACKBIRD FARMS APARTMENTS PHASE II, LLC
 301 N. 5TH STREET
 LAFAYETTE, INDIANA 47901
 (765) 479-7800 ext. 803
 ATTN: KEITH LONG, V.P.

ENGINEER:
 CIVIL SITE GROUP, INC.
 160 W. CARMEL DRIVE
 SUITE 240
 CARMEL, INDIANA 46032
 (317) 810-1677

PROPERTY OWNER:
 BLACKBIRD FARMS APARTMENTS PHASE II, LLC
 301 N. 5TH STREET
 LAFAYETTE, INDIANA 47901
 (765) 479-7800 ext. 803
 ATTN: KEITH LONG, V.P.

SURVEYOR:
 MILLER SURVEYING, INC.
 948 CONNER STREET
 NOBLESVILLE, INDIANA 46060
 (317) 773-2644

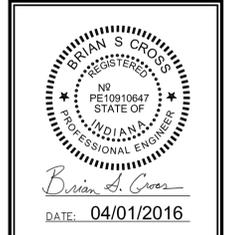
STORM SEWER SYSTEM NOTE

ALL ON-SITE STORM SEWER INFRASTRUCTURE TO BE CONSTRUCTED WITH THIS PROJECT SHALL BE PRIVATELY OWNED AND MAINTAINED.

REV	DATE	DESCRIPTION	DES BY	APP BY
1	06/03/16	REVISED PER CITY REVIEW COMMENTS	KPB	BSC
2	07/05/16	REV. ENTRANCE GRADING & BTWN #120 & 123	BSC	BSC
3	07/14/16	REVISED GRADING FOR EMERGENCY FLOOD ROUTING	BSC	BSC
4	07/28/16	REVISED GRADING FOR EMERGENCY FLOOD ROUTING	EAG	EAG

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 301 N. 5th STREET
 LAFAYETTE, INDIANA 47901

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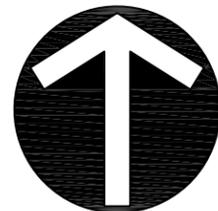
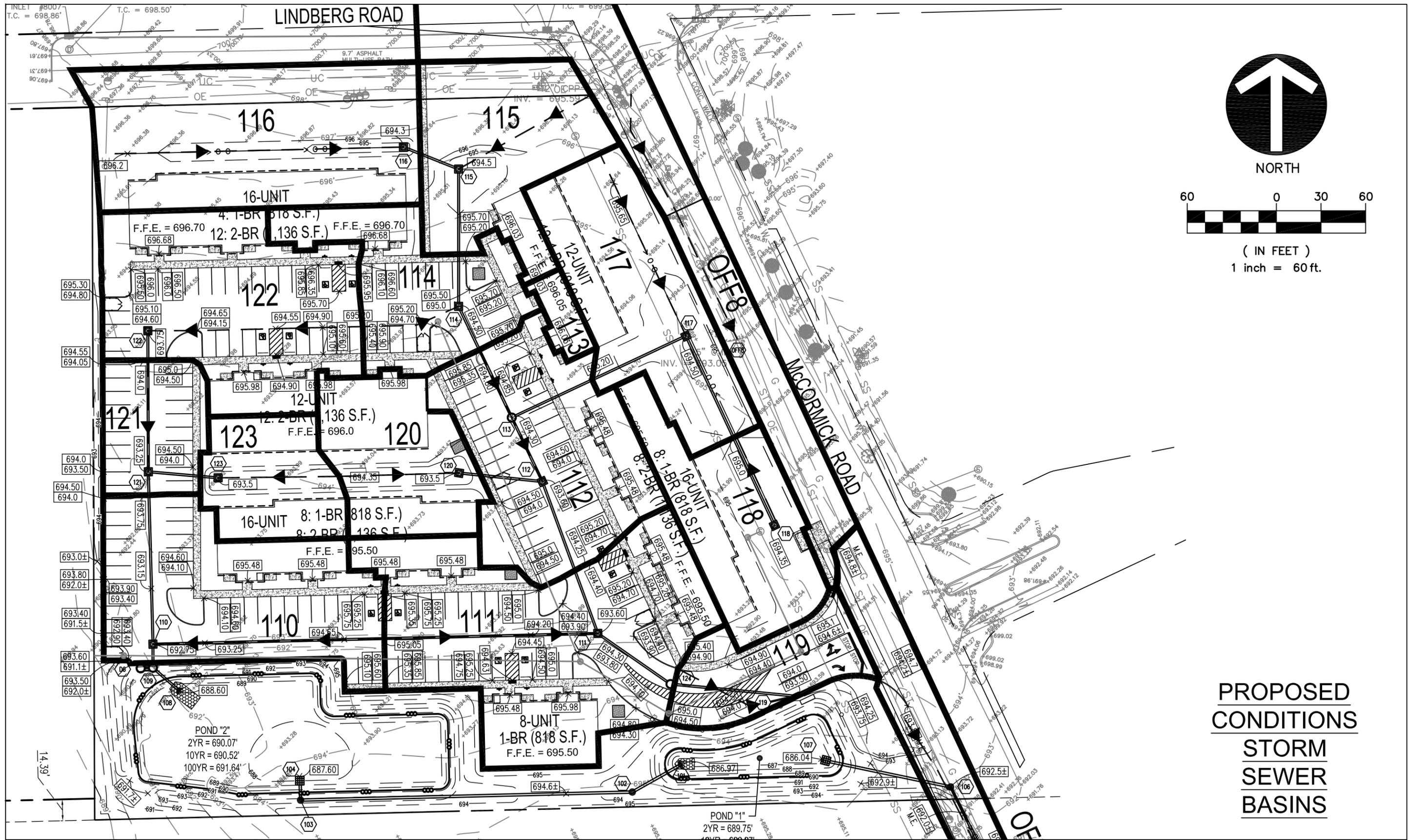
DWN BY: KPB
 CHKD. BY: BSC
 SCALE: 1" = 40'
 DATE: 04/01/16

BLACKBIRD III APARTMENTS
 SW CORNER OF LINDBERG ROAD & MCCORMICK ROAD
 WEST LAFAYETTE, INDIANA 47906

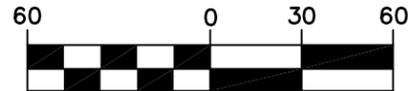
GRADING & DRAINAGE PLAN

PROJECT NUMBER
WHL.001

DRAWING NUMBER
C3.0
 SHEET 6 OF 31



NORTH



(IN FEET)
1 inch = 60 ft.

PROJECT NUMBER
WHL.001

DATE: 06/06/16
DWN. BY: EAG
CHKD. BY: EAG
SCALE: 1" = 60'

BLACKBIRD III APARTMENTS
SW CORNER of LINDBERG ROAD & McCORMICK ROAD
WEST LAFAYETTE, INDIANA

CIVIL SITE GROUP, INC.
160 WEST CARMEL DRIVE, SUITE 240
CARMEL, INDIANA 46032
(317) 810-1677 / (Fax) 810-1679

