

### LINEAR FOOTAGE OF STREETS CIMMARON AVENUE 606 LF HIGHVIEW LANE DRYDEN WAY 451 LF LAKEHURST COURT 580 LF 1,756 LF

### DEVELOPMENT STANDARDS

MAXIMUM NUMBER OF LOTS MINIMUM LOT AREA MINIMUM LOT WIDTH AT BUILDING LINE

MINIMUM FRONT YARD SETBACK MINIMUM SIDE YARD SETBACK MINIMUM REAR YARD SETBACK MINIMUM LIVABLE FLOOR AREA

MAXIMUM LOT COVERAGE MAXIMUM HEIGHT - PRINCIPAL

\*NOTE: LOTS 61,62,73-77 HAVE MAXIMUM LOT COVERAGE OF 55% PER ORDINANCE 091019 RECORDED AS INST. #201909743 IN THE OFFICE OF THE RECORDER OF HANCOCK COUNTY, INDIANA.

1,500 SF (SINGLE STORY) 1,800 SF (MULTI STORY)

AREA "A"

7,500 SQ. FT

25 FEET

25 FEET

45%\* 35 FEET

# McCORD POINTE SECTION 4

## Lennar Homes of Indiana, Inc.

C.A.#4-1

**CIMMARON AVENUE** 

C.A.#4-1

### **DEVELOPER:**

LENNAR HOMES OF INDIANA, INC. **BILL BRYANT** 9025 NORTH RIVER ROAD, SUITE 100 INDIANAPOLIS, INDIANA 46240 (317) 450-4634

LAKEHURST COURT

289

DR

### CIVIL ENGINEER and SURVEYOR:

**HWC ENGINEERING** 135 N. PENNSYLVANIA ST., SUITE 2800 INDIANAPOLIS, IN 46204 (317) 347-3663 keichhorn@hwcengineering.com





SOILS LEGEND

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3	RIGHT-OF-WAY DETAILS
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7	STORM SEWER BEDDING DETAILS AND GENERAL NOTES
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STANDARDS & GUIDELINES

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C8.5	CITIZENS WATER DETAILS

PLAN COMMISSION APPROVAL DRAINAGE APPROVAL \_\_\_\_\_ ADDRESS APPROVAL EROSION CONTROL APPROVAL COUNTY ENGINEER APPROVAL COUNTY SANITARIAN APPROVAL \_\_\_\_\_ COUNTY COMMISSIONERS APPROVAL \_\_\_\_\_\_

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<u>CITY OF INDIANAPOLIS</u>

Indianapolis, IN 46204

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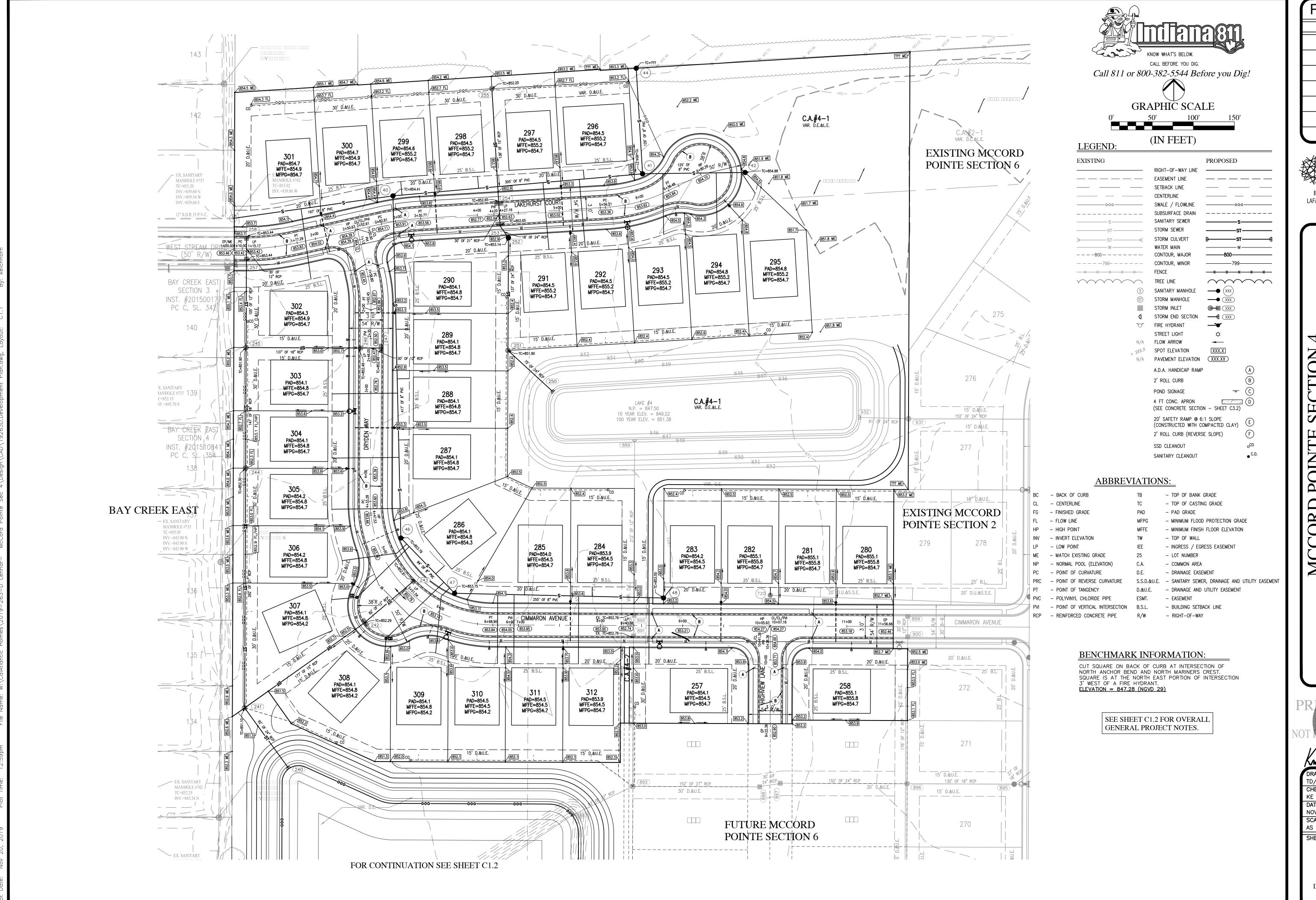
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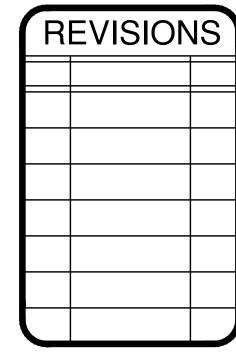
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CORDSVILLE, INDIAN, JEVEL OPMENT PLAN

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DATE
NOVEMBER 22, 2019

SCALE
AS SHOWN

SHEET

C1.1

DEVELOPMENT PLAN

### OVERALL GENERAL PROJECT NOTES

FOR CONTINUATION SEE SHEET C1.1

MFFE=854.8

N.P. = 846.50

10 YEAR ELEV. = 849.31

100 YEAR ELEV, = 851.46

MFPG=854.2

MFFE=854.8/

MANHOLE #742

TC=852.25

BAY CREEK EAST

INV.=845.24 N

– EX. SANITARY

MANHOLE #742

TC=852.01

\_\_\_\_\_INV.<u>=843.4</u>6 S

CREEK EAST

#201610685

EX. SANITARY

MANHOLE #74 TC=851.17

INV.=842.62 N INV.=842.52 S

C, SL. 378

SECTION 5

MFPG=854.2

- 1. NOT ALL GAS, POWER, OR TELEPHONE LINES, WHETHER ABOVE OR BELOW GROUND, HAVE BEEN SHOWN ON THE DRAWINGS. ANY UNDERGROUND INFORMATION SHOWN ON THE DRAWINGS HAS BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND IS GIVEN FOR THE CONTRACTORS BENEFIT. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR PROTECTING ALL UTILITIES IN HIS WORK AREA WHETHER SHOWN OR NOT, AND MUST REALIZE THAT THE ACTUAL LOCATION OF THE UTILITIES MAY BE DIFFERENT FROM THAT SHOWN ON THE DRAWINGS. ALL EXISTING UTILITIES ENCOUNTERED IN THE WORK, WHETHER IN PUBLIC RIGHTS OF WAY OR ON PRIVATE PROPERTY, SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN IN SERVICE ANY UTILITIES WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION TO SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE UTILITY, IF MINOR CONFLICTS ARISE, THE CONTRACTOR MAY SHIFT THE PROPOSED LOCATION OF THE INSTALLATION OF THE WORK. BEFORE WORKING WITH OR AROUND UTILITIES, THE APPLICABLE UTILITY COMPANY SHALL BE NOTIFIED BY THE CONTRACTOR.
- 2. SAFETY PROVISIONS FOR THE WORK SHALL BE IN FULL COMPLIANCE WITH ALL APPLICABLE RULES AND REGULATIONS OF THE INDIANA OSHA AND ANY OTHER LOCAL STATE OR FEDERAL AGENCY HAVING JURISDICTION. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. CONTRACTOR SHALL AT MINIMUM, PROVIDE TRAFFIC CONTROL AS REQUIRED TO SAFELY PROTECT THE GENERAL PUBLIC, THE CONTRACTOR'S WORK FORCES AND THE WORK. TRAFFIC CONTROL SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, STANDARD DETAILS AND GENERAL INSTRUCTIONS TO FIELD EMPLOYEES. THE REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT TO BE LIMITED TO NORMAL WORKING HOURS. THE OPTION OF THE OWNER AND/OR ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL BARRICADES, FENCES, WARNING SIGNS, FLASHING LIGHTS, TEMPORARY WALKWAYS, AND TRAFFIC CONTROL DURING CONSTRUCTION. CONTRACTOR TO COMPLY WITH ALL OSHA REGULATIONS, REQUIREMENTS, SAFETY MEETING REQUIREMENTS AND AGENCY REQUIREMENTS FOR
- 3. WHERE PROPERTY MARKERS, SECTION CORNERS, SURVEY MARKS OR BENCHMARKS, SUCH AS STONES, PIPES, OR OTHER SUCH MONUMENTS ARE ENCOUNTERED AND CONFLICT WITH THE WORK, THE ENGINEER SHALL BE NOTIFIED BEFORE THEY ARE DISTURBED, THE MARKERS SHALL BE PROTECTED AFTER THE OWNER, ENGINEER, AND AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR REFERENCED THEIR LOCATIONS.

853.84 854.05 853.95 853.00 852.74 891 A 853.21

PAD=853.9 MFFE=854.5

MFPG=854.7

15' D,&U.E.

M THE MANAGEMENT OF THE PARTY O

25' B.S.L.

MFFE=854.5

MFPG=854.7

853.8

30' D.&U.E.

i |-----

h-----

30' D.&U.E.

PVI CIMMARON AVENUE I,

PAD=854.5

MFFE=854.5

MFPG=854.7

PAD=854.5 MFFE=854.5

MFPG=854.2

TRAFFIC CONTROL AND SAFETY PRECAUTIONS, THERE WILL BE NO SEPARATE OR ADDITIONAL PAYMENT FOR THIS WORK.

- 4. ALL MATERIALS DENOTED "SALVAGED" SHALL BE STORED AND PROTECTED AT THE SITE FOR THE OWNER TO COLLECT OR FOR THE CONTRACTOR TO RE-USE AS INDICATED.
- 5. THERE SHALL BE NO CHANGES WITHOUT WRITTEN APPROVAL OF ENGINEER.
- 6. ALL GRADES AT BOUNDARY SHALL MEET EXISTING GRADES.

10+05.93 10+07.16

FUTURE MCCORD

POINTE SECTION 6

- 7. CONTRACTOR SHALL MINIMIZE DAMAGE TO EXISTING TREES.
- REMOVE AND BACKFILL ALL AREAS WHERE ANY FIELD TILE CROSSES PROPOSED HOUSE PADS. ALL FIELD TILES INTERCEPTED TO BE PERPETUATED INTO STORM SEWER SYSTEM OR LAKE. THE SUBCONTRACTOR SHALL NOTIFY IN WRITING THE OWNER AND THE ENGINEER IN ANY CIRCUMSTANCES WHERE THIS CANNOT BE ACCOMPLISHED.
- 9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS.
- 10. CONTRACTOR SHALL STAMP THE LETTER "S" IN THE CURB PERPENDICULAR TO THE LATERAL MARKER.
- 11. STRUCTURES RECEIVING SUB-SURFACE DRAIN (SSD) SHALL HAVE BOTH PORTS CORE DRILLED. "T" OR "Y" BLIND CONNECTIONS ARE NOT ALLOWED.

\_\_\_\_\_\_\_

11+00 -

853.18

PAD=855.1

MFFE=855.8

MFPG=854.7

30' D.&U.E.

- 12. ALL STORM SEWER CASTINGS SHALL BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY".
- 13. STRUCTURAL FILL: SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698). SHALL BE FREE OF ORGANIC MATERIAL, DEBRIS, DELETERIOUS MATERIALS AND FROZEN SOLIDS.
- 14. ALL ROADS MUST BE BROUGHT BACK TO ORIGINAL OR BETTER CONDITION, INCLUDING BUT NOT LIMITED TO STRIPING, STONE SHOULDERS AND SIGNAGE. REPAIRS (i.e. STRIPING) SHALL COINCIDE WITH THE ADJOINING ROAD.
- 15. CLAY POND LINERS ARE REQUIRED IF SIGNIFICANT SAND OR GRAVEL STRATIFICATIONS ARE ENCOUNTERED DURING EXCAVATION OF POND.
- 16. ALL COMMON AREA SIDEWALKS OR PATHS ARE TO BE CONSTRUCTED AS PART OF THE SITE INFRASTRUCTURE. INDIVIDUAL LOT SIDEWALKS TO BE CONSTRUCTED AT THE TIME OF HOME CONSTRUCTION.

7 4 852.46

20' D.&U.E.

30' D,&U.E.

CIMMARON AVENUE

20' D.&U.E.

15' D.&U.E.

\_ \_ \_ \_ \_ \_ \_ \_

EXISTING MCCORD

POINTE SECTION 6

269

268

267

130' OF 18" RCP

15'D.&U.E.



PROPOSED

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**EXISTING** 

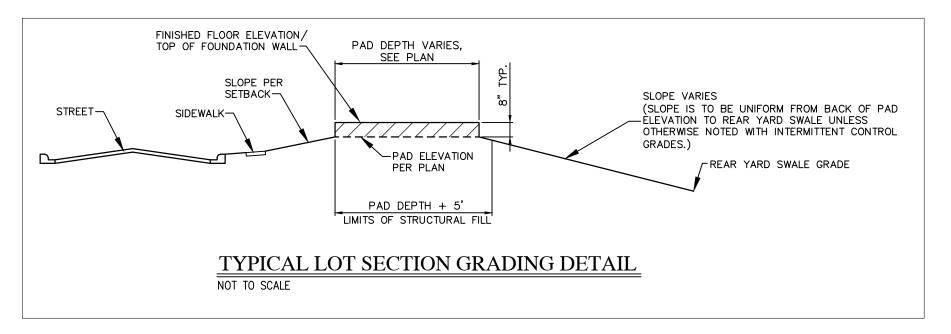
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	RIGHT-OF-WAY LINE -	
	EASEMENT LINE	
	SETBACK LINE	
	CENTERLINE — — —	
000	SWALE / FLOWLINE ————————————————————————————————————	0
	SUBSURFACE DRAIN ——————	
S	SANITARY SEWERS	
ST	STORM SEWER STORM SEWER	
>ST<	STORM CULVERT D S	
	CONTOUR, MAJOR ————800—	
	·	
		<del></del>
	TREE LINE	<b>\\\\</b>
S	SANITARY MANHOLE — (XXX)	
<u>s</u>	STORM MANHOLE —— XXX	
	STORM INLET	
0	STORM END SECTION —— (XXX)	
$\nabla$	FIRE HYDRANT ——	
	STREET LIGHT 🌣	
N/A	FLOW ARROW	
* ****	SPOT ELEVATION XXX.X	
N/A	PAVEMENT ELEVATION (XXX.XX)	
	A.D.A. HANDICAP RAMP	(A)
	2' ROLL CURB	B
	POND SIGNAGE	<b>©</b>
	4 FT CONC. APRON (SEE CONCRETE SECTION — SHEET C3.2)	₫ <b>D</b>
	20' SAFETY RAMP @ 6:1 SLOPE (CONSTRUCTED WITH COMPACTED CLAY)	E
	2' ROLL CURB (REVERSE SLOPE)	F
	SSD CLEANOUT	oco
	SANITARY CLEANOUT	_ C.O.

### ABBREVIATIONS:

- BC BACK OF CURB TOP OF BANK GRADE - TOP OF CASTING GRADE CENTERLINE FG - FINISHED GRADE PAD GRADE - MINIMUM FLOOD PROTECTION GRADE FLOW LINE
- HP HIGH POINT - MINIMUM FINISH FLOOR ELEVATION - TOP OF WALL INVERT ELEVATION - INGRESS / EGRESS EASEMENT LOW POINT
- MATCH EXISTING GRADE LOT NUMBER - NORMAL POOL (ELEVATION) - COMMON AREA
- POINT OF CURVATURE DRAINAGE EASEMENT S.S.D.&U.E. - SANITARY SEWER, DRAINAGE AND UTILITY EASEMENT - POINT OF REVERSE CURVATURE - DRAINAGE AND UTILITY EASEMENT ESMT. - POLYVINYL CHLORIDE PIPE
- POINT OF VERTICAL INTERSECTION B.S.L. BUILDING SETBACK LINE RCP - REINFORCED CONCRETE PIPE R/W RIGHT-OF-WAY

### BENCHMARK INFORMATION:

CUT SQUARE ON BACK OF CURB AT INTERSECTION OF NORTH ANCHOR BEND AND NORTH MARINERS CREST. SQUARE IS AT THE NORTH EAST PORTION OF INTERSECTION 3' WEST OF A FIRE HYDRANT. ELEVATION = 847.28 (NGVD 29)



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DEVELOPMENT PLAN

Knotopher K. Eichon

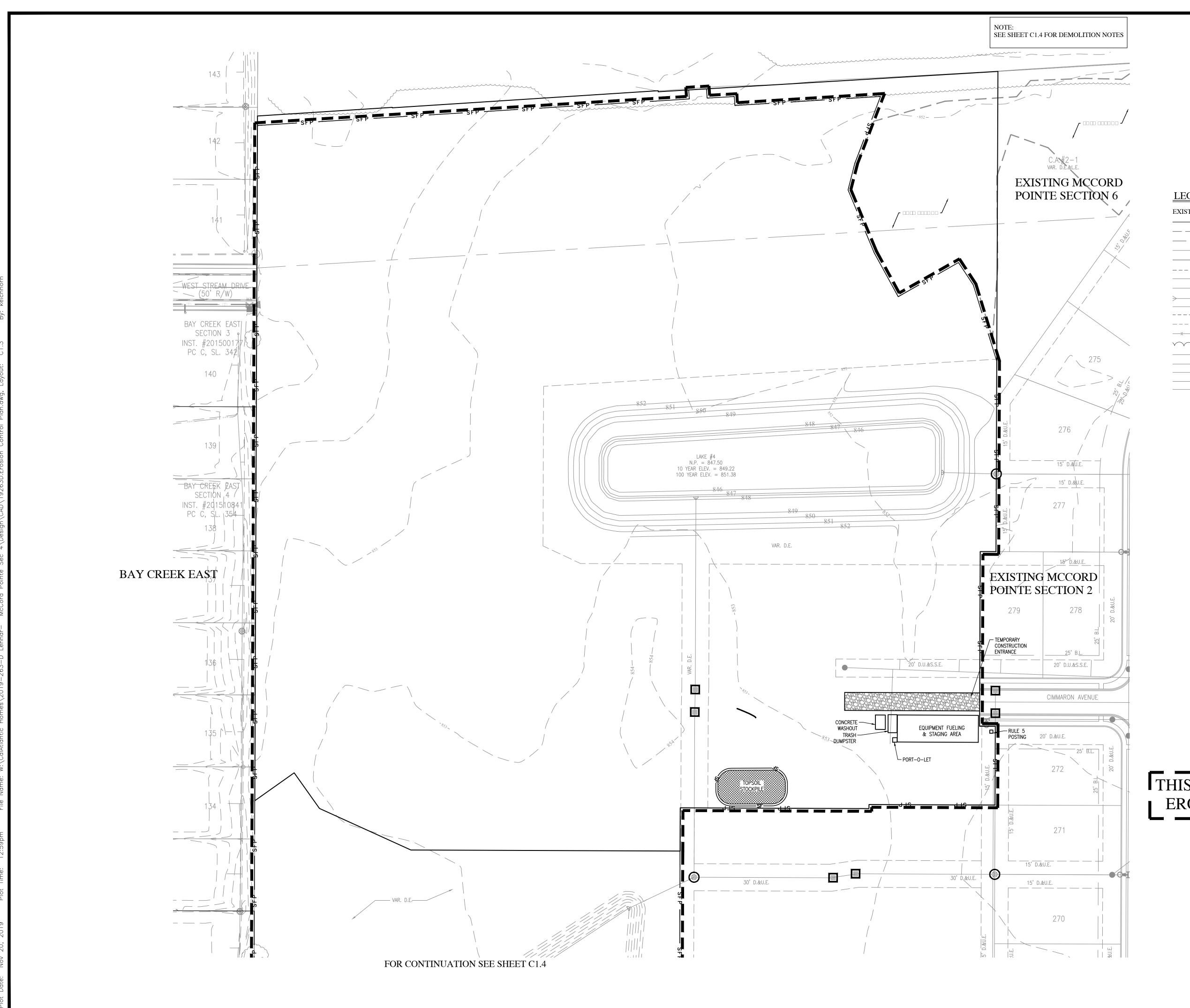
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SCALE

AS SHOWN

NOVEMBER 22, 2019





(IN FEET)

LEGEND: **EXISTING** PROPOSED SUBSURFACE DRAIN ---800---- CONTOUR, MAJOR  $\bigcirc \bigcirc \bigcirc \bigcirc$ TELEPHONE (UNDERGROUND) —FO———— FIBER OPTIC (UNDERGROUND) GAS (UNDERGROUND) OVERHEAD UTILITY (ELECTRIC/FIBER) STORM END SECTION 
 → N/A FLOW ARROW <sup>E</sup>■ ELECTRIC PANEL/PEDESTAL W WATER METER TRAN ELECTRIC TRANSFORMER ₩ WATER VALVE FIBER OPTIC ACCESS/MANHOLE 

WATER WELL/MONITORING WELL AC SITE - A/C UNIT GAS MARKER POST □ SITE - FENCE POST G GAS METER SITE - FLAG POLE ₩ GAS VALVE o<sup>MB</sup> SITE − MAILBOX ★ LIGHT POLE/AREA LIGHT oCO SEWER CLEANOUT TREE - CONIFEROUS TELEPHONE MARKER POST TREE - DECIDUOUS TELEPHONE PANEL/PEDESTAL TREE - MULTI-TRUNK Ø UTILITY POLE  $\leftarrow$  UTILITY POLE GUY ANCHOR

LEGEND

CURB INLET

- TEMPORARY "DROP INLET PROTECTION BASKET" - TEMPORARY CURB INLET PROTECTION

FENCE, STRAW WATTLES, COIR LOGS, OR

VEGETATIVE STRIPS AS CONDITIONS WARRANT. CONSTRUCTION LIMITS TEMPORARY SITE CONSTRUCTION ENTRANCE

SEE SHEET C8.0 FOR A LIST IN SEQUENCE

OF CONSTRUCTION ACTIVITIES.

### THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

- EROSION CONTROL NOTES:

  1. ADDITIONAL EROSION CONTROL MEASURES MAY BE
- THERE SHALL BE NO DIRT, DEBRIS OR STORAGE OF MATERIALS IN THE STREET.
- 3. THIS SHEET TO BE USED FOR STORMWATER POLLUTION PREVENTION PURPOSES ONLY.
- 4. GEOTEXTILE FABRIC SHALL BE PLACED UNDER STONE LAYER OF THE CONSTRUCTION ENTRANCE.
- 5. ALL PORTABLE TOILETS MUST BE ANCHORED TO PREVENT SPILLS. 6. WHERE EXISTING DRAIN TILES OR FIELD TILES ARE ENCOUNTERED WHERE APPLICABLE, INTERCEPT EXISTING TILES AND TIE THEM INTO THE STORM SYSTEM.

### PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL

BILL BRYANT LENNAR HOMES OF INDIANA, INC. PHONE: 317-659-3200 EMAIL: WILLIAM.BRYANT@LENNAR.COM **REVISIONS** 



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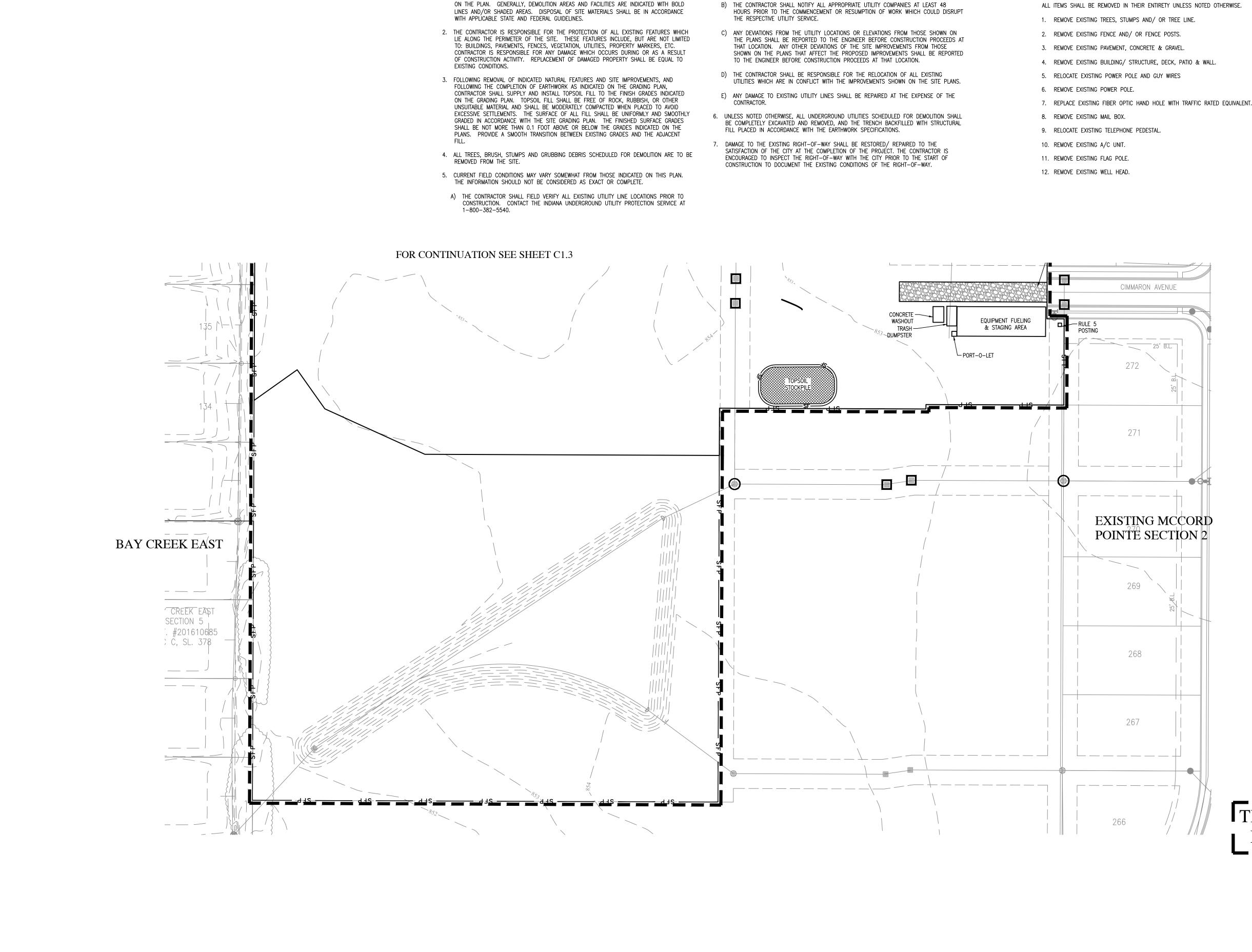
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NOVEMBER 22, 2019 SCALE AS SHOWN

PRE-CONSTRUCTION

STORMWATER POLLUTION PREVENTION AND DEMOLITION PLAN © 2019



**DEMOLITION GENERAL NOTES:** 

1. THE CONTRACTOR SHALL DEMOLISH AND REMOVE FROM THE SITE ALL MATERIALS INDICATED

DEMOLITION KEYNOTES:	#
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(NOT ALL KEY NOTES APPLY TO THIS SHEET)



GRAPHIC SCALE (IN FEET)

EXISTING		PROPOSED
	RIGHT-OF-WAY LINE	
	EASEMENT LINE	
	SETBACK LINE	
	CENTERLINE	
000	SWALE / FLOWLINE	000
	SUBSURFACE DRAIN	
S	SANITARY SEWER	s
ST	STORM SEWER	st
>	STORM CULVERT	<del>D</del> st——st
	WATER MAIN	W
<del></del>	CONTOUR, MAJOR	<b></b> 799
	CONTOUR, MINOR	
	FENCE	<del></del>
<b>\</b> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	TREE LINE	
E	ELECTRIC (UNDERGROU	•
T	TELEPHONE (UNDERGRO	•
FO	FIBER OPTIC (UNDERGE GAS (UNDERGROUND)	(OUND)
OHE	OVERHEAD UTILITY (EL	ECTRIC/FIBER)
(\$)	SANITARY MANHOLE	<b>—</b>
(ST)	STORM MANHOLE	<b>—</b>
₩	STORM INLET	₩-₩
٥	STORM END SECTION	<del></del> 4
V	FIRE HYDRANT	<b>~</b>
N/A	FLOW ARROW	<b>←</b>
E ELECTRIC P	ANEL/PEDESTAL (	W WATER METER
TRAN ELECTRIC TE	RANSFORMER "	₩ WATER VALVE
FIBER OPTION	C ACCESS/MANHOLE -	WATER WELL/MONITORING W
GAS GAS MARKE	R POST	SITE - A/C UNIT
© GAS METER	K	SITE - FENCE POST
₩ GAS VALVE		SITE - FLAG POLE
	TARLA LIGITI	SMB SITE - MAILBOX
o <sup>CO</sup> SEWER CLEA	7//	TREE - CONIFEROUS
_	MARKER PUSI	TREE - DECIDUOUS
	PANEL/PEDESTAL	TREE - MULTI-TRUNK
Ø UTILITY POL	40%	TREE - MOLII-TROWK
← UTILITY POL	E GUY ANCHOR	3 SHRUB
LEGENI	D	
	<ul> <li>TEMPORARY "DROP INLE</li> </ul>	I PROTECTION BASKET"
CURB INLET	- TEMPORARY CURB INLET	
	SEE SHEET C8.1 FOR D	
SFP	<ul> <li>SHEET FLOW PROTECTION</li> <li>FENCE, STRAW WATTLES</li> </ul>	·
	VEGETATIVE STRIPS AS	
	- CONSTRUCTION LIMITS	
	- TEMPORARY SITE CONST	TRUCTION ENTRANCE

THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

SEE SHEET C8.0 FOR A LIST IN SEQUENCE

OF CONSTRUCTION ACTIVITIES.

- EROSION CONTROL NOTES:

  1. ADDITIONAL EROSION CONTROL MEASURES MAY BE
- THERE SHALL BE NO DIRT, DEBRIS OR STORAGE OF MATERIALS IN THE STREET.
- 3. THIS SHEET TO BE USED FOR STORMWATER POLLUTION PREVENTION PURPOSES ONLY.
- 4. GEOTEXTILE FABRIC SHALL BE PLACED UNDER STONE LAYER OF THE CONSTRUCTION ENTRANCE.
- 5. ALL PORTABLE TOILETS MUST BE ANCHORED TO PREVENT SPILLS. 6. WHERE EXISTING DRAIN TILES OR FIELD TILES ARE ENCOUNTERED WHERE APPLICABLE, INTERCEPT EXISTING TILES AND TIE THEM INTO THE STORM SYSTEM.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL BILL BRYANT

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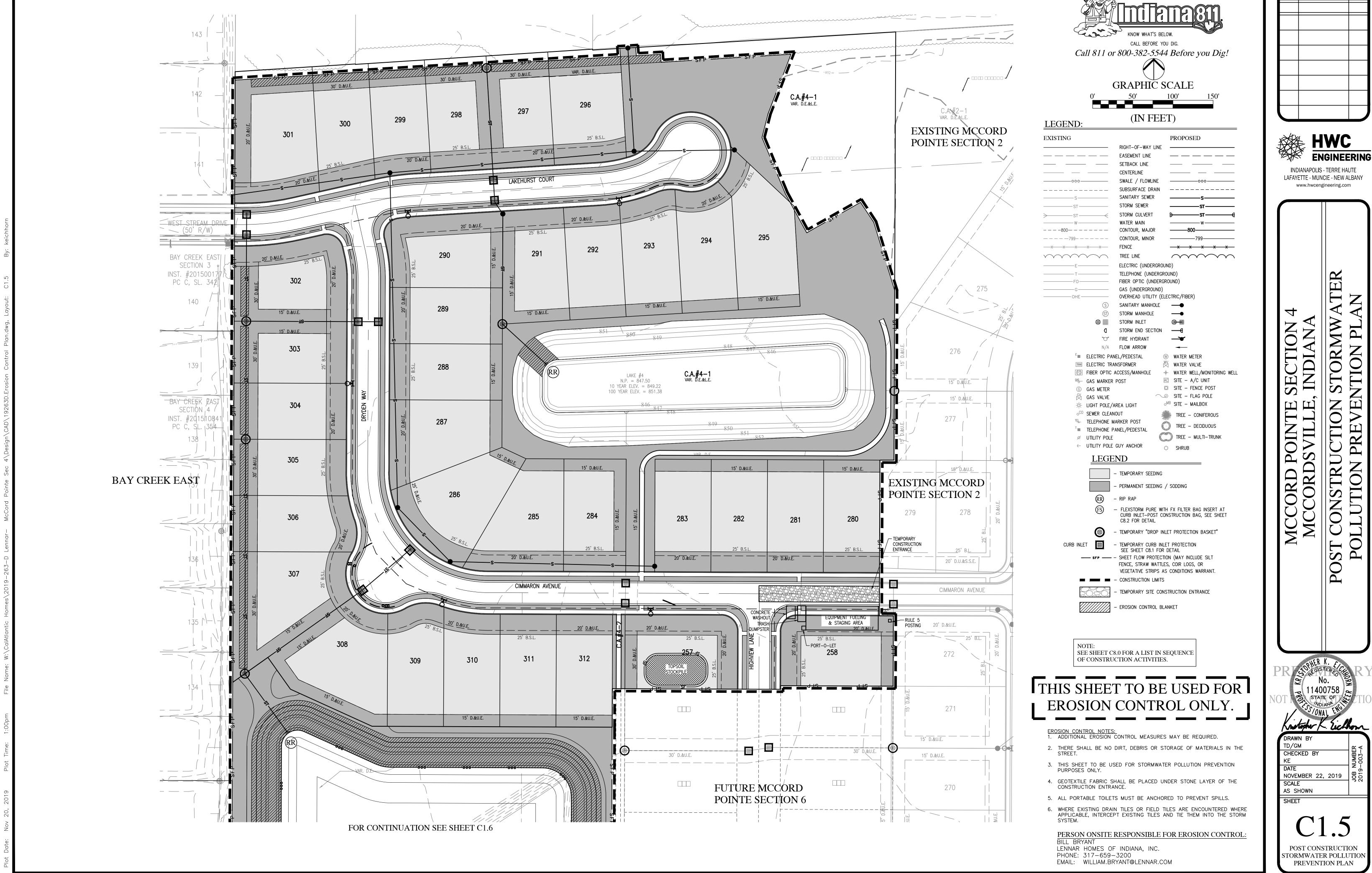
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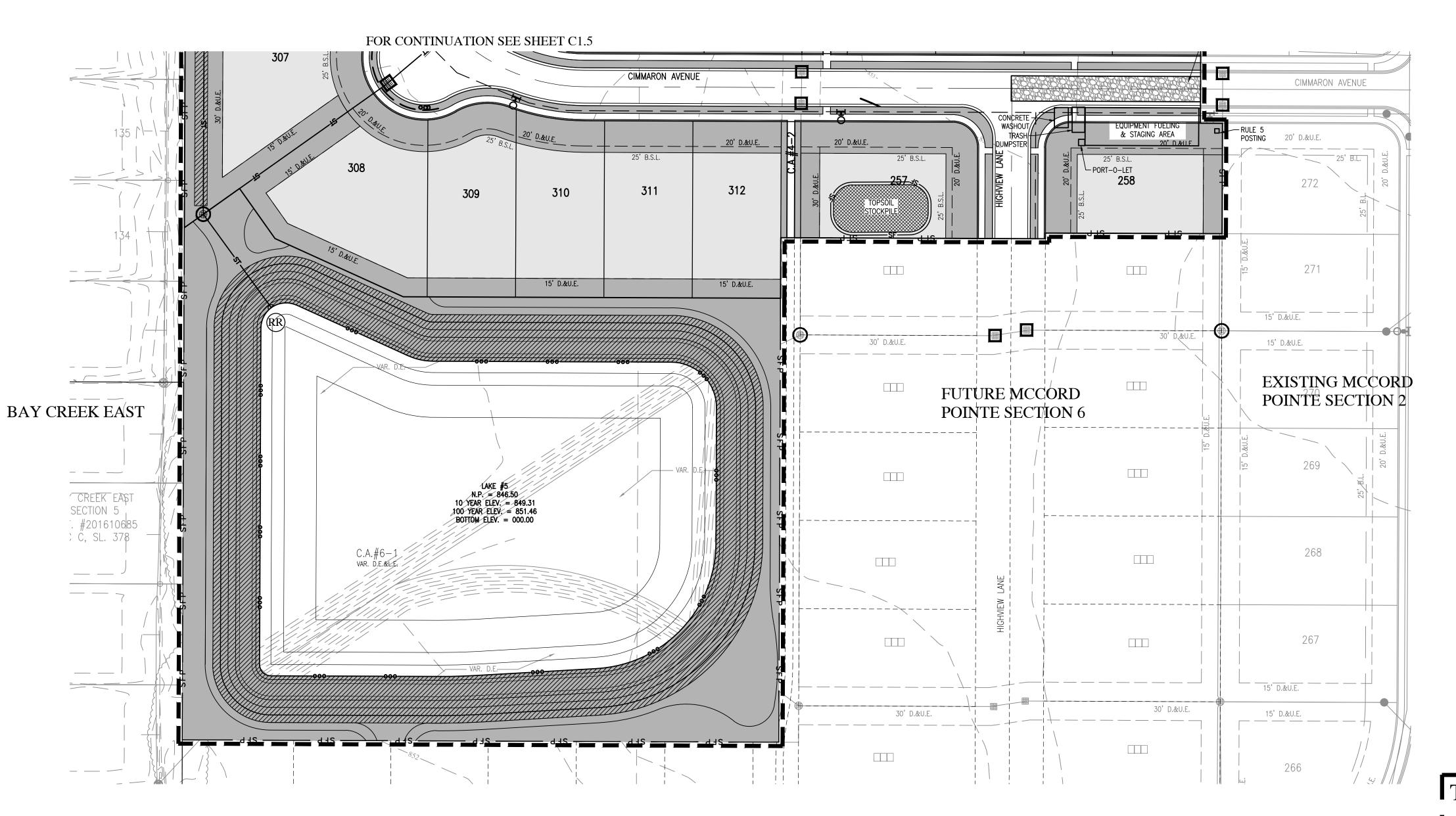
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STORMWATER POLLUTION PREVENTION AND DEMOLITION PLAN

PRE-CONSTRUCTION



**REVISIONS** 





(IN FEET) LEGEND: **EXISTING** PROPOSED \_\_\_\_\_ ---- 800---- CONTOUR, MAJOR <del>\_\_x\_\_x\_\_x\_\_x</del>\_\_ TREE LINE  $\sim\sim\sim\sim$ ELECTRIC (UNDERGROUND) TELEPHONE (UNDERGROUND) FIBER OPTIC (UNDERGROUND) GAS (UNDERGROUND) OVERHEAD UTILITY (ELECTRIC/FIBER) STORM END SECTION —— N/A FLOW ARROW ELECTRIC PANEL/PEDESTAL W WATER METER ₩ WATER VALVE TRAN ELECTRIC TRANSFORMER FIBER OPTIC ACCESS/MANHOLE → WATER WELL/MONITORING WELL AC SITE - A/C UNIT GAS MARKER POST ☐ SITE - FENCE POST G GAS METER SITE - FLAG POLE ₩ GAS VALVE o<sup>MB</sup> SITE − MAILBOX ★ LIGHT POLE/AREA LIGHT o<sup>CO</sup> SEWER CLEANOUT TREE - CONIFEROUS TELEPHONE MARKER POST TELEPHONE PANEL/PEDESTAL TREE - MULTI-TRUNK Ø UTILITY POLE  $\leftarrow$  UTILITY POLE GUY ANCHOR **LEGEND** - TEMPORARY SEEDING PERMANENT SEEDING / SODDING - FLEXSTORM PURE WITH FX FILTER BAG INSERT AT CURB INLET-POST CONSTRUCTION BAG, SEE SHEET C8.2 FOR DETAIL - TEMPORARY "DROP INLET PROTECTION BASKET" CURB INLET - TEMPORARY CURB INLET PROTECTION SEE SHEET C8.1 FOR DETAIL FENCE, STRAW WATTLES, COIR LOGS, OR VEGETATIVE STRIPS AS CONDITIONS WARRANT. - CONSTRUCTION LIMITS

> SEE SHEET C8.0 FOR A LIST IN SEQUENCE OF CONSTRUCTION ACTIVITIES.

### THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

EROSION CONTROL NOTES:

1. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED.

2. THERE SHALL BE NO DIRT, DEBRIS OR STORAGE OF MATERIALS IN THE STREET.

TEMPORARY SITE CONSTRUCTION ENTRANCE

- EROSION CONTROL BLANKET

- THIS SHEET TO BE USED FOR STORMWATER POLLUTION PREVENTION PURPOSES ONLY.
- 4. GEOTEXTILE FABRIC SHALL BE PLACED UNDER STONE LAYER OF THE CONSTRUCTION ENTRANCE.
- 5. ALL PORTABLE TOILETS MUST BE ANCHORED TO PREVENT SPILLS.
- 6. WHERE EXISTING DRAIN TILES OR FIELD TILES ARE ENCOUNTERED WHERE APPLICABLE, INTERCEPT EXISTING TILES AND TIE THEM INTO THE STORM SYSTEM.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL: BILL BRYANT

LENNAR HOMES OF INDIANA, INC. PHONE: 317-659-3200 EMAIL: WILLIAM.BRYANT@LENNAR.COM **REVISIONS** 



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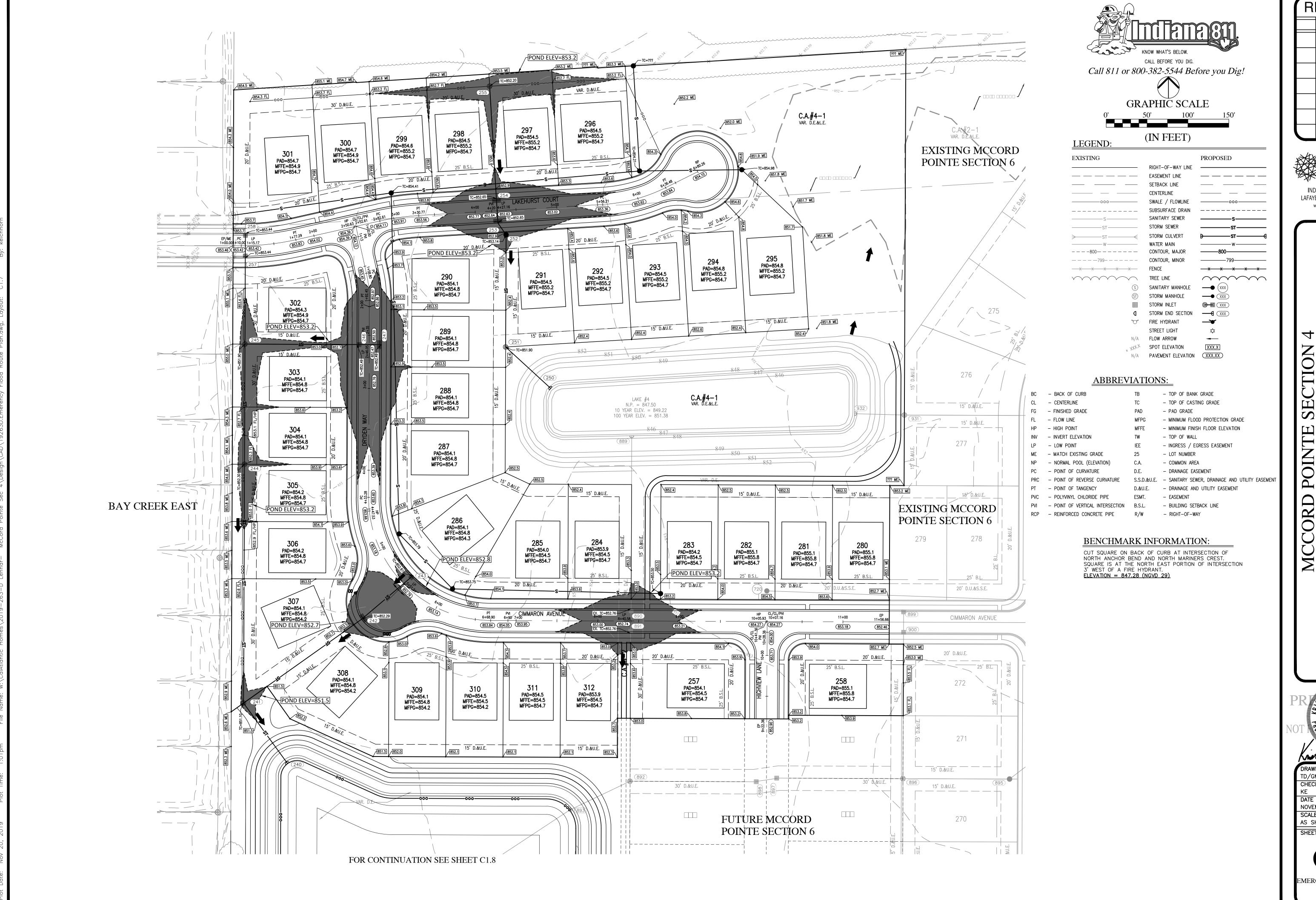
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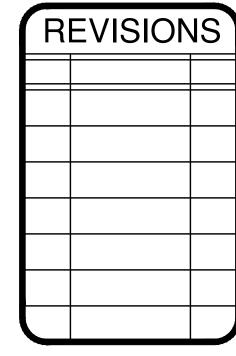
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> POST CONSTRUCTION STORMWATER POLLUTION

> > PREVENTION PLAN © 2019





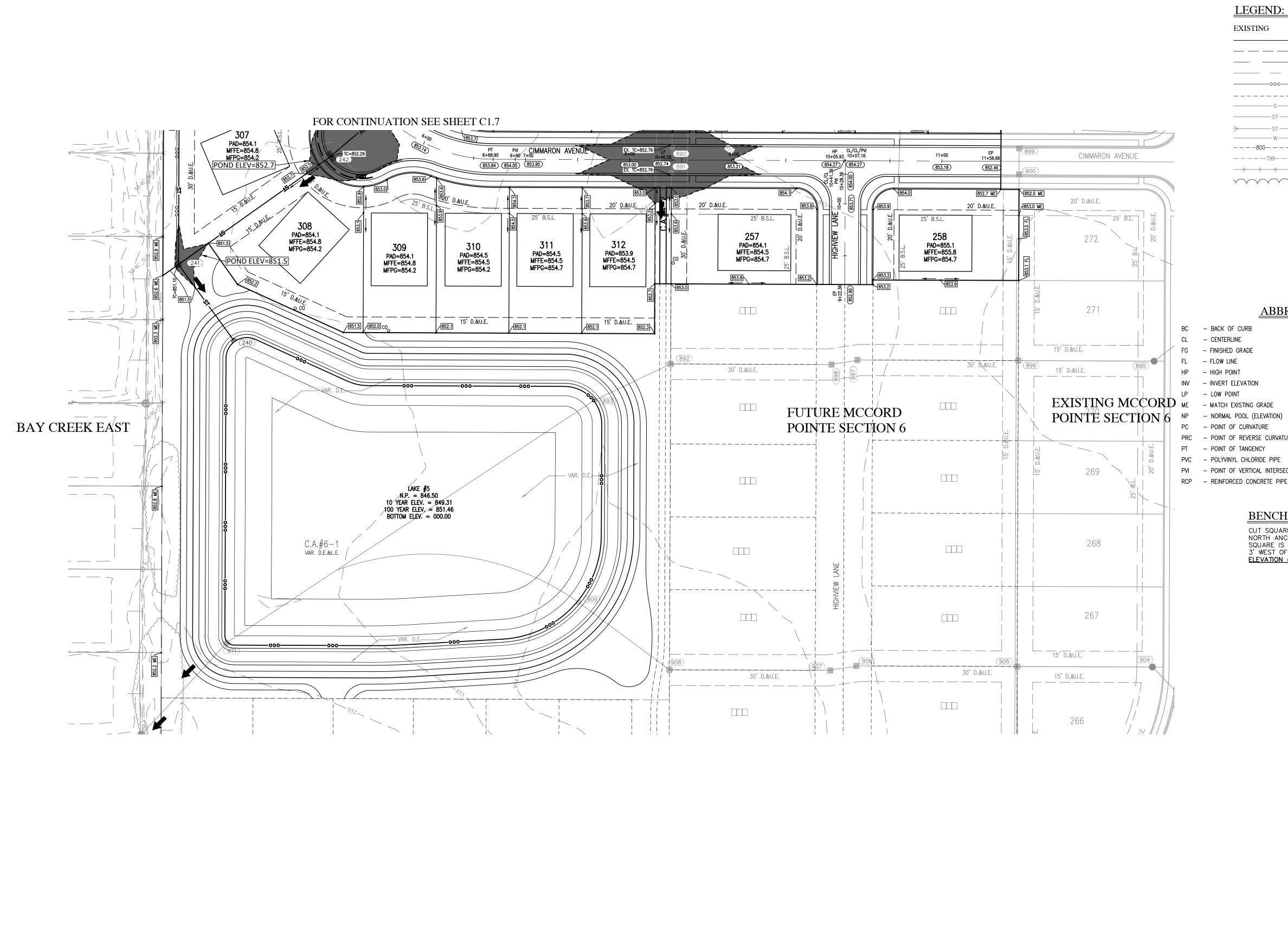


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MCCORD POINTE SECTION 4
MCCORDSVILLE, INDIANA
EMERGENCY FLOOD ROUTE PLA

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C1.7
EMERGENCY FLOOD ROUT
PLAN





	RIGHT-OF-WAY LINE	
	EASEMENT LINE	
	SETBACK LINE	
	CENTERLINE	
000	SWALE / FLOWLINE	000
	SUBSURFACE DRAIN	
s	SANITARY SEWER	s
ST	STORM SEWER	st
>	STORM CULVERT	<del>)</del> sr———
	WATER MAIN	——————————————————————————————————————
<del></del>	CONTOUR, MAJOR	800
<b> 799</b>	CONTOUR, MINOR	<del>7</del> 99
	FENCE	<del>xxxx</del>
	TREE LINE	$\sim\sim\sim\sim$
(\$)	SANITARY MANHOLE	<b>→</b> (XXX)
(ST)	STORM MANHOLE	<b>→</b> XXX
	STORM INLET	₩ XXX
0	STORM END SECTION	$\longrightarrow$ $\bigcirc$ $\bigcirc$ $\bigcirc$ $\bigcirc$
	FIRE HYDRANT	<b>→</b>
	STREET LIGHT	ф
N/A	FLOW ARROW	-
* ****	SPOT ELEVATION	XXX.X
N/A	PAVEMENT ELEVATION	(XXX.XX)

PROPOSED

	ABBREV	IATION	<u>[S:</u>
BC	- BACK OF CURB	ТВ	- TOP OF BANK GRADE
CL	- CENTERLINE	TC	- TOP OF CASTING GRADE
FG	- FINISHED GRADE	PAD	- PAD GRADE
FL	- FLOW LINE	MFPG	- MINIMUM FLOOD PROTECTION GRADE
HP	- HIGH POINT	MFFE	- MINIMUM FINISH FLOOR ELEVATION
INV	- INVERT ELEVATION	TW	- TOP OF WALL
LP	- LOW POINT	IEE	- INGRESS / EGRESS EASEMENT
ME	- MATCH EXISTING GRADE	25	- LOT NUMBER
NP	- NORMAL POOL (ELEVATION)	C.A.	- COMMON AREA
PC	- POINT OF CURVATURE	D.E.	- DRAINAGE EASEMENT
PRC	- POINT OF REVERSE CURVATURE	S.S.D.&U.E.	- SANITARY SEWER, DRAINAGE AND UTILITY EAS
PT	- POINT OF TANGENCY	D.&U.E.	- DRAINAGE AND UTILITY EASEMENT
PVC	- POLYVINYL CHLORIDE PIPE	ESMT.	- EASEMENT
PVI	- POINT OF VERTICAL INTERSECTION	B.S.L.	- BUILDING SETBACK LINE
RCP	- REINFORCED CONCRETE PIPE	R/W	- RIGHT-OF-WAY

### BENCHMARK INFORMATION:

CUT SQUARE ON BACK OF CURB AT INTERSECTION OF NORTH ANCHOR BEND AND NORTH MARINERS CREST.
SQUARE IS AT THE NORTH EAST PORTION OF INTERSECTION
3' WEST OF A FIRE HYDRANT.
ELEVATION = 847.28 (NGVD 29)

RI	REVISIONS		



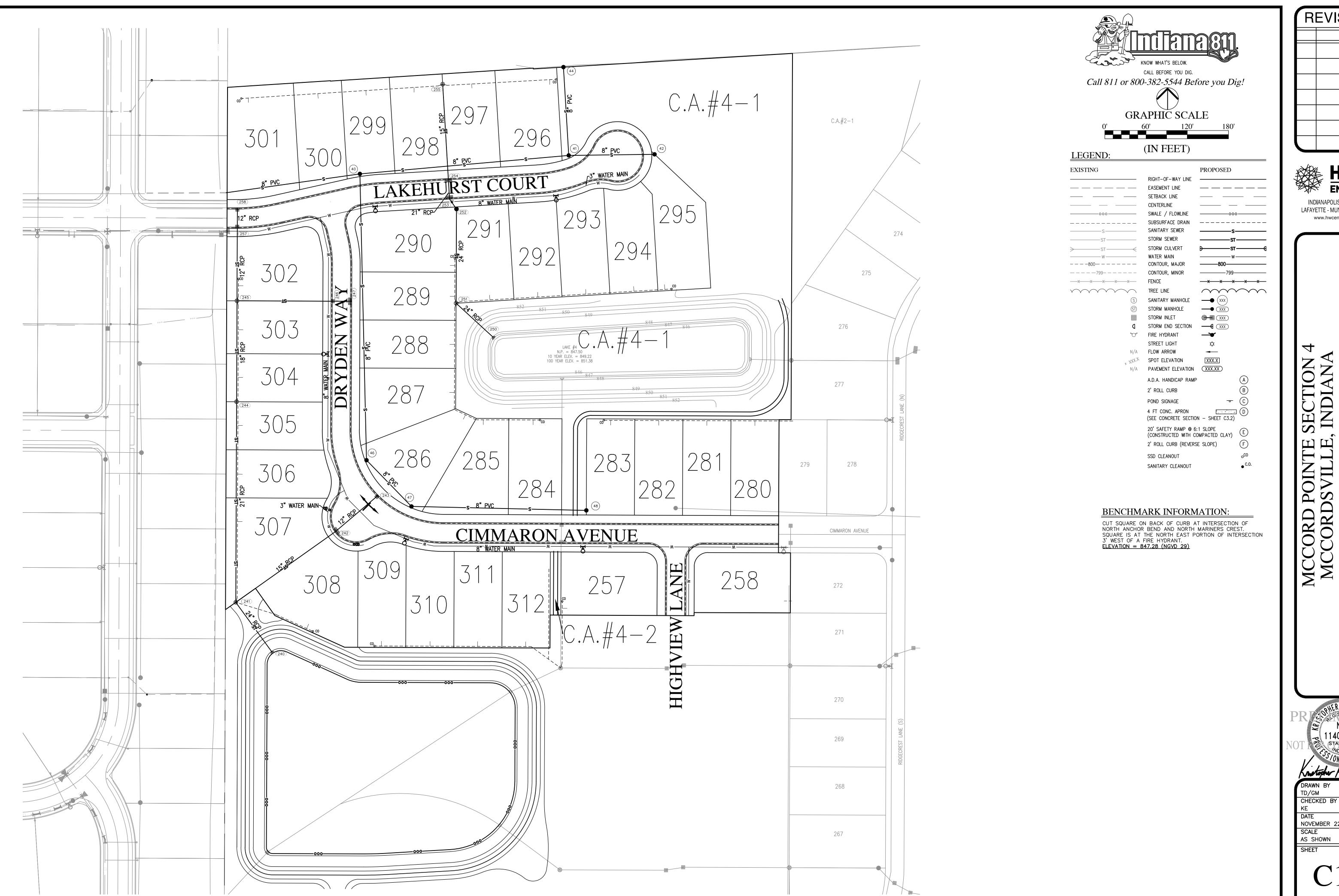
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MCCORD POIN MCCORDSVIL EMERGENC

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> SCALE AS SHOWN EMERGENCY FLOOD ROUT

PLAN



**REVISIONS** 

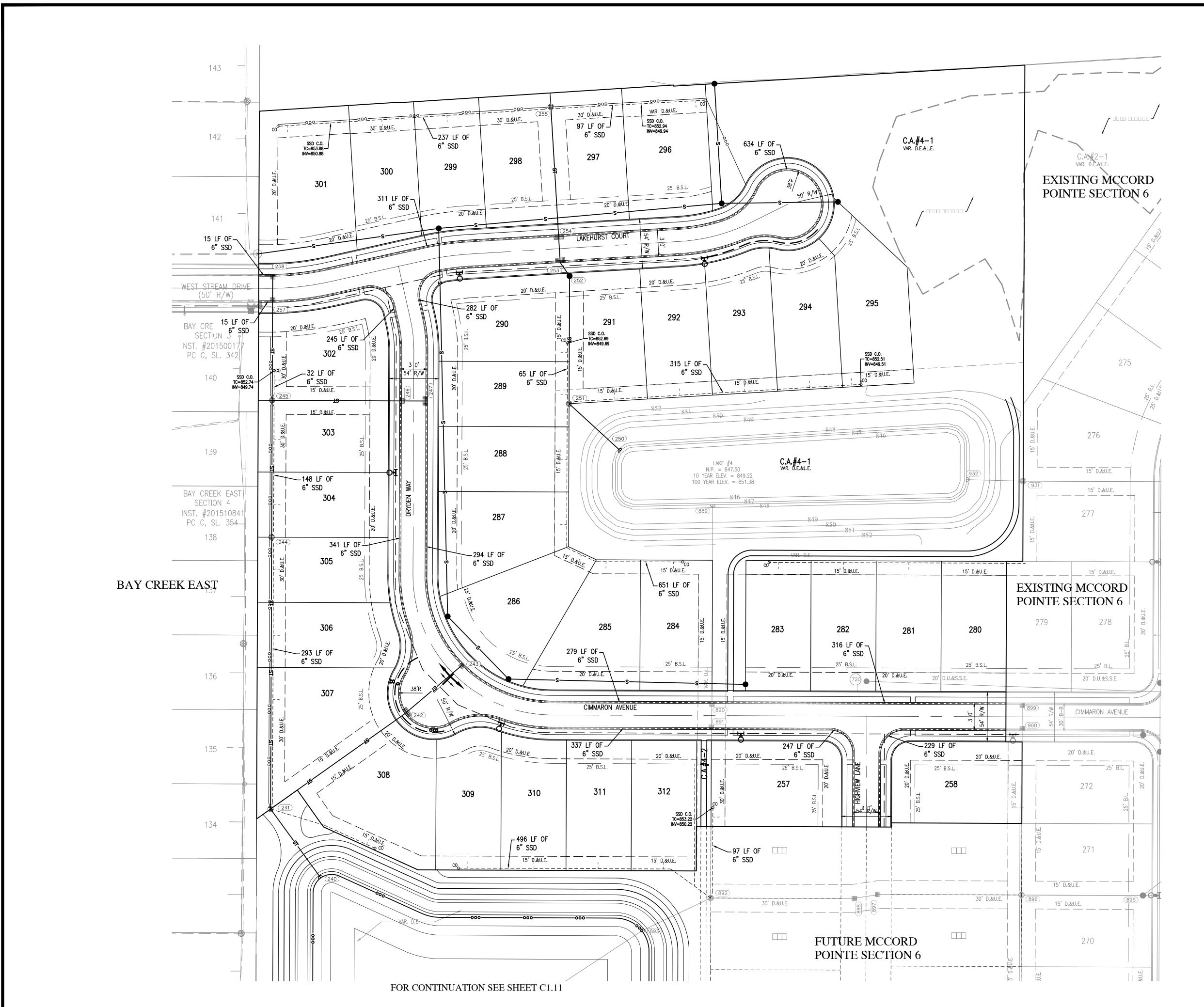


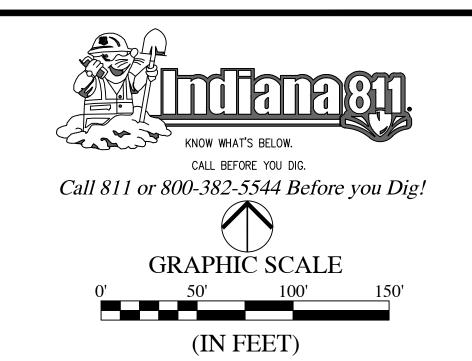
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MCCORD POINTE MCCORDSVILLE

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MASTER UTILITY PLAN





PROPOSED

# **EXISTING**

LEGEND:

 $\sim\sim\sim\sim\sim$ CLEAN OUT CURB SUBSURFACE DRAIN =----REAR YARD SUBSURFACE DRAIN \_\_\_\_\_\_\_ FOR HOUSE SUMP PUMP SUBSURFACE DRAIN LATERAL ---I-----

### BENCHMARK INFORMATION:

CUT SQUARE ON BACK OF CURB AT INTERSECTION OF NORTH ANCHOR BEND AND NORTH MARINERS CREST.

SQUARE IS AT THE NORTH EAST PORTION OF INTERSECTION

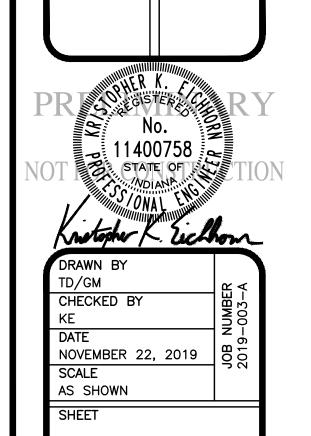
3' WEST OF A FIRE HYDRANT.

ELEVATION = 847.28 (NGVD 29)

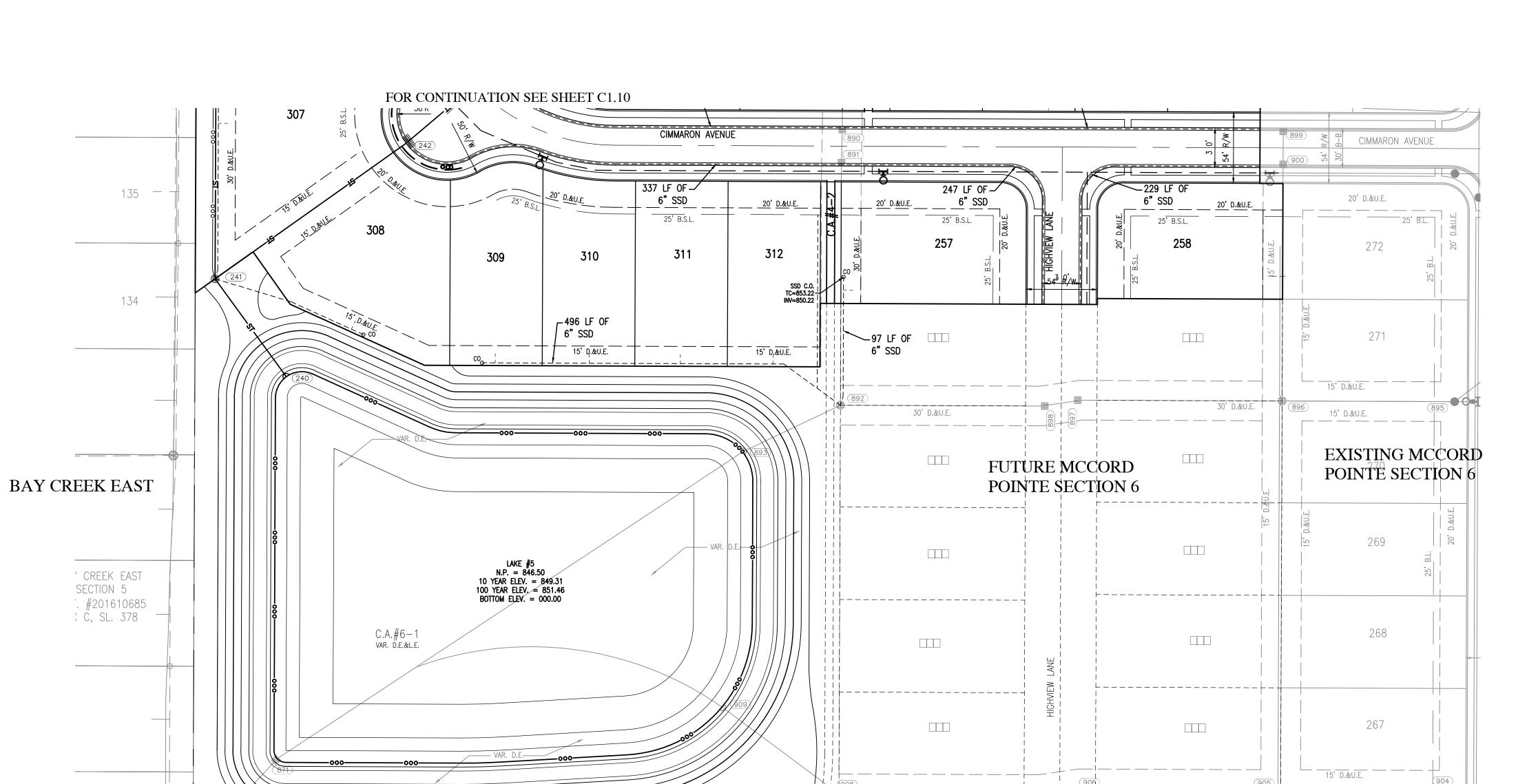
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SUBSURFACE DRAIN PLAN



30' D.&U.E.



### LEGEND:

15' D.&U.E.

EXISTING		PROPOSED
	RIGHT-OF-WAY LINE	
	EASEMENT LINE	
	SETBACK LINE	
	CENTERLINE	
s	SANITARY SEWER	s
ST	STORM SEWER	ST
>	STORM CULVERT	<del>D</del>
W	WATER MAIN	
XXXXX	FENCE	<del>xxxx</del>
	TREE LINE	$\sim\sim\sim\sim$
$\bigcirc$	SANITARY MANHOLE	<b>→</b>
ST	STORM MANHOLE	<b>→</b>
	STORM INLET	<b>⊕</b> ■
D	STORM END SECTION	<del></del>
$\forall$	FIRE HYDRANT	<b>—</b>
	CLEAN OUT	co <sub>O</sub>
	CURB SUBSURFACE DRAIN	
REAR	YARD SUBSURFACE DRAIN FOR HOUSE SUMP PUMP	
SUE	BSURFACE DRAIN LATERAL	

### BENCHMARK INFORMATION:

CUT SQUARE ON BACK OF CURB AT INTERSECTION OF NORTH ANCHOR BEND AND NORTH MARINERS CREST. SQUARE IS AT THE NORTH EAST PORTION OF INTERSECTION 3' WEST OF A FIRE HYDRANT.

ELEVATION = 847.28 (NGVD 29)

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> MCCORDSVILLE, INDIANA SUBSURFACE DRAIN PLAI

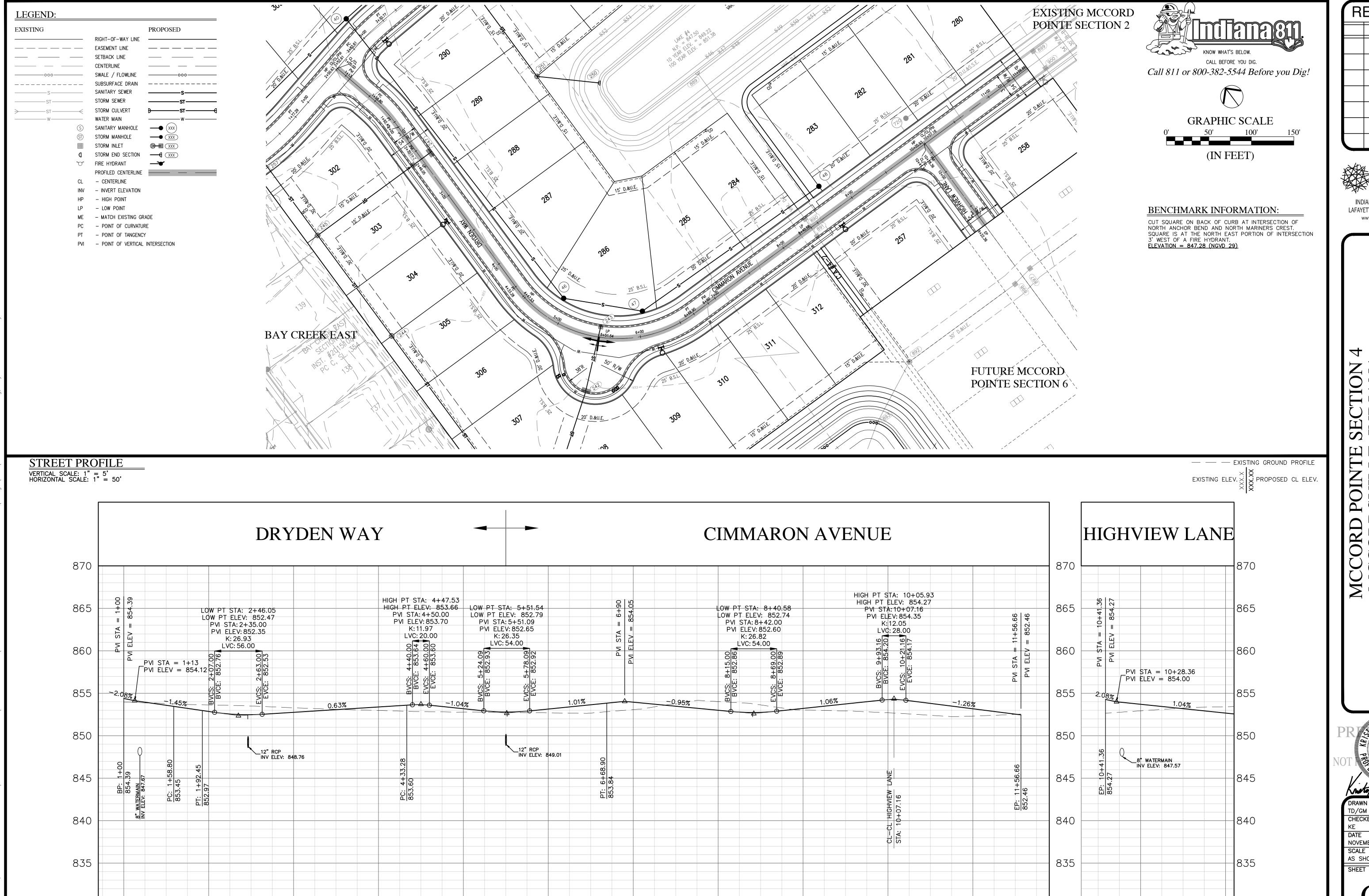
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SUBSURFACE DRAIN PLAN



2+00

1+00

3+00

4+00

5+00

6+00

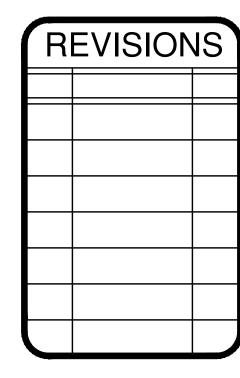
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10+00

11+00





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MCCORD POIN MCCORDSVIL STREET

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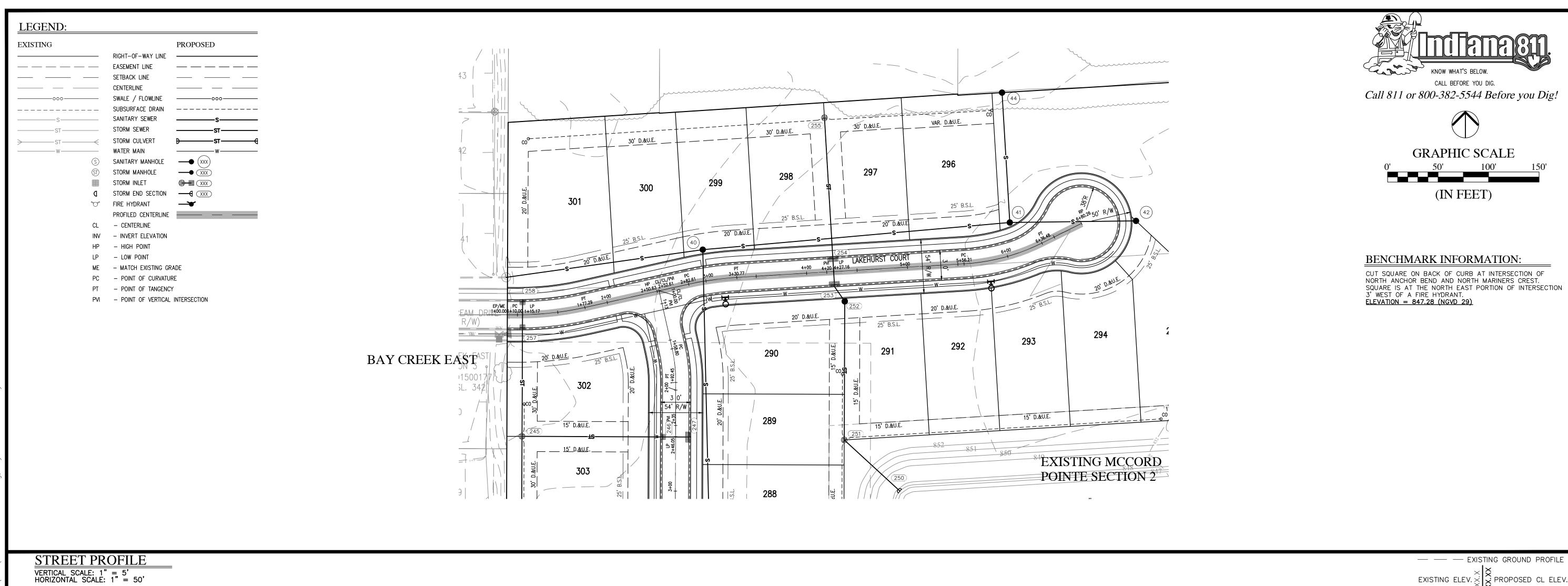
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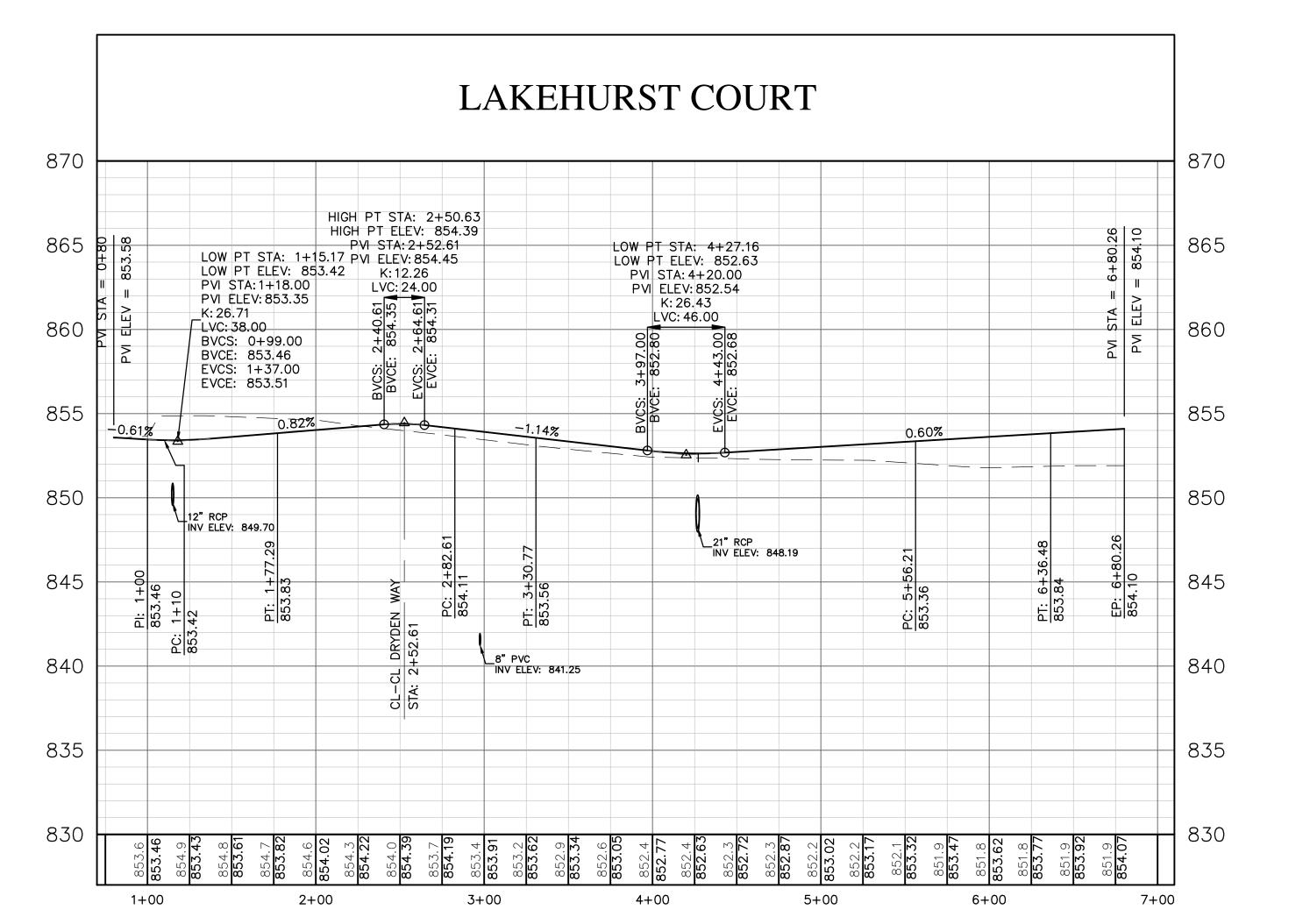
STREET PLAN & PROFILE

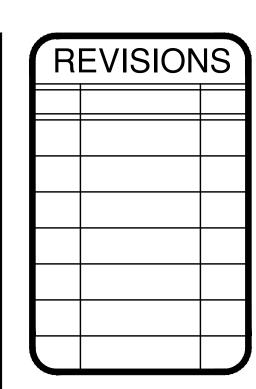
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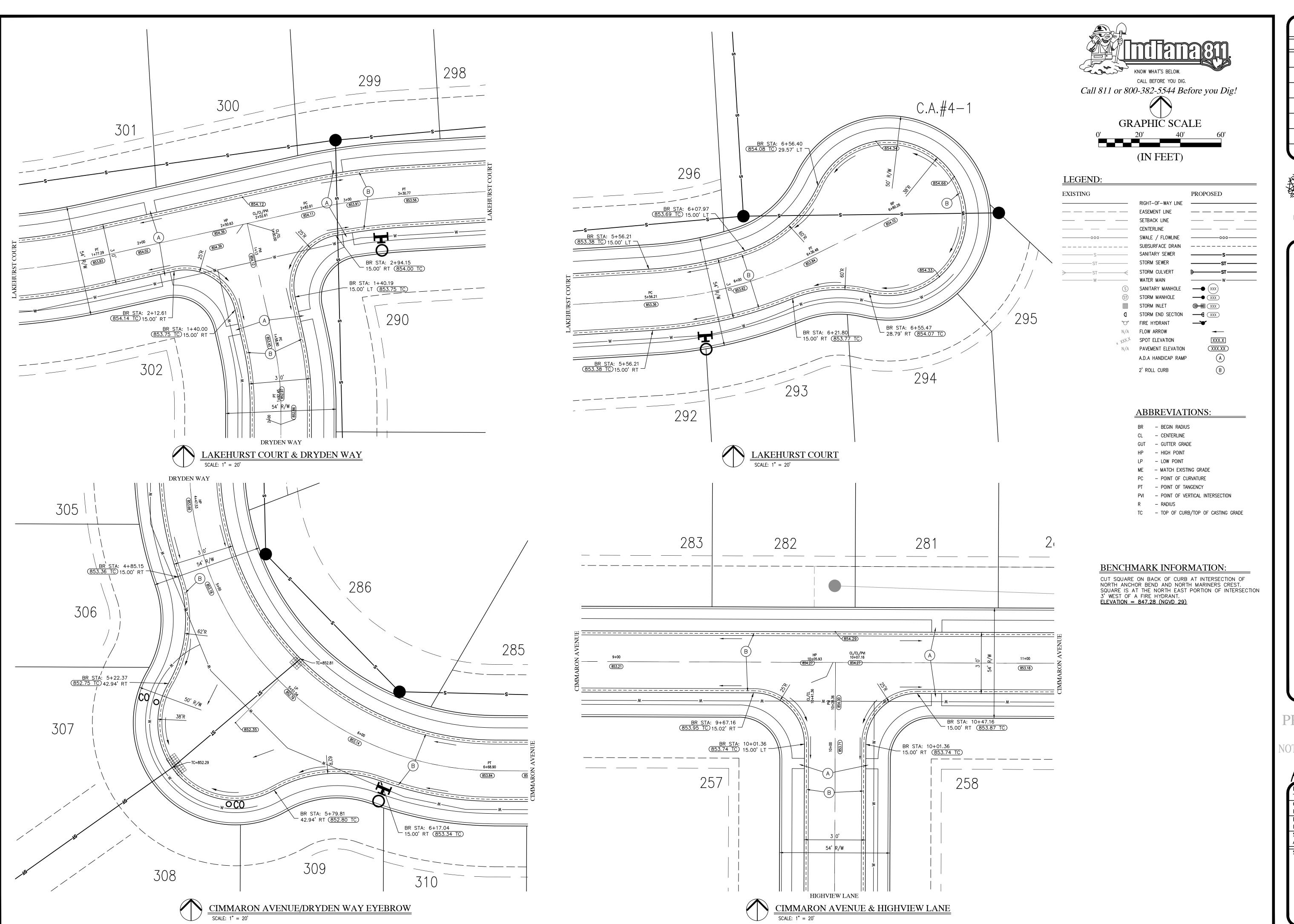


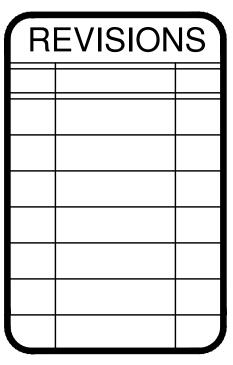
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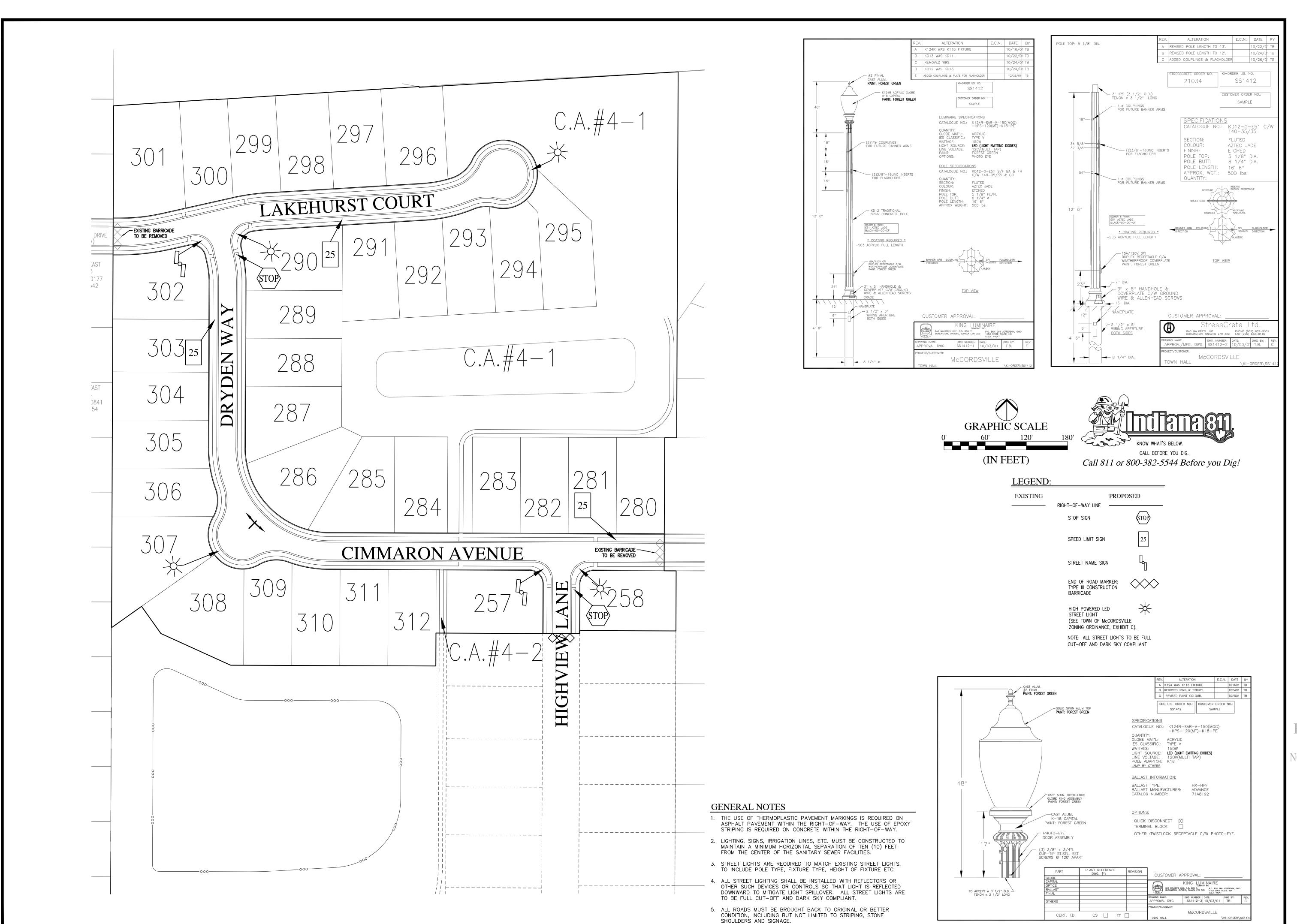
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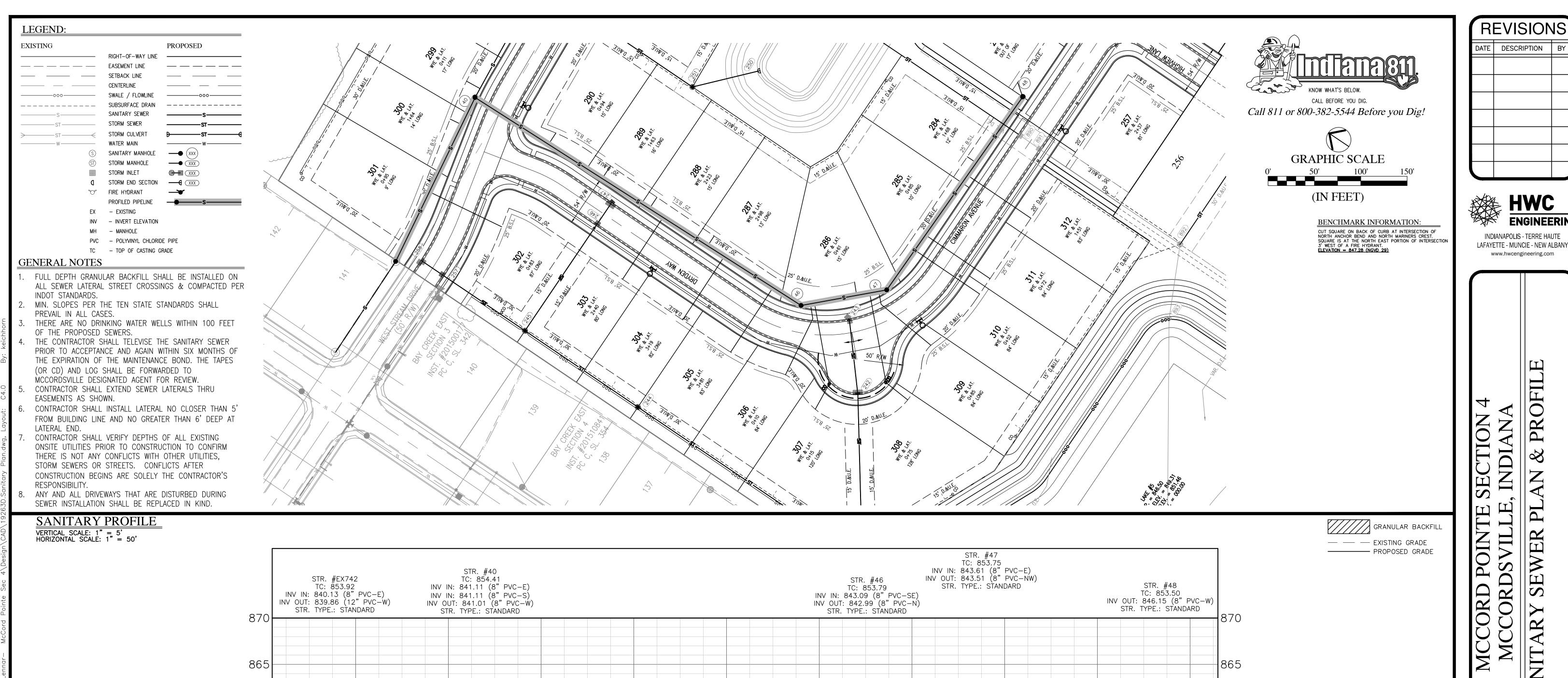
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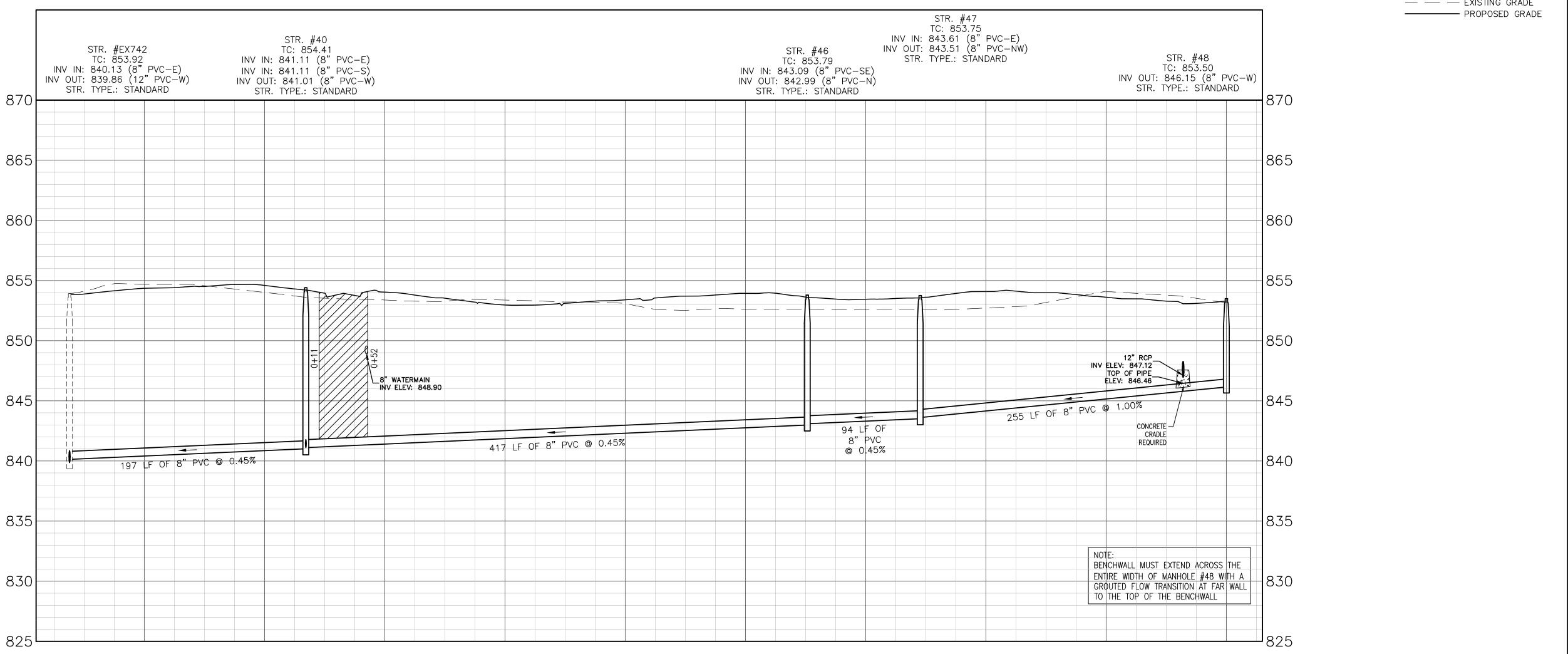
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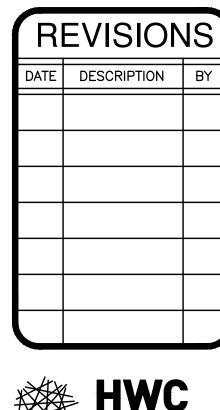
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SCALE AS SHOWN

TRAFFIC CONTROL AND LIGHTING PLAN







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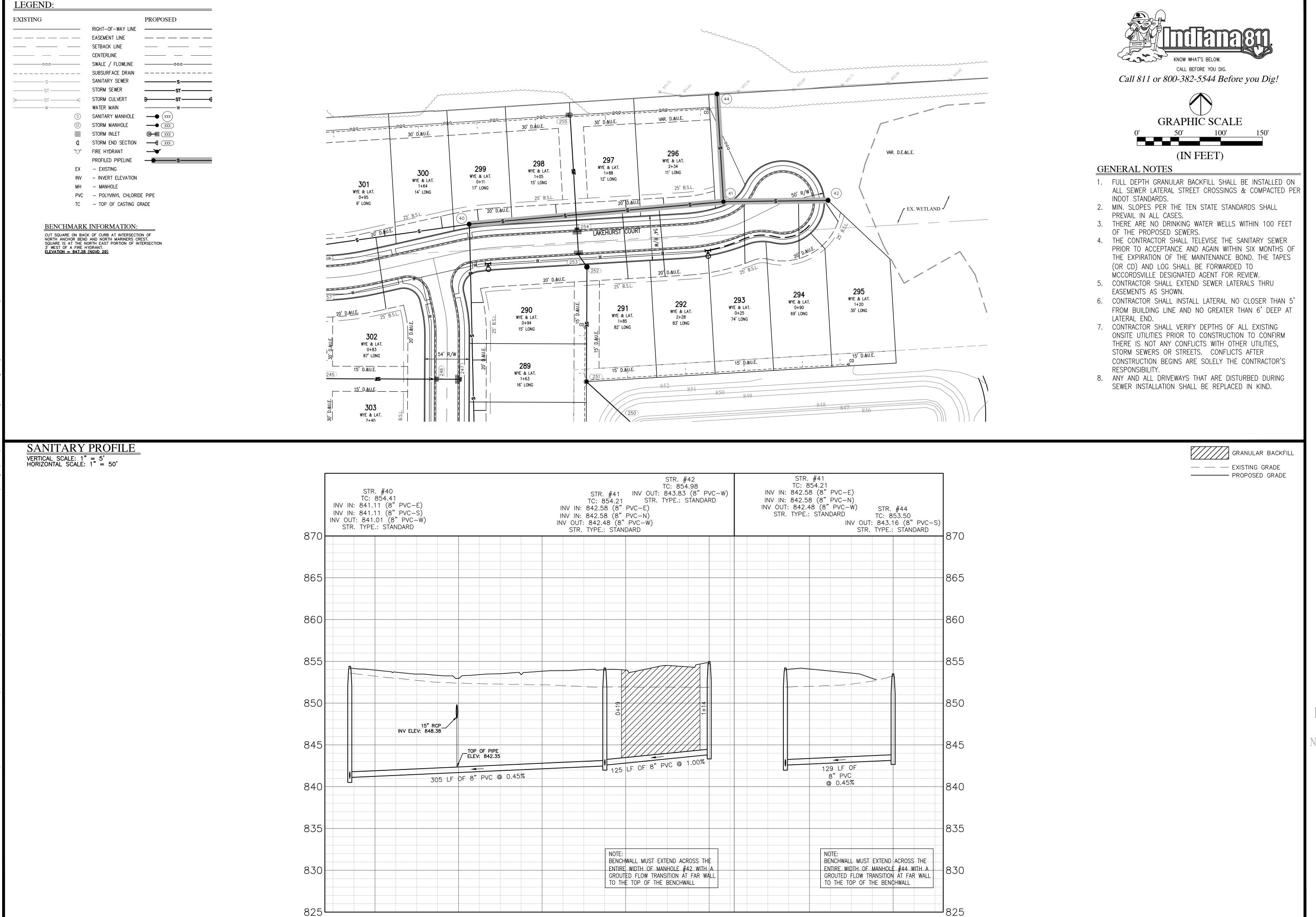
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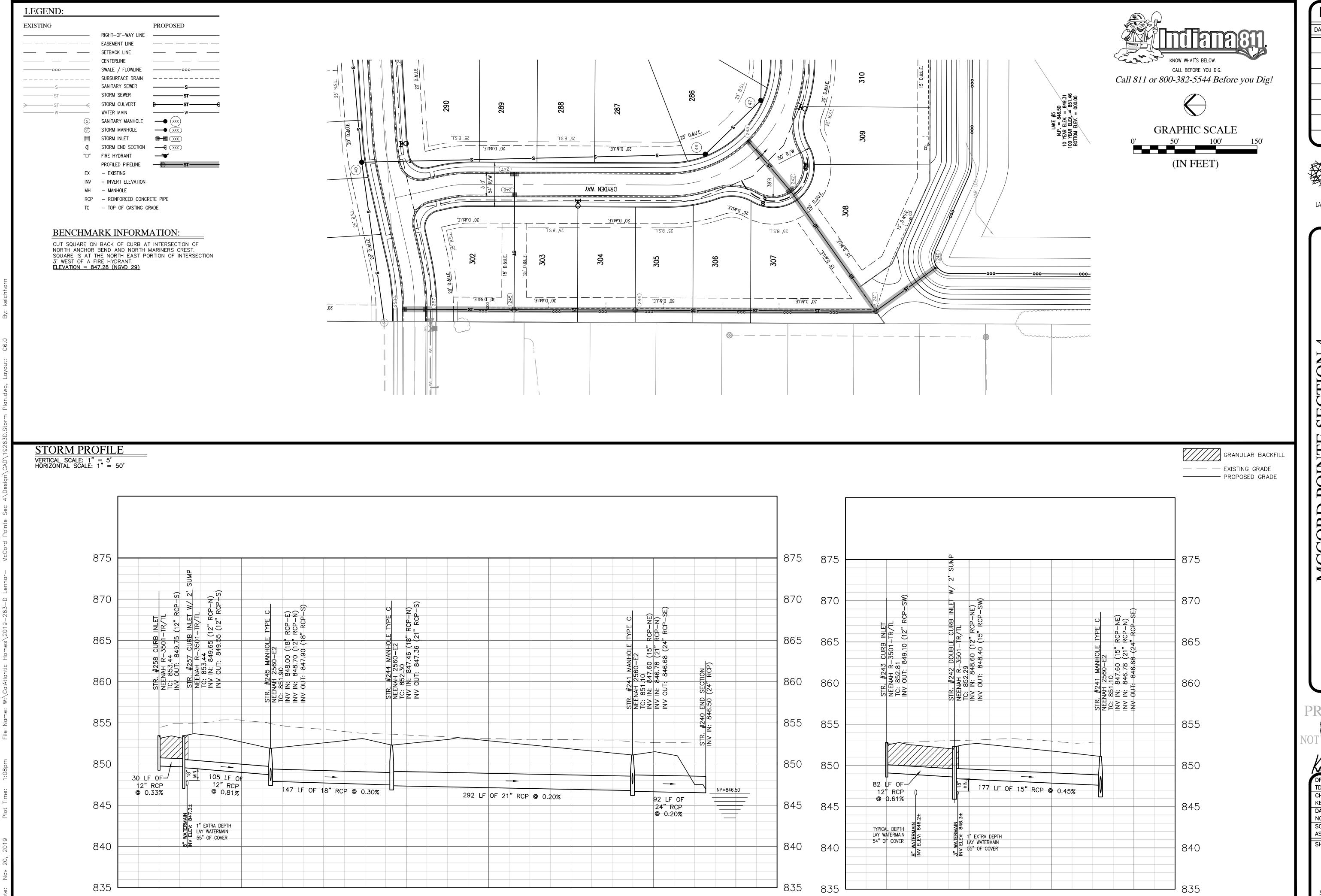
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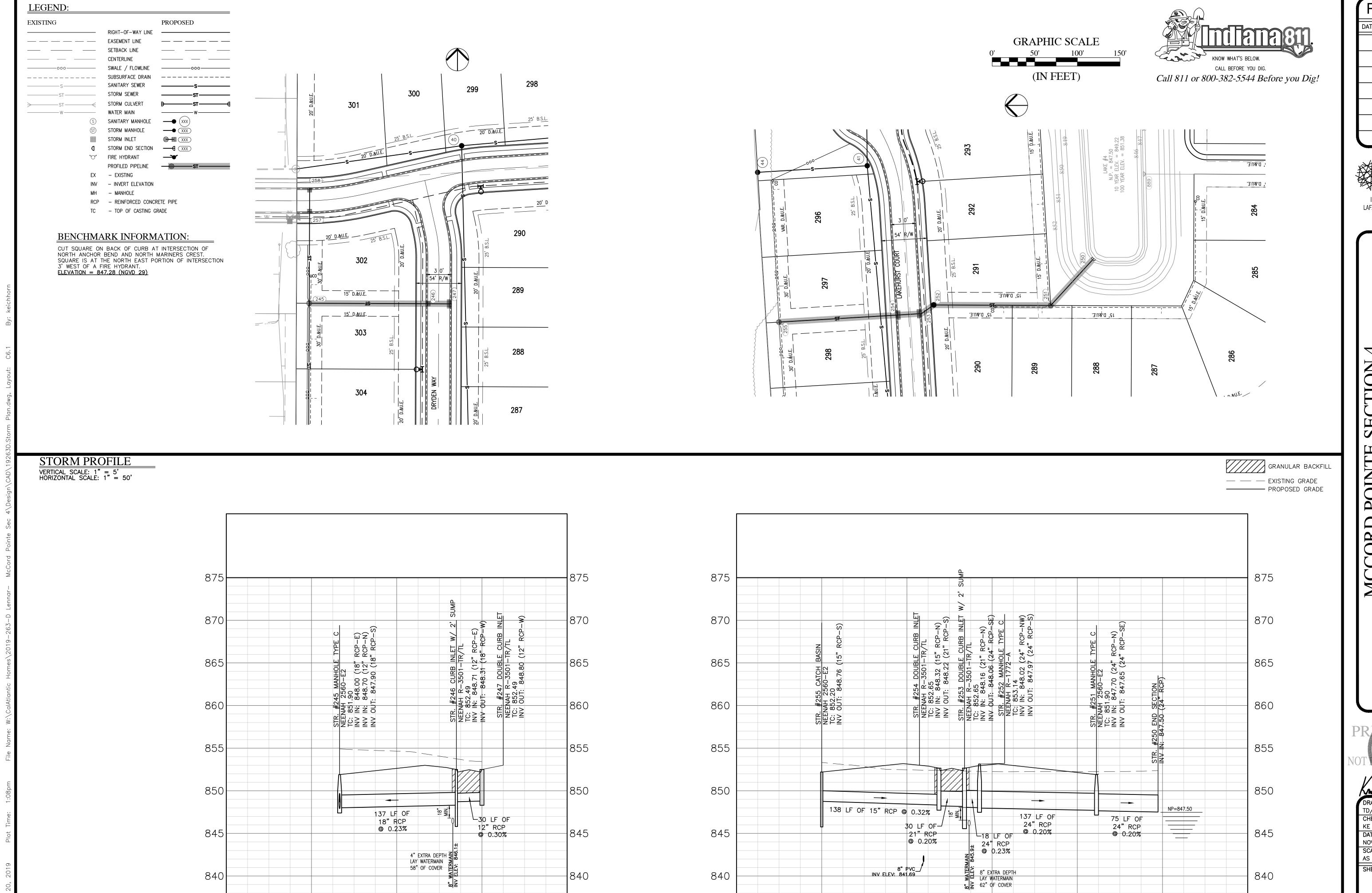
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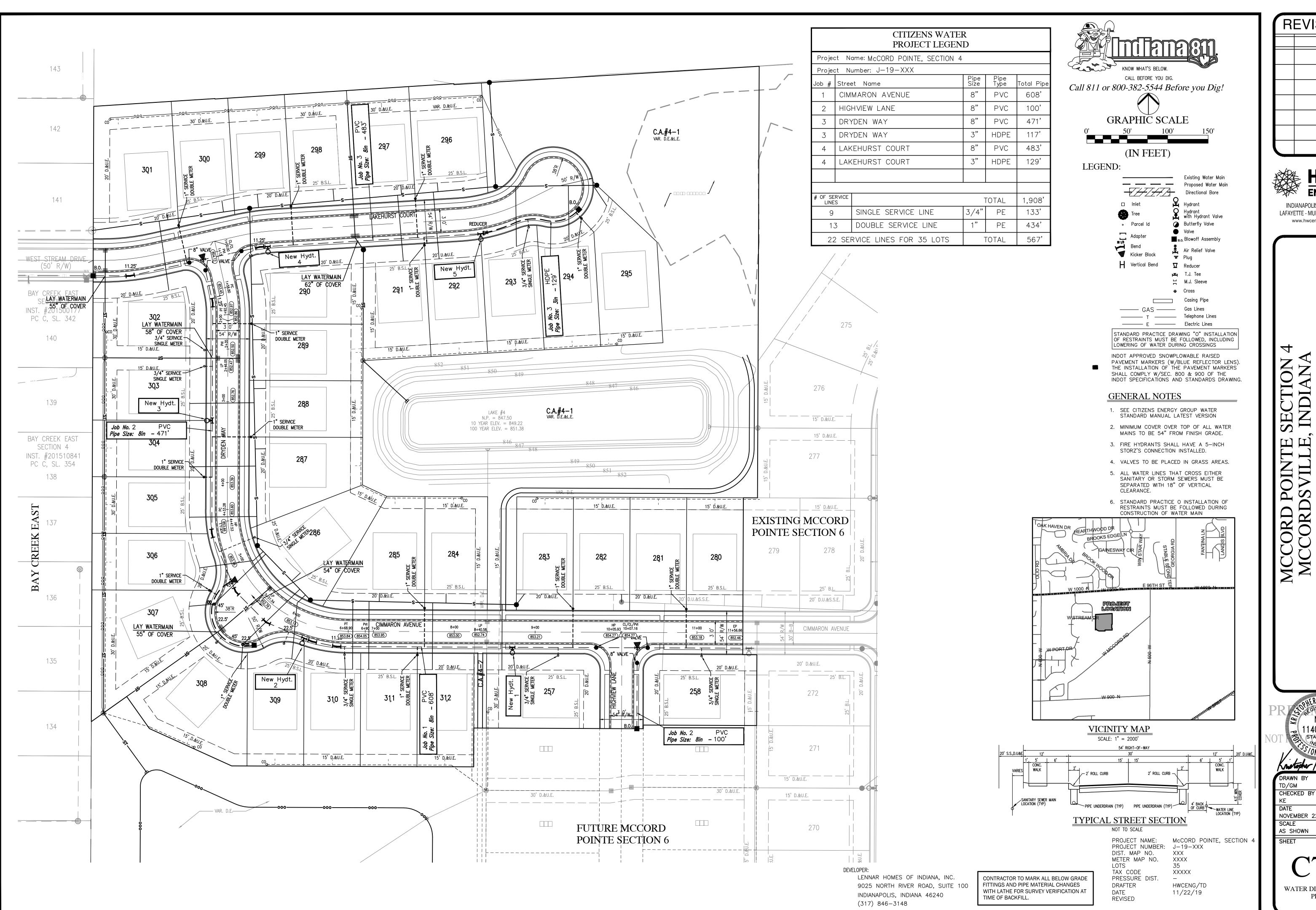
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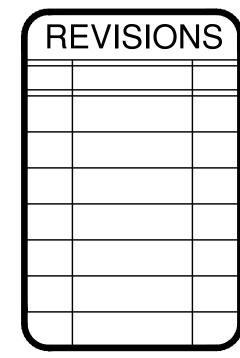
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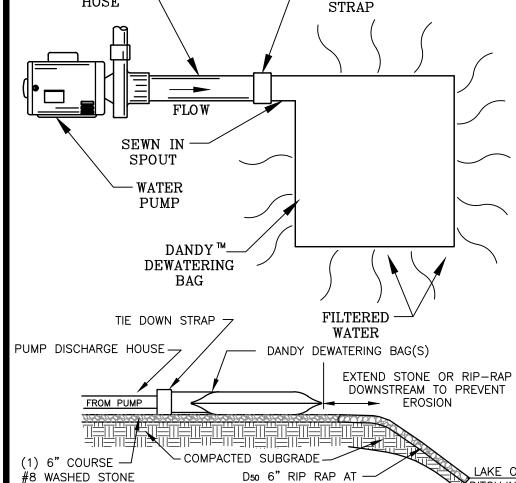
11400758 STATE OF WOLANA Knotopher K. Eichon TD/GM

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WATER DISTRIBUTION

PLAN

Const. Insp. Page 2 of 1 July 2004 DISCHARGE -TIE DOWN HOSE



### EROSION. DANDY DEWATERING BAG

FILTERING PAD.

OUTLET. IN ADEQUATE

QUANTITIES TO PREVENT

NOT-TO-SCALE DANDY DEWATERING BAG™

SPECIFICATIONS

NOTE: THE DANDY DEWATERING BAG™ WILL BE MANUFACTURED IN THE U.S.A. FROM A

NONWOVEN POLYPROPYLE	NE FABRIC THAT	MEETS OR EXCEEDS THE FO	DLLOWING SPECIFICATIONS:
Mechanical Properties	Test Method	Units	MARV
Cook Tracile Character	ACTIA D. ACZO	IAI /IIX	0.0 (005) 0.0 (005)
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205) x 0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50 x 50
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2618 (380)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80) X 0.36 (80)
UV Resistence	ASTM D 4355	%	70
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.180 (80)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	3866 (95)
Permittivity	ASTM D 4491	Sec <sup>-1</sup>	1.2

STORMWATER POLLUTION PREVENTION PLAN INDEX

A1 PLAN INDEX SEE COVER SHEET C1.0 A2 11X17 PLAT PROVIDED IN OVERALL SUBMITTAL A3 PROJECT TYPE THIS PROJECT IS: MCCORD POINTE SECTION 4, SINGLE FAMILY SUBDIVISION. IT CONSISTS OF 35 SINGLE FAMILY LOTS. A4 VICINITY MAP SEE SHEET C1.0

A5 LEGAL DESCRIPTION SEE PLAT FOR LEGAL DESCRIPTION. THE LATITUDE IS 39°55'25" N AND LONGITUDE IS 85°54'20" W. A6 SITE IMPROVEMENTS SEE SHEETS C1.1-C1.2

A7 14 DIGIT HYDROLOGIC UNIT CODE 05120201100150 A8 STATE OR FEDERAL WATER QUALITY PERMITS IDEM RULE 5

A9 POINTS WHERE STORMWATER WILL DISCHARGE DRAINS NORTH ACROSS 96TH STREET INTO HAMILTON COUNTY TO THE BEE CAMP CREEK DRAIN WHICH OUTLETS INTO GEIST RESERVOIR.

A10 LOCATION OF WETLANDS, LAKES, WATER DELINEATED ON PLANS. COURSES ADJACENT TO SITE

EX. STORM SEWER IN MCCORD POINTE TO BEE CAMP CREEK DRAIN TO GEIST A12 IDENTIFICATION OF POTENTIAL DISCHARGE TO NONE GROUNDWATER

A13 100 YEAR FLOODPLAINS, FLOODWAYS, AND NONE FLOOD FRINGES

A14 PRE CONSTRUCTION AND POST CONSTRUCTION 10-YR ALLOWABLE RELEASE RATE: \_\_\_ CFS PEAK DISCHARGE 10-YR POST CONSTRUCTION RATE: \_\_\_ CFS

A15 ADJACENT LAND USES SEE SHEETS C1.1-C1.2 NORTH: RESIDENTIAL LOTS **FAST: RESIDENTIAL LOTS** SOUTH: RESIDENTIAL LOTS WEST: RESIDENTIAL LOTS

A16 LOCATIONS AND BOUNDARIES OF DISTURBED SEE SHEETS C1.1-C1.8 A17 IDENTIFICATION OF EXISTING VEGETATIVE SEE SHEETS C1.3-C1.4 COVER

A18 SOILS MAP SEE SHEET C1.0 A19 LOCATIONS, SIZES, DIMENSIONS OF PROPOSED SEE SHEETS C1.1-C1.2 & C6.0-C6.3 STORMWATER SYSTEM

A20 LOCATIONS, SIZES, DIMENSIONS OF PROPOSED OFFSITE SANITARY SEWER, SEE SHEETS C4.0 OFFSITE CONSTRUCTION ACTIVITIES

A21 LOCATION OF SOIL STOCKPILE SEE SHEETS C1.3-C1.4 A22 EXISTING SITE TOPOGRAPHY SEE SHEETS C1.3-C1.4 A23 PROPOSED SITE TOPOGRAPHY SEE SHEETS C1.1-C1.2

B1 POLLUTANT SOURCES ERODED SOILS AND SEDIMENTS; OILS, GREASES, COOLANTS, ASSOCIATED WITH CONSTRUCTION CONCRETE WASHOUT, PETROLEUM FUELS AND OTHER FLUIDS ASSOCIATED WITH OPERATION AND MAINTENANCE OF CONSTRUCTION EQUIPMENT PRESENT ON THE SITE; DEBRIS INCLUDING CUTTINGS, SEALANTS, ADHESIVES, AND COATINGS

ASSOCIATED WITH INSTALLATION OF UNDERGROUND PIPES. INFRASTRUCTURE AND CONSTRUCTION OF THE BUILDING; PAINTS ASSOCIATED WITH PAVEMENT MARKING; FERTILIZERS ASSOCIATED WITH SEEDING AND PLANTING.

B2 SCHEDULE OF STORMWATER STORMWATER POLLUTION PREVENTION PLAN HAS BEEN QUALITY MEASURES RELATED TO DEVELOPED TO ELIMINATE SEDIMENT FROM LEAVING THE LAND DISTURBING ACTIVITIES PROJECT DURING CONSTRUCTION ACTIVITIES PROTECTING ADJOINING PROPERTIES AND THE RECEIVING WATERS.

PRE-CONSTRUCTION SCHEDULE

PORT-O-LET AS SHOWN ON SHEET C1.3.

1 CONTRACTOR TO CALL INDIANA UNDERGROUND 811 BY CALLING 811 OR 800-382-5544 TO VERIFY LOCATION OF EXISTING UTILITIES TWO (2) WORKING DAYS PRIOR TO START OF

2 CONTRACTOR SHALL INSTALL STONE CONSTRUCTION ENTRANCE PRIOR TO THE START OF EARTHWORK IN ACCORDANCE WITH THE PLAN LOCATION ON SHEET C1.3. 3 CONTRACTOR TO INSTALL RULE 5 INFORMATION POSTING, TRASH DUMPSTER, AND

4 CONTRACTOR TO INSTALL EXISTING STORM INLET PROTECTION, REFER TO SHEETS C1.3-C1.5 FOR LOCATIONS. CONTRACTOR SHALL EVALUATE EXISTING EROSION CONTROL MEASURES AND USE AND MAINTAIN, REPLACE AS NECESSARY.

5 CONTRACTOR SHALL INSTALL ALL REQUIRED SILT FENCE AROUND THE PERIMETER OF THE GRADING LIMITS, ANY TREE PROTECTION FENCING, ROCK CHECK DAMS AND SEDIMENT BASINS FOR THE IMMEDIATE PHASE OF WORK PRIOR TO ANY EARTHWORK ACTIVITIES SUCH AS EARTH MOVING OR STRIPPING COMMENCE.

6 CONTRACTOR SHALL INSTALL CONCRETE WASHOUT AREA AND CONSTRUCTION STAGING AREA PRIOR TO THE START OF EARTHWORK ACTIVITIES AS SHOWN ON SHEET C1.3. 7 CONTRACTOR TO EVALUATE LOCATION OF SOIL STOCKPILE AREAS AND PREPARE BY PLACING SILT FENCE DEFINING LIMITS, SEE SHEET C1.3.

B CONTRACTOR AND DEVELOPER SHALL COORDINATE WITH ADJOIING PROPERTY OWNERS RELATED TO OFFSITE SANITARY SEWER AND STORM SEWER WORK. CONTRACTOR SHALL INSTALL ALL REQUIRED SILT FENCE AROUND THE PERIMETER OF THE OFFSITE CONSTRUCTION LIMITS AS WELL AS ANY TREE PROTECTION FENCING PRIOR TO OFFSITE PHASE OF WORK. 9 ONCE PERIMETER ELEMENTS ARE INSTALLED, ANY UTILITY MODIFICATION OR RELOCATION AND OVERALL SITE DEMOLITION/DEBRIS REMOVAL PER SHEETS C1.1-C1.2 CAN COMMENCE IN FINAL

CONSTRUCTION SCHEDULE

PREPARATION FOR MASS EARTHWORK OPERATIONS.

10 BEGIN CLEARING AND GRADING ACTIVITIES. EARTHMOVING SHALL BE DONE IN A MANNER TO MINIMIZE EROSION. CONTRACTOR SHALL VERIFY ALL EXISTING STORM SEWER AND UTILITY CONNECTION LOCATIONS AND ELEVATION PRIOR TO MOVING EARTH, CONTACT ENGINEER WITH

11 CONTRACTOR SHALL STRIP TOPSOIL AND GRADE THE SITE PER PLAN AND PLACE PERMANENT AND TEMPORARY SEED AS INDICATED ON THE PLAN, INCLUDING SEEDING WITH FIBER BLANKET ON MOUNDS, POND BANKS, AND SWALES. DURATION OF EXPOSED AREAS SHALL BE KEPT MINIMAL DEPENDENT ON WEATHER. ALL POTENTIALLY IDLE AREAS FOR 15 DAYS SHALL BE TEMPORARILY SEEDED AND MULCHED PER IDEM RULE 5.

12 PERMANENT AND FINAL VEGETATION SHALL, IN ADDITION TO STRUCTURAL MEASURES, BE INSTALLED AS SOON AS PRACTICAL PER SHEETS C1.6-C1.8. 13 CONTRACTOR SHALL INSTALL SANITARY SEWER SYSTEM.

14 CONTRACTOR SHALL INSTALL STORM SEWER SYSTEM, SUBSURFACE DRAINAGE SYSTEM, AND SWALES. ALL STORM SEWER INLET PROTECTION AND OUTFALL RIP—RAP SHALL BE INSTALLED DITCH, INLET 15 CONTRACTOR SHALL INSTALL WATER DISTRIBUTION SYSTEM. AT THE TIME EACH INLET IS CONSTRUCTED PER SHEETS C1.6-C1.8.

16 CONTRACTOR SHALL INSTALL ALL STREETS AS INDICATED ON PLANS.

17 CONTRACTOR SHALL INSTALL FINAL SEED AND STRAW IN DISTURBED AREAS.

18 BUILDING FOUNDATION EXCAVATIONS.

19 VERTICAL CONSTRUCTION AND SINGLE FAMILY HOME BUILDING.

20 INSTALL PERMANENT OR TEMPORARY SOIL STABILIZATION AND LANDSCAPING.

21 CONTRACTOR SHALL MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AND UNTIL SEDIMENTATION OF STREETS AND STORM SEWERS NO LONGER OCCURS. CONTRACTOR SHALL INSPECT ON A WEEKLY BASIS OR AFTER A SIGNIFICANT STORM EVENT (AN EVENT OF AT LEAST 0.5 INCHES OF RAINFALL). SEE SHEETS C8.0-C8.1 FOR

22 COMPLETE FINAL GRADING AND INSTALL SEEDING AND LANDSCAPING (IF APPLICABLE) STABILIZE ALL REMAINING EXPOSED AREAS AS A RESULT OF CONSTRUCTION RELATED

23 ALL EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH INDIANA 327 IAC 15-5 AND RULE

B3 STABLE CONSTRUCTION ENTRANCE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE LOCATION AND SPECIFICATIONS FOR LOCATION: SEE SHEETS C1.3-C1.4

FOR DETAIL: SEE SHEET C8.1 B4 SEDIMENT CONTROL FOR SHEET SILT FENCE WILL BE INSTALLED ALONG THE PERIMETER OF THE PROJECT TO COLLECT SEDIMENT RUNOFF. FLOW AREAS FOR LOCATIONS: SEE SHEETS C1.3-C1.4 FOR DETAIL: SEE SHEET C8.1

B5 SEDIMENT CONTROL FOR ROCK CHECK DAMS, TEMPORARY DIVERSION SWALES, SEDIMENT CONCENTRATED FLOW AREAS TRAPS, EROSION CONTROL BLANKETS AND RIP-RAP WILL BE INSTALLED TO REDUCE VELOCITY AND COLLECT SEDIMENT RUNOFF. FOR LOCATIONS: SEE SHEETS C1.3-C1.8 FOR DETAILS: SEE SHEET C8.1

SILT FENCE WILL BE INSTALLED AROUND AREA INLETS, BASKETS WILL B6 STORM SEWER PROTECTION BE INSTALLED IN STREET INLETS TO PROVIDE CURB INLET PROTECTION AND RIP-RAP INSTALLED AT END SECTIONS. FOR LOCATIONS: SEE SHEETS C1.3-C1.8

MEASURES, LOCATIONS, SPECIFICATIONS FOR DETAILS: SEE SHEET C8.1 B7 RUNOFF CONTROL MEASURES ALMOST ALL OF THE EROSION CONTROL MEASURES USED AT THIS

SITE CAN BE VIEWED AS RUNOFF CONTROL MEASURES. CONSTRUCTION ENTRANCE STABILIZES EARTH TO MINIMIZE SEDIMENT RUNOFF AT CRITICAL LOCATIONS OF ACCESS POINTS TO THE SITE TO MINIMIZE SEDIMENT TRACKING ON STREETS. CONCRETE WASHOUT AREA ARE DISPOSAL AREAS FOR CONTAINMENTS AND ACCESSIBLE FOR CLEANUP AND REMOVAL OFFSITE. SILT FENCE AND INLET PROTECTION MEASURES COLLECT SEDIMENT LADEN RUNOFF PRIOR TO LEAVING SITE. RIP RAP REDUCES THE ENERGY OF THE RUNOFF AND THUS REDUCES POTENTIAL FOR EROSIVE SOILS. EROSION CONTROL BLANKETS ANCHOR MATTING TO INCREASE SEED GERMINATION AND STABILIZE SLOPES TO MINIMIZE SEDIMENT RUNOFF.

FOR DETAILS: SEE SHEET C8.1 B8 STORMWATER OUTLET PROTECTION RIP RAP WILL BE INSTALL AT ALL STORM PIPE OUTLETS INTO THE PONDS, AND ALL POND OUTLETS AS OUTLET PROTECTION. FOR LOCATIONS: SEE SHEETS C1.6-C1.8

FOR LOCATIONS: SEE SHEETS C1.3-C1.8

FOR DETAILS: SEE SHEET C8.1 B9 GRADE STABILIZATION STRUCTURES

LOCATION, DIMENSION, WET PONDS SPECIFICATIONS AND DETAILS FOR FOR LOCATIONS: SEE SHEETS C1.1-C1.2 AND C1.6-C1.7 STORMWATER QUALITY MEASURES FOR DETAIL: SEE SHEET C8.2

B11 TEMPORARY SURFACE TEMPORARY SEEDING IS REQUIRED FOR ANY AREA LEFT FOR 15 STABILIZATION FOR EACH SEASON DAYS OR LONGER WITHIN THIS PROJECT, SUCH AS SOIL STOCKPILES. TEMPORARY SEEDING IS ALSO REQUIRED IN AREAS THAT WILL BE DISTURBED IN FUTURE PROJECTS. THIS SEEDING WILL BE PLACED AFTER FINISH GRADING AND TOPSOIL REPLACEMENT.

FOR LOCATIONS: SEE SHEETS C1.6-C1.8 FOR DETAIL: SEE SHEET C8.1 B12 PERMANENT SURFACE PERMANENT SEEDING WILL BE APPLIED WITH THE INSTALLATION OF THE EROSION CONTROL BLANKETS AROUND THE PONDS. STABILIZATION EMBANKMENTS. WITH THE COMPLETION OF ONSITE STORM DRAINAGE SYSTEM, SWALES, SANITARY SEWER AND WATER LINES, AND AFTER

REPLACEMENT OF TOPSOIL AS DESCRIBED IN THE CONSTRUCTION SEQUENCING. FOR LOCATIONS: SEE SHEETS C1.6-C1.8 FOR DETAIL: SEE SHEET C8.1

B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN

MATERIAL HANDLING:

1. THE PROPER MANAGEMENT AND DISPOSAL OF WASTE SHOULD BE PRACTICED ON SITE AT ALL TIMES TO REDUCE POLLUTION OF STORM WATER RUNOFF. HAZARDOUS WASTE SHOULD ALWAYS BE DISPOSED OF THROUGH A DESIGNATED HAZARDOUS WASTE MANAGEMENT OR RECYCLING FACILITY 2.DESIGNATE A WASTE COLLECTION AREA ON-SITE THAT DOES NOT RECEIVE A SUBSTANTIAL AMOUNT OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY INTO A WATER BODY.

3.KEEP PRODUCTS IN ORIGINAL CONTAINERS WITH ORIGINAL LABELS AND MATERIAL SAFETY DATA INFORMATION ATTACHED.
MAKE SURE PRODUCTS ARE PROPERLY SEALED TO PREVENT LEAKS AND SPILLS AND STORED IN A WEATHER PROOF CONTAINED AREA AWAY FROM HEAT, SPARKS AND FLAMES. 4.A PROGRAM FOR RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE SHALL BE ESTABLISHED BY THE CONTRACTOR. ALL RECYCLING CONTAINERS SHALL BE CLEARLY LABELED.

5.ALL CONSTRUCTION ACTIVITIES ARE TO BE MONITORED AND MAINTAINED BY THE CONTRACTOR. AS EACH NEW SUBCONTRACTOR COMES ON—SITE, THE CONTRACTOR WILL CONDUCT AND DOCUMENT A MEETING TO ENSURE

WARENESS OF THE POLLUTANT PREVENTION PROGRAM. GUIDELINES FOR PROPER HANDLING, STORAGE AND DISPOSAL OF CONSTRUCTION SITE WASTES SHALL BE POSTED IN THE STORAGE AND USE AREAS, AND WORKERS SHALL BE 6.CONTAINERS AND EQUIPMENT MUST BE INSPECTED REGULARLY FOR LEAKS, CORROSION, SUPPORT OR FOUNDATION FAILURE, OR ANY OTHER SIGNS OF DETERIORATION AND MUST BE TESTED FOR SOUNDNESS. ANY FOUND TO BE

DEFECTIVE SHOULD BE REPAIRED OR REPLACED IMMEDIATELY. SPILL PREVENTION PLAN: THE INTENTION OF THIS SPILL PREVENTION, CONTROL AND COUNTERMEASURES (SPCC) IS TO ESTABLISH THE PROCEDURES

AND FOUIPMENT REQUIRED TO PREVENT THE DISCHARGE OF OIL AND HAZARDOÙS SUBSTANCES IN QUANTITIES THAT VIOLATE APPLICABLE WATER QUALITY STANDARDS, CAUSE A SHEEN UPON OR DISCOLORATION OF THE SURFACE OF NAVIGABLE WATERS OR ADJOINING SHORELINES, OR CAUSE SLUDGE OR EMULSION TO BE DEPOSITED BENEATH THE SURFACE OF THE WATER OR ADJOINING SHORELINES. THE PLAN ALSO ESTABLISHES THE ACTIVITIES REQUIRED TO MITIGATE SUCH DISCHARGES (I.E., COUNTERMEASURES) SHOULD THEY OCCUR.

POLLUTANT: MEANS POLLUTANT OF ANY KIND OR IN ANY FORM, INCLUDING BUT NOT LIMITED TO SEDIMENT, PAINT, CLEANING AGENT, CONCRETE WASHOUT, PESTICIDES, NUTRIENTS, TRASH, HYDRAULIC FLUIDS, FUEL, OIL, PETROLEUM, FUEL OIL, SLUDGE, OIL REFUSE, AND OIL MIXED WITH WASTES OTHER THAN DREDGED SOIL

INCLUDES BUT IS NOT LIMITED TO, ANY SPILLING, LEAKING, PUMPING, POURING, EMITTING, EMPTYING, OR DUMPING. MEANS ALL WATERS OF THE UNITED STATES THAT ARE CONNECTED WITH A NAVIGABLE STREAM, LAKE, OR SEA. THIS DEFINITION IS USUALLY INTERPRETED TO MEAN ANY WASTEWATER (EVEN NORMALLY DRY WASH OR STORM SEWER) THAT EVENTUALLY DRAINS INTO A NAVIGABLE STREAM].

THIS PLAN SHALL BE REVIEWED AND/OR AMENDED, IF NECESSARY, WHENEVER THERE IS A CHANGE IN THE DESIGN OF THE SITE, CONSTRUCTION, OPERATION, OR MAINTENANCE WHICH MATERIALLY AFFECTS THE SITE'S POTENTIAL FOR THE

1. NEAREST NAVIGABLE WATER: GEIST RESERVOIR — FALL CREEK
2. DRAINAGE SYSTEM: ALL STORM DRAINAGE LEAVES THE SITE BY CLOSED STORM SYSTEMS TO EXISTING PONDS IN MCCORD POINTE WHICH DISCHARGE INTO BEE CAMP CREEK REGULATED DRAIN.

3.POSSIBLE SPILL SOURCES (DURING AND POST CONSTRUCTION): VEHICULAR SOURCES SUCH AS LEAKING FUEL OR OIL,

BRAKE FLUID, GREASE, ANTIFREEZE; TRASH AND DEBRIS, BIOLOGICAL AGENTS FOUND IN TRASH AND DEBRIS FERTILIZERS, HOUSEHOLD ITEMS INCLUDING BUT NOT LIMITED TO CLEANING AGENTS, CHEMICALS, PAINT, HERBICIDES AND 4. GROUNDWATER CONTAMINATION: GROUNDWATER CONTAMINATION.

THE FACILITY MAINTAINS NO ABOVE GROUND OR UNDER GROUND STORAGE TANKS AT THIS SITE. THEREFORE, IT IS FELT
THAT THERE IS LITTLE OR NO POSSIBILITY OF POST CONSTRUCTION GROUNDWATER CONTAMINATION. THE FACILITY DOES

HAVE PUBLIC SANITARY SEWER AND PUBLIC WATER. ALERT PROCEDURES FOR SPILLS:

1. ANY PERSONNEL OBSERVING A SPILL WILL IMMEDIATELY INSTIGATE THE FOLLOWING PROCEDURE: A. DIALING "911" FROM ANY TELEPHONE. B. NOTIFY THE APPROPRIATE EMERGENCY PERSONNEL

2. THE EMERGENCY COORDINATOR WILL THEN TAKE THE FOLLOWING ACTIONS:

A. BARRICADE THE AREA ALLOWING NO VEHICLES TO ENTER OR LEAVE THE SPILL ZONE B. NOTIFY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF EMERGENCY RESPONSE BY CALLING THE APPROPRIATE TELEPHONE NUMBER:

TOLL FREE 800-233-7745 ALSO THE NATIONAL RESPONSE CENTER AT 800-424-8802 AND PROVIDE THE FOLLOWING INFORMATION:

LOCATION OF THE SPILL

IDENTITY OF MATERIAL SPILLED PROBABLE SOURCE OF THE SPILI PROBABLE TIME OF THE SPILL

PRESENT AND ANTICIPATED MOVEMENT OF THE SPILL PERSONNEL AT THE SCEN

ACTION INITIATED BY PERSONNEL C. NOTIFY THE TOWN OF MCCORDSVILLE FIRE DEPARTMENT PHONE: 9-1-1 D. NOTIFY THE TOWN OF MCCORDSVILLE POLICE DEPARTMENT PHONE: 9-1-1
E. NOTIFY WASTE RECOVERY CONTRACTOR, MAINTENANCE PERSONNEL OR OTHER CONTRACTUAL PERSONNEL AS

F. COORDINATE AND MONITOR CLEANUP UNTIL THE SITUATION HAS BEEN STABILIZE AND ALL SPILLS HAVE BEEN G. COOPERATE WITH THE IDEM-OER ON PROCEDURES AND REPORTS INVOLVED WITH THE EVENT.

□THE DEVELOPER SHALL BE CONTINUALLY KEPT INFORMED, MAINTAIN LISTS OF QUALIFIED CONTRACTORS AND AVAILABLE A CONTINUALLY UPDATED LIST OF AVAILABLE ABSORBENT MATERIALS AND CLEAN—UP SUPPLIES SHOULD BE KEPT ON ALL MAINTENANCE PERSONNEL WILL BE MADE AWARE OF TECHNIQUES FOR PREVENTION AND CONTAINMENT OF SPILLS. THEY WILL BE INFORMED OF THE REQUIREMENTS AND PROCEDURES OUTLINED IN THIS PLAN. THEY WILL BE KEPT BREAST OF CURRENT DEVELOPMENTS OR NEW INFORMATION ON THE PREVENTION OF SPILLS AND/OR NECESSARY ALTERATIONS TO THIS PLAN. IF SPILLS OCCUR WHICH COULD ENDANGER HUMAN LIFE, THIS BECOMES THE PRIMARY CONCERN. THE DISCHARGE OF THE LIFE SAVING PROTECTION FUNCTION WILL BE CARRIED OUT BY THE LOCAL POLICE AND FIRE DEPARTMENTS.

ABSORBENT MATERIALS, WHICH ARE USED IN CLEANING UP SPILLED MATERIALS, WILL BE DISPOSED OF IN A MANNER SUBJECT TO THE APPROVAL OF THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMEN

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.

VEHICLE & EQUIPMENT MAINTENANCE

PREVENT OR REDUCE THE CONTAMINATION OF STORMWATER RESULTING FROM VEHICLE AND EQUIPMENT MAINTENANCE BY RUNNING A "DRY AND CLEAN SITE". THE BEST OPTION WOULD BE TO PERFORM MAINTENANCE ACTIVITIES AT AN OFFSITE PROVIDING COVER FOR MATERIALS STORED OUTSIDE, CHECKING FOR LEAKS AND SPILLS, AND CONTAINING AND CLEANING

IFLUSHING OF SPILLED MATERIAL WITH WATER WILL NOT BE PERMITTED UNLESS SO AUTHORIZED BY THE INDIANA

THESE PROCEDURES ARE SUITABLE ON ALL CONSTRUCTION PROJECTS WHERE AN ONSITE YARD AREA IS NECESSARY FOR STORAGE AND MAINTENANCE OF HEAVY EQUIPMENT AND VEHICLES.

ONSITE VEHICLE AND EQUIPMENT MAINTENANCE SHOULD ONLY BE USED WHERE IT IS IMPRACTICAL TO SEND VEHICLES AND EQUIPMENT OFFSITE FOR MAINTENANCE AND REPAIR. SENDING VEHICLES/EQUIPMENT OFFSITE SHOULD BE DONE IN CONJUNCTION WITH A STABILIZED CONSTRUCTION ENTRANCE/EXIT. OUTDOOR VEHICLE OR EQUIPMENT MAINTENANCE IS A POTENTIALLY SIGNIFICANT SOURCE OF STORMWATER POLLUTION. ACTIVITIES THAT CAN CONTAMINATE STORMWATER INCLUDE ENGINE REPAIR AND SERVICE, CHANGING OR REPLACEMENT OF FLUIDS, AND OUTDOOR EQUIPMENT STORAGE AND PARKING

IF MAINTENANCE MUST OCCUR ONSITE, USE DESIGNATED AREAS, LOCATED AWAY FROM DRAINAGE COURSES. DEDICATED MAINTENANCE AREAS SHOULD BE PROTECTED FROM STORMWATER RUNON AND RUNOFF, AND SHOULD BE LOCATED AT LEAST 50 FT FROM DOWNSTREAM DRAINAGE FACILITIES AND WATERCOURSES.

DRIP PANS OR ABSORBENT PADS SHOULD BE USED DURING VEHICLE AND EQUIPMENT MAINTENANCE WORK THAT INVOLVES FLUIDS, UNLESS THE MAINTENANCE WORK IS PERFORMED OVER AN IMPERMEABLE SURFACE IN A DEDICATED

PLACE A STOCKPILE OF SPILL CLEANUP MATERIALS WHERE IT WILL BE READILY ACCESSIBLE. FUELING TRUCKS AND FUELING AREAS ARE REQUIRED TO HAVE SPILL KITS AND/OR USE OTHER SPILL PROTECTION

USE ABSORBENT MATERIALS ON SMALL SPILLS. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF INSPECT ONSITE VEHICLES AND EQUIPMENT DAILY AT STARTUP FOR LEAKS, AND REPAIR IMMEDIATELY, OR REMOVE FROM

KEEP VEHICLES AND EQUIPMENT CLEAN: DO NOT ALLOW EXCESSIVE BUILD-UP OF OIL AND GREASE. SEGREGATE AND RECYCLE WASTES, SUCH AS GREASES, USED OIL OR OIL FILTERS, ANTIFREEZE, CLEANING SOLUTIONS, AUTOMOTIVE BATTERIES, HYDRAULIC AND TRANSMISSION FLUIDS. PROVIDE SECONDARY CONTAINMENT AND COVERS FOR THESE MATERIALS IF STORED ONSITE.

TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER MAINTENANCE AND SPILL CLEANUP PROCEDURES. PROPERLY DISPOSE OF USED OILS, FLUIDS, LUBRICANTS, AND SPILL CLEANUP MATERIALS. DO NOT PLACE USED OIL IN A DUMPSTER OR POUR INTO A STORM DRAIN OR WATERCOURSE. PROPERLY DISPOSE OF OR RECYCLE USED BATTERIES.

DO NOT BURY USED TIRES. REPAIR LEAKS OF FLUIDS AND OIL IMMEDIATELY.

KEEP AMPLE SUPPLIES OF SPILL CLEANUP MATERIALS ONSITE. MAINTAIN WASTE FLUID CONTAINERS IN LEAK PROOF CONDITION.

VEHICLE EQUIPMENT FUELING PROCEDURES AND PRACTICES ARE DESIGNED TO PREVENT FUEL SPILLS AND LEAKS AND REDUCE OR ELIMINATE CONTAMINATION OF STORMWATER. THIS CAN BE ACCOMPLISHED BY USING OFFSITE FACILITIES, FUELING IN DESIGNATED AREAS ONLY, ENCLOSING OR COVERING STORED FUEL, IMPLEMENTING SPILL CONTROLS, AND TRAINING EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING PROCEDURES.

ONSITE VEHICLE AND EQUIPMENT FUELING SHOULD ONLY BE USED WHERE IT IS IMPRACTICAL TO SEND VEHICLES AND OFFSITE FOR FUELING, SENDING VEHICLES AND EQUIPMENT OFFSITE SHOULD BE DONE IN CONJUNCTION WITH A STABILIZED CONSTRUCTION ENTRANCE/EXIT.

USE OFFSITE FUELING STATIONS AS MUCH AS POSSIBLE. THESE BUSINESSES ARE BETTER EQUIPPED TO HANDLE FUEL AND SPILLS PROPERLY. PERFORMING THIS WORK OFFSITE CAN ALSO BE ECONOMICAL BY ELIMINATING THE NEED FOR A SEPARATE FUELING AREA AT A SITE. DISCOURAGE "TOPPING OFF' OF FUEL TANKS.

ABSORBENT SPILL CLEANUP MATERIALS AND SPILL KITS SHOULD BE AVAILABLE IN FUELING AREAS AND ON FUELING TRUCKS AND SHOULD BE DISPOSED OF PROPERLY AFTER USE. DRIP PANS OR ABSORBENT PADS SHOULD BE USED DURING VEHICLE AND EQUIPMENT FUELING, UNLESS THE FUELING IS PERFORMED OVER AN IMPERMEABLE SURFACE IN A DEDICATED FUELING AREA. USE ABSORBENT MATERIALS ON SMALL SPILLS. DO NOT HOSE DOWN OR BURY THE SPILL. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF PROPERLY. AVOID MOBILE FUELING OF MOBILE CONSTRUCTION EQUIPMENT AROUND THE SITE; RATHER, TRANSPORT THE EQUIPMENT

TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING AND CLEANUP PROCEDURES. DEDICATED FUELING AREAS SHOULD BE PROTECTED FROM STORMWATER RUNON AND RUNOFF AND SHOULD BE LOCATED B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS AT LEAST 50 FT AWAY FROM DOWNSTREAM DRAINAGE FACILITIES AND WATERCOURSES. FUELING MUST BE PERFORMED

PROTECT FUELING AREAS WITH BERMS AND DIKES TO PREVENT RUNON, RUNOFF, AND TO CONTAIN SPILLS. NOZZLES USED IN VEHICLE AND EQUIPMENT FUELING SHOULD BE EQUIPPED WITH AN AUTOMATIC SHUTOFF TO CONTROL DRIPS. FUELING OPERATIONS SHOULD NOT BE LEFT UNATTENDED. FEDERAL, STATE, AND LOCAL REQUIREMENTS SHOULD BE OBSERVED FOR ANY STATIONARY ABOVE GROUND STORAGE

VEHICLES AND EQUIPMENT SHOULD BE INSPECTED EACH DAY OF USE FOR LEAKS. LEAKS SHOULD BE REPAIRED IMMEDIATELY, OR PROBLEM VEHICLES OR EQUIPMENT SHOULD BE REMOVED FROM THE PROJECT SITE. KEEP AMPLE SUPPLIES OF SPILL CLEANUP MATERIALS ONSITE.

IMMEDIATELY CLEAN UP SPILLS AND PROPERLY DISPOSE OF CONTAMINATED SOIL AND CLEANUP MATERIALS.

CONCRETE WASHOUT
THE FOLLOWING STEPS WILL HELP REDUCE STORMWATER POLLUTION FROM CONCRETE WASTES:
DISCUSS THE CONCRETE MANAGEMENT TECHNIQUES DESCRIBED IN THIS BMP (SUCH AS HANDING OF CONCRETE WASTE AND WASHOUT) WITH THE READY MIX CONCRETE SUPPLIER BEFORE ANY DELIVERIES ARE MADE. NCORPORATE REQUIREMENTS FOR CONCRETE WASTE MANAGEMENT INTO MATERIAL SUPPLIES AND SUBCONTRACTOR

STORE DRY AND WET MATERIALS UNDER COVER, AWAY FROM DRAINAGE AREAS. AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE. PERFORM WASHOUT OF CONCRETE TRUCKS OFFSITE OR IN DESIGNATED AREAS ONLY.

DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS. DO NOT ALLOW EXCESS CONCRETE TO BE DUMPED ONSITE, EXCEPT IN DESIGNATED AREAS.

LOCATE WASHOUT AREA AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES. WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND AVOID CREATING RUNOFF BY DRAINING WATER TO A BERMED OR LEVEL AREA WHEN WASHING CONCRETE TO REMOVE FINE PARTICLES AND EXPOSE THE AGGREGATE. DO NOT WASH SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO THE STREET OR STORM DRAIN.

COLLECT AND RETURN SWEEPINGS TO AGGREGATE BASE STOCKPILE OR DISPOSE IN THE TRASH. SOLID WASTE MANAGEMENT PROCEDURES AND PRACTICES ARE DESIGNED TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM SOLID OR CONSTRUCTION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS, ARRANGING FOR REGULAR DISPOSAL, AND TRAINING EMPLOYEES AND SUBCONTRACTORS.

THIS BMP IS SUITABLE FOR CONSTRUCTION SITES WHERE THE FOLLOWING WASTES ARE GENERATED OR STORED: SOLID WASTE GENERATED FROM TREES AND SHRUBS REMOVED DURING LAND CLEARING, DEMOLITION OF EXISTING STRUCTURES (RUBBLE), AND BUILDING CONSTRUCTION.

SCRAP OR SURPLUS BUILDING MATERIALS INCLUDING SCRAP METALS, RUBBER, PLASTIC, GLASS PIECES AND MASONRY DOMESTIC WASTES INCLUDING FOOD CONTAINERS SUCH AS BEVERAGE CANS, COFFEE CUPS, PAPER BAGS, PLASTIC WRAPPERS, AND CIGARETTES.

CONSTRUCTION WASTES INCLUDING BRICK, MORTAR, TIMBER, STEEL AND METAL SCRAPS, PIPE AND ELECTRICAL CUTTINGS, NONHAZARDOUS EQUIPMENT PARTS, STYROFOAM AND OTHER MATERIALS FROM TRANSPORT AND PACKAGE CONSTRUCTION

SELECT DESIGNATED WASTE COLLECTION AREAS ONSITE.

INFORM CONTRACTORS THAT YOU WILL ACCEPT ONLY WATERTIGHT DUMPSTERS FOR ONSITE USE.

ARRANGE FOR REGULAR WASTE COLLECTION BEFORE CONTAINERS OVERFLOW.

INSPECT DUMPSTERS FOR LEAKS AND REPAIR ANY DUMPSTER THAT IS NOT WATERTIGHT. PROVIDE AN ADEQUATE NUMBER OF CONTAINERS WITH LIDS OR COVERS THAT CAN BE PLACED OVER THE CONTAINER TO KEEP RAIN OUT OR TO PREVENT LOSS OF WASTES WHEN IT IS WINDY. PLAN FOR ADDITIONAL CONTAINERS AND MORE FREQUENT PICKUP DURING THE DEMOLITION PHASE OF CONSTRUCTION.

COLLECT SITE TRASH DAILY, ESPECIALLY DURING RAINY AND WINDY CONDITIONS. REMOVE THIS SOLID WASTE PROMPTLY SINCE EROSION AND SEDIMENT CONTROL DEVICES TEND TO COLLECT LITTER. MAKE SURE THAT TOXIC LIQUID WASTES (USED OILS, SOLVENTS, AND PAINTS) AND CHEMICALS (ACIDS, PESTICIDES, ADDITIVES, CURING COMPOUNDS) ARE NOT DISPOSED OF IN DUMPSTERS DESIGNATED FOR CONSTRUCTION DEBRIS. DO NOT HOSE OUT DUMPSTERS ON THE CONSTRUCTION SITE. LEAVE DUMPSTER CLEANING TO THE TRASH HAULING

CLEAN UP IMMEDIATELY IF A CONTAINER DOES SPILL. MAKE SURE THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL INCORPORATE REQUIREMENTS FOR SOLID WASTE MANAGEMENT INTO BUILDER AND SUBCONTRACTOR AGREEMENTS.

LITTERING ON THE PROJECT SITE SHOULD BE PROHIBITED. TO PREVENT CLOGGING OF THE STORM DRAINAGE SYSTEM, LITTER AND DEBRIS REMOVAL FROM DRAINAGE GRATES, TRASH RACKS, AND DITCH LINES SHOULD BE A PRIORITY.

TRASH RECEPTACLES SHOULD BE PROVIDED IN THE CONTRACTOR'S YARD, FIELD TRAILER AREAS, AND AT LOCATIONS WHERE WORKERS CONGREGATE FOR LUNCH AND BREAK PERIODS. LITTER FROM WORK AREAS WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT SITE SHOULD BE COLLECTED AND PLACED IN WATERTIGHT DUMPSTERS AT LEAST WEEKLY, REGARDLESS OF WHETHER THE LITTER WAS GENERATED BY THE

CONTRACTOR, THE PUBLIC, OR OTHERS. COLLECTED LITTER AND DEBRIS SHOULD NOT BE PLACED IN OR NEXT TO DRAIN INLETS, STORMWATER DRAINAGE SYSTEMS, OR WATERCOURSES. DUMPSTERS OF SUFFICIENT SIZE AND NUMBER SHOULD BE PROVIDED TO CONTAIN THE SOLID WASTE GENERATED BY THE

FULL DUMPSTERS SHOULD BE REMOVED FROM THE PROJECT SITE AND THE CONTENTS SHOULD BE DISPOSED OF BY THE CONSTRUCTION DEBRIS AND WASTE SHOULD BE REMOVED FROM THE SITE BIWEEKLY OR MORE FREQUENTLY AS NEEDED. CONSTRUCTION MATERIAL VISIBLE TO THE PUBLIC SHOULD BE STORED OR STACKED IN AN ORDERLY MANNER STORMWATER RUNON SHOULD BE PREVENTED FROM CONTACTING STORED SOLID WASTE THROUGH THE USE OF BERMS, DIKES, OR OTHER TEMPORARY DIVERSION STRUCTURES OR THROUGH THE USE OF MEASURE TO ELEVATE WASTE FROM

SOLID WASTE STORAGE AREAS SHOULD BE LOCATED AT LEAST 50 FT. FROM DRAINAGE FACILITIES AND WATERCOURSES AND SHOULD NOT BE LOCATED IN AREA PRONE TO FLOODING OR PONDING. NSPECTION AND MAINTENANCE INSPECT CONSTRUCTION WASTE AREA WEEKLY

ARRANGE FOR REGULAR WASTE COLLECTION.

DEWATERING AND PUMPING OPERATIONS
DESCRIPTION AND PURPOSE DEWATERING OPERATIONS ARE PRACTICES THAT MANAGE THE DISCHARGE OF POLLUTANTS WHEN NON-STORMWATER AN ACCUMULATED PRECIPITATION MUST BE REMOVED FROM A WORK LOCATION SO THAT CONSTRUCTION WORK MAY BE ACCOMPLISHED.

SUITABLE APPLICATIONS HESE PRACTICES ARE IMPLEMENTED FOR DISCHARGES OF NON-STORMWATER FROM CONSTRUCTION SITES. NON-STORMWATERS INCLUDE, BUT ARE NOT LIMITED TO, GROUNDWATER, WATER FROM COFFERDAMS, WATER DIVERSIONS, AND WATERS USED DURING CONSTRUCTION ACTIVITIES THAT MUST BE REMOVED FROM A WORK AREA. PRACTICES IDENTIFIED IN THIS SECTION ARE ALSO APPROPRIATE FOR IMPLEMENTATION WHEN MANAGING THE REMOVAL OF ACCUMULATED PRECIPITATION (STORMWATER) FROM DEPRESSED AREAS AT A CONSTRUCTION SITE.

SITE CONDITIONS WILL DICTATE DESIGN AND USE OF DEWATERING OPERATIONS. THE CONTROLS DISCUSSED IN THIS BEST MANAGEMENT PRACTICE (BMP) ADDRESS SEDIMENT ONLY. THE CONTROLS DETAILED IN THIS BMP ONLY ALLOW FOR MINIMAL SETTLING TIME FOR DIMENT PARTICLES. USE ONLY WHEN SITE CONDITIONS RESTRICT THE USE OF THE OTHER CONTROL METHODS. DEWATERING OPERATIONS WILL REQUIRE, AND MUST COMPLY WITH, APPLICABLE LOCAL PERMITS.

DEWATERING DISCHARGES MUST NOT CAUSE EROSION AT THE DISCHARGE POINT. A VARIETY OF METHODS CAN BE USE TREAT WATER DURING DEWATERING OPERATIONS. SEVERAL DEVICES ARE PRESENTED BELOW AND PROVIDE OPTION TO ACHIEVE SEDIMENT REMOVAL. THE SIZE OF PARTICLES PRESENT IN THE SEDIMENT AND PERMIT OR RECEIVING WATE LIMITATIONS ON SEDIMENT ARE KEY CONSIDERATIONS FOR SELECTING SEDIMENT TREATMENT OPTION(S); IN SOME CASES, THE USE OF MULTIPLE DEVICES MAY BE APPROPRIATE.

SEDIMENT TRAP A SEDIMENT TRAP IS A TEMPORARY BASIN FORMED BY EXCAVATION AND/OR CONSTRUCTION OF AN EARTHEN EMBANKMENT ACROSS A WATERWAY OR LOW DRAINAGE AREA TO DETAIN RUNOFF AND ALLOW SEDIMENT TO SETTLE OU BEFORE DISCHARGING. SEDIMENT TRAPS ARE GENERALLY SMALLER THAN SEDIMENT BASINS.

EFFECTIVE FOR THE REMOVAL OF LARGE AND MEDIUM SIZED PARTICLES (SAND AND GRAVEL) AND SOME METALS THAT ETTLE OUT WITH THE SEDIMENT. EXCAVATION AND CONSTRUCTION OF RELATED FACILITIES IS REQUIRED. TRAP INLETS SHOULD BE LOCATED TO MAXIMIZE

HE TRAVEL DISTANCE TO THE TRAP OUTLET. USE ROCK OR VEGETATION TO PROTECT THE TRAP OUTLETS AGAINST MAINTENANCE IS REQUIRED FOR VEGETATION. EMBANKMENT, INLET AND OUTFALL STRUCTURES, AS WELL AS OTHER

FEATURES. REMOVAL OF SEDIMENT IS REQUIRED WHEN THE STORAGE VOLUME IS REDUCED BY ONE THIRD. GRAVITY BAG FILTER (DEWATERING BAG)
DESCRIPTION A GRAVITY BAG FILTER, ALSO REFERRED TO AS A DEWATERING BAG, IS A SQUARE OR RECTANGULAR BAG MADE OF

NON-WOVEN GEOTEXTILE FABRIC THAT COLLECTS SAND, SILT, AND FINES. APPROPRIATE APPLICATIONS EFFECTIVE FOR THE REMOVAL OF SEDIMENTS (GRAVEL, SAND, AND SILT). SOME METALS ARE REMOVED WITH THE

SEDIMENT WATER IS PUMPED INTO ONE SIDE OF THE BAG AND SEEPS THROUGH THE BOTTOM AND SIDES OF THE BAG. A CONDARY BARRIER, SUCH AS A ROCK FILTER BED OR STRAW/HAY BALE BARRIER, IS PLACED BENEATH AND BEYOND

INSPECTION OF THE FLOW CONDITIONS, BAG CONDITION, BAG CAPACITY, AND THE SECONDARY BARRIER IS REQUIRED. REPLACE THE BAG WHEN IT NO LONGER FILTERS SEDIMENT OR PASSES WATER AT A REASONABLE RATE. THE BAG IS

B14 MONITORING AND MAINTENANCE OF POLLUTION PREVENTION MEASURES

DISPOSED OF OFFSITE.

THE EDGES OF THE BAG TO CAPTURE SEDIMENTS THAT ESCAPE THE BAG.

EACH MEASURE SHALL BE INSPECTED WEEKLY AND AFTER EACH 0.5" RAINFALL EVENT FOLLOW MAINTENANCE GUIDELINES FOR EACH MEASURE AS SPECIFIED IN EACH RELEVANT CONSTRUCTION DETAIL.

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE: LEAVES, MULCH, VEHICULAR SOURCES SUCH AS LEAKING FUEL OR OIL, BRAKE FLUID, BRAKE DUST, GREASE ANTIFREEZE, METALS, RUBBER FRAGMENTS, ROAD GRIT, SALTS AND SANDS, TRASH AND DEBRIS, FERTILIZERS, CLEANING AGENTS CHEMICALS, PAINT, ANIMAL WASTE, ELEVATED STORM RUNOFF TEMPERATURES, PESTICIDES AND

C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION: REFERENCE EROSION CONTROL SEQUENCING SEE PLAN SET: PRE-CONSTRUCTION AND POST-CONSTRUCTION STORMWATER POLLUTION PREVENTION PLANS, SHEETS C1.3-C1.8

C3 DESCRIPTION OF PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES;

VEGETATED SWALES
THEY WILL BE CONSTRUCTED DURING AND FOLLOWING THE MASS GRADING OF THE SITE. THEY WILL BE IMMEDIATELY STABILIZED WITH PERMANENT SEEDING AND MULCH AND EROSION CONTROL BLANKETS AS SHOWN ON THE PLAN. THEY WILL PERSIST IN THE POST CONSTRUCTION PHASE AS A PERMANENT FEATURE.

PERMANENT SEEDING WILL BE PLACE WITHIN 15 DAYS AFTER FINAL GRADING IS COMPLETED. WET DETENTION BASIN.
WET DETENTION BASIN WILL BE INITIALLY EXCAVATED AS PART OF MASS GRADING OF THE SITE, IT WILL BE USED HROUGHOUT THE CONSTRUCTION PHASE TO CONTROL SEDIMENT, THEN PERSIST INTO THE POST CONSTRUCTION PHASE AS PERMANENT FEATURES PROVIDING STORMWATER RETENTION AND SEDIMENT CONTROL.

VEGETATED SWALES
THE VEGETATED SWALES INSTALLED DURING CONSTRUCTION WILL SLOW RUNOFF AND ACT AS A SLOWING THE RUNOFF WILL NOT ONLY ALLOW SEDIMENT TO DROP OUT, BUT LIMIT THE ABILITY FOR THE STORM WATER TO

NUTRIENTS AND TRACE METALS THROUGH THE PROCESS OF SETTLING OF POLLUTANTS. BIOLOGICAL PROCESSES

PERMANENT SEEDING WILL BE PLACED TO ACT AS A FILTER AND TO PREVENT EROSION. <u>WET DETENTION BASIN</u>
THEY SERVE TO CONTROL THE VOLUME AND RATE OF RUNOFF. THE FACILITY REMOVES SEDIMENT. BOD ORGANIC

OCCURRING IN THE POND AID IN REDUCING THE AMOUNT OF SOLUBLE NUTRIENTS PRESENT SUCH AS NITRATE AND C4 LOCATION, DIMENSIONS, SPECIFICATIONS AND CONSTRUCTION DETAILS OF STORMWATER QUALITY MEASURES:

FOR LOCATIONS SEE PLAN SET: SHEETS C1.1-C1.2, C1.6-C1.7 FOR DETAILS: SEE SHEET C8.1-C8.2 C5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST CONSTRUCTION STORMWATER QUALITY MEASURES:

SEE BMP O&M MAINTENANCE MANUAL

TE VEGETATED SWALES SHOULD BE CHECKED ANNUALLY FOR ISSUES RELATED TO PERFORMANCE. DURING THIS TIME TRASH SHOULD BE REMOVED, SEED PLANTED IF NECESSARY, AND ANY EROSION PROBLEMS ADDRESSED. T GRASS IN THE SWALE SHOULD BE KEPT AT A 3"-4" HEIGHT. MAINTENANCE ASSOCIATED WITH THE VEGETATED SWALE IS THE RESPONSIBILITY OF THE LOCAL LANDOWNER FOR INDIVIDUAL LOTS AND HOME OWNERS ASSOCIATIO FOR COMMON AREAS. THE HOMEOWNERS ASSOCIATION SHOULD CONDUCT THE INSPECTION AND REMINDED HOMEOWNERS OF MAINTENANCE NEEDS

PERMANENT SEEDING AREAS SHOULD BE CHECKED ANNUALLY FOR ISSUES RELATED TO PERFORMANCE. DURING THIS TIME PLANT SEED IF NECESSARY AND ANY EROSION PROBLEMS ADDRESSED. TRASH SHOULD BE REMOVED OF AN AS NEED BASIS. THE GRASS SHOULD BE KEPT TO A 3" - 4' HEIGHT. MAINTENANCE IS THE RESPONSIBILITY THE LOCAL LANDOWNER FOR INDIVIDUAL LOTS AND HOME OWNERS ASSOCIATION FOR COMMON AREAS. THE HOMEOWNERS ASSOCIATION SHOULD CONDUCT THE INSPECTION AND REMINDED HOMEOWNERS OF MAINTENANCE

VET DETENTION BASINS (PONDS)

NLETS AND OUTLETS SHOULD BE CHECKED TO MAKE SURE THEY ARE FREE OF DEBRIS. THE WET PONDS SHOULD BE CHECKED SEMIANNUALLY TO ENSURE PROPER PERFORMANCE. BANKS SHOULD BE CHECKED FOR EROSION, AND REPAIRED IF NECESSARY. SEDIMENT SHOULD BE REMOVED FROM THE POOL WHEN THE ACCUMULATED SEDIMENT

STREET CLEANING AND TRASH COLLECTION WILL BE PART OF THE TOWN OF MCCORDSVILLE'S NORMAL

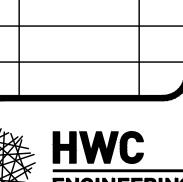
THEIR INDIVIDUAL RESPONSIBILITY TO KEEP IT CLEAN AND FUNCTIONING.

INDIVIDUAL LOT OWNERS ARE RESPONSIBLE FOR PREVENTING POLLUTANTS FROM LEAVING THE LOTS. THE HOMEOWNERS ASSOCIATION SHOULD REMIND HOMEOWNERS OF NECESSITY OF STORM COLLECTION SYSTEM AND THE

RIGHT-OF-WAY UPKEEP AND WILL BE DONE ON AN AS NEEDED BASIS. STREETS SHOULD BE MONITORED MONTHL' AND SWEPT AS NEEDED TO REMOVE AS MUCH SEDIMENT AS POSSIBLE BEFORE ENTERING STORM SEWER SYSTEM

ND DOWNSTREAM WATERWAYS. THIS SHALL BE DONE BY THE DEVELOPER UNTIL THE STREETS ARE ACCEPTED BY

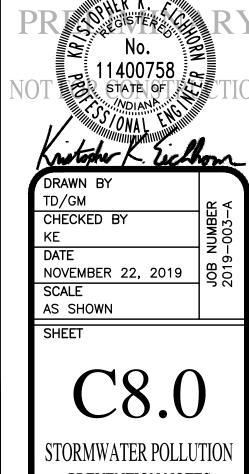
DESCRIPTION



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D



ORIEGISTER CO

PREVENTION NOTE



ngress/egress pad is a ediment control measure consisting of a stabilized ggregate pad with geotexunderlayment that is used at any point where construction traffic will be traversing between a large construction site and adjoining public right-of-way, street, alley, sidewalk, or parking areas.

To provide ingress/egress to a construction site and minimize tracking of mud and sediment onto public roadways.

Location

### Avoid locating on steep slopes or at curves in public roads.

- Width 20 feet minimum or full width of entrance/exit roadway, whichever Length 150 feet minimum (length can be shorter for small sites).
- Thickness eight inches minimum.
- Washing Facility (optional)
- Level area with three inch, or larger, washed aggregate or install a commer-
- Divert waste water to a sediment trap or basin.

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### TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES TWO ACRES OR LARGER)

- One to two and one-half inch diameter washed aggregate [Indiana Department of Transportation Course Aggregate No. 2 (see Appendix D)]. One-half to one and one-half inch diameter washed aggregate [INDOT CA
- . Geotextile fabric underlayment (see Appendix C) (used as a separation layer to prevent intermixing of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions or soils

- 1. Remove all vegetation and other objectionable material from the foundation
- 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 way from the road (see Temporary Construction Ingress/Egress Pad Cross-Section View Worksheet).
- 3. Install a culvert pipe under the pad if needed to maintain proper public road
- 4. If wet conditions are anticipated, place geotextile fabric on the graded
- 5. Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in 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
- ches 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.

- 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
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EROSION CONTROL BLANKET

MAINTENANCE REQUIREMENTS:

CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET.

1. FOR EASIER INSTALLATION, LOWER WATER FROM LEVEL A TO LEVEL B BEFORE INSTALLATION.

NOTE:
\* SEAM OVERLAP SHOULD BE SHINGLED ACCORDING TO PREDOMINANT EROSIVE ACTION.

CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

2. 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 PAPERSIDE DOWN.

3. BEGIN AT THE TOP OF THE SHORELINE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF EXTENDED BEYOND THE UP—SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET 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 BACK OVER SEED AND COMPACTED SOIL. SECURE OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.

4. ROLL RECP'S EITHER (A.) DOWN THE SHORELINE FOR LONG BANKS, (TOP TO BOTTOM) OR (B.) HORIZONTALLY ACROSS
THE SHORELINE 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 THROUGH EACH OF THE COLORED DOTS

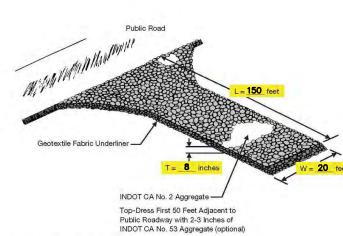
5. THE EDGES OF ALL HORIZONTAL AND VERTICAL SEAMS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP.

6. THE EDGE OF THE BLANKET AT OR BELOW NORMAL WATER LEVEL MUST BE ANCHORED BY PLACING THE STAPLES/STAKES IN A 12" (30 CM) DEEP X 6" (15 CM) WIDE ANCHOR TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART IN THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING (STONE OR SOIL MAY BE USED AS BACKFILL.)

NOTE:
\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY
TO PROPERLY ANCHOR THE RECP's.

### TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

Temporary Construction Ingress/Egress Pad Plan View Worksheet (large sites—two acres or larger)



W = Ingress/Egress Pad Width

### (Note: For minimum dimensions, see the "Specifications" section of this measure

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

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### Temporary Construction Ingress/Egress Pad Cross-Section View Worksheet (large sites two acres or larger) Diversion Ridge with 3:1 Side H = Height of Diversion Ridge

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD

(LARGE SITES-TWO ACRES OR LARGER)

Source: Adapted from North Carolina Erosion and Sectment Control Planning and Design Manual. 1993

(Note: 8 inches minimum)

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**(3)** HOUSE GARAGE

1. EROSION/SEDIMENT CONTROL MEASURES MUST BE FUNCTIONAL AND BE MAINTAINED THROUGHOUT CONSTRUCTION. 2. MAINTAIN POSITIVE DRAINAGE FLOW AWAY FROM THE STRUCTURE(S).

3. PERMANENT SEEDING AREAS TO BE TOP-SOILED, SEEDED, AND MULCHED BY OWNER AT COMPLETION OF CONSTRUCTION.

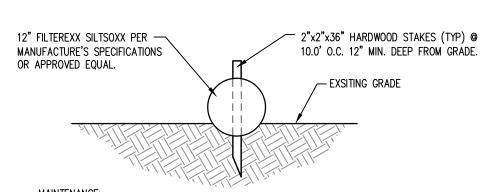
INDIVIDUAL LOT STORM WATER POLLUTION & PREVENTION DETAIL

### 2"x2"x36" HARDWOOD STAKES (TYP) @ 12" FILTEREXX SILTSOXX PER — MANUFACTURE'S SPECIFICATIONS 10.0' O.C. 12" MIN. DEEP FROM GRADE. OR APPROVED EQUAL. EXSITING GRADE -

### 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.

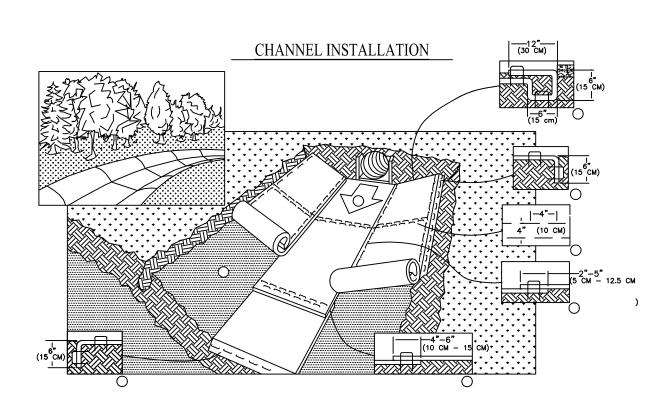
COIR LOG (FIBER ROLL) ALONG CURB



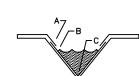
### MAINTENANCE: \* INSPECT DAILY

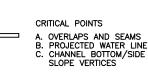
- \* REMOVE ACCUMULATED SEDIMENT FROM PAVED AREA (DO NOT FLUSH WITH WATER) AFTER EACH STORM EVENT. DEPOSIT SEDIMENT IN AN AREA WHERE IT
- WILL NOT RE-ENTER THE PAVED AREA OR STORM DRAINS. \* INSPECT FOR DAMAGE BY VEHICULAR TRAFFIC AND REPAIR IF NEEDED.

COIR LOG (FIBER ROLL)

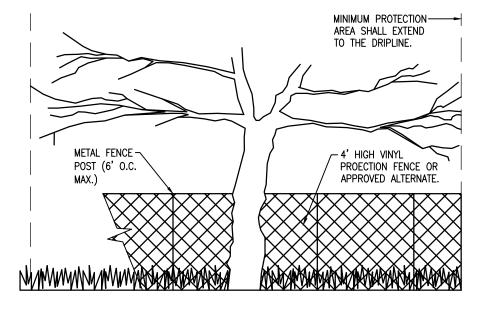


- 1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- 2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING 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 COMAPCT 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 OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP'S. 3. ROLL CENTER RECP'S IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. 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 THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 4. PLACE CONSECUTIVE RECP'S END OVER END (SHINGLE STYLE) WITH A 4" 6" (10 CM -15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP'S. 5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- 6. ADJACENT RECP'S MUST BE OVERLAPPED APPROXIMATELY 2" 5" (5 CM -12.5 CM) (DEPENDING ON RECP'S TYPE) AND STAPLED. 7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL. 8. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- NOTE: \* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP'S.





\* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE. \*\* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



TREE PROTECTION DETAIL

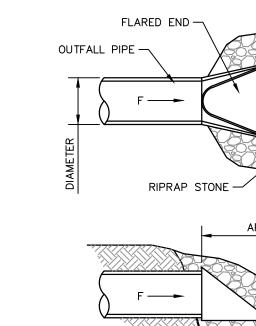
• INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR

AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.

IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED

SHORELINE INSTALLATION

TRIBINATION

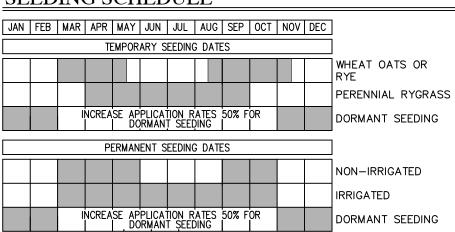


SLOPE INSTALLATION

# APRON LENGTH — RIPRAP STON

FILTER FABRIC

### SEEDING SCHEDULE



**EROSION CONTROL** PLAN LEGEND

PROPERTY LINE/

EXISTING DRAINAGE

FINISHED DRAINAGE

DRAINAGE SWALE

TREE CONSERVATION

— SF SILT FENCE OR TEMP SEDIMENT

GRAVEL ENTRANCE/

EXIT PAD

CURB INLET

PROTECTION

PROTECTION

SOIL SALVAGE AND UTILIZATION

PS PERMANENT SEEDING

TRAP - BACK CUT CURB

DESCRIPTION

INDIANAPOLIS - TERRE HAUTE

LAFAYETTE - MUNCIE - NEW ALBANY

www.hwcengineering.com

NOTES:
1. PERMANENT SEEDING INFORMATION SHOWN ON THIS PLAN IS FOR EROSION CONTROL PURPOSES ONLY. IF THE LANDSCAPING PLANS AND SPECIFICATIONS CONTAIN INFORMATION CONCERNING PERMANENT LAWN SEEDING AND/OR SODDING, THEN THAT INFORMATION SHALL SUPERSEDE SIMILAR INFORMATION INDICATED ON THIS SHEET.

2. AREAS TO BE SEEDED SHALL BE SMOOTH AND UNIFORM AND SHALL BE IN ACCORDANCE WITH THE FINISHED GRADE AND CROSS SECTION SHOWN

3. AREAS TO BE SEEDED SHALL HAVE A MINIMUM TOPSOIL DEPTH OF 6 INCHES. LIGHTLY COMPACT PLACED TOPSOIL BY ROLLING OR TAMPING.

4. PRIOR TO REPLACING TOPSOIL, LOOSEN SUBSOIL TO ENSURE GOOD BOND

WITH TOPSOIL. 5. APPLY SEEDING WITH 800 LB/ACRE OF 12-12-12 FERTILIZER AND MULCH WITH A CONTINUOUS BLANKET OF STRAW AT A RATE OF 2 TONS/ACRE,

OR USE HYDROSEEDING TECHNIQUES WITH EQUIVALENT APPLICATION . APPLY TEMPORARY SEEDING WITH 200 LB/ACRE OF 12-12-12 FERTILIZER AND MULCH WITH A CONTINUOUS BLANKET OF STRAW AT A RATE OF 2 TONS/ACRE, OR USE HYDROSEEDING TECHNIQUES WITH EQUIVALENT APPLICATION RATES.

7. ON SLOPES GRADED AT 3:1 OR STEEPER, STRAW MULCH SHALL BE HELD IN PLACE WITH POLYMERIC PLASTIC NET TACKED WITH WIRE STAPLES, OR

EQUIVALENT METHOD. 8. SEED MIXTURES AND APPLICATION RATES: GRASS MIX APPLIED AT 170 LB/ACRE (4 LB/1000 SQ.FT.) COMPRISED OF

THE FOLLOWING: KENTUCKY 31 FESCUE - 95 LB/ACRE PERENNIAL RYEGRASS - 65 LB/ACRE JASPER RED FESCUE - 10 LB/ACRE

### THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL

BILL BRYANT

LENNAR HOMES OF INDIANA, INC. Phone: (317) 450-4634

1 STAPLE 1-1/2 STAPLES PER SQ. YD. 2 STAPLES

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" (30cm) 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 OVER COMPACTED SOIL WITH A ROW OF STAPLES (STANCES SPACED APPROXIMATELY 10" (30 CM) APART ACROSS THE WINTH OF THE RECP'S

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 RÉCP'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 THROUGH 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 \*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

### . × × × \* \* \* \* 3.5 STAPLES PER SQ. YD. EROSION CONTROL BLANKET STAPLE PATTERN GUIDE

SLOPE GRADIENT

\* × ×D×

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS WILL VARY DEPENDING UPON SLOPE LENGTH, SLOPE GRADE, SOIL TYPE AND AVERAGE

ANNUAL RAINFALL.

NER K. No. 11400758 STATE OF WORLD notopher L. Eichon DRAWN BY CHECKED BY NOVEMBER 22, 2019 SCALE AS SHOWN SHEET

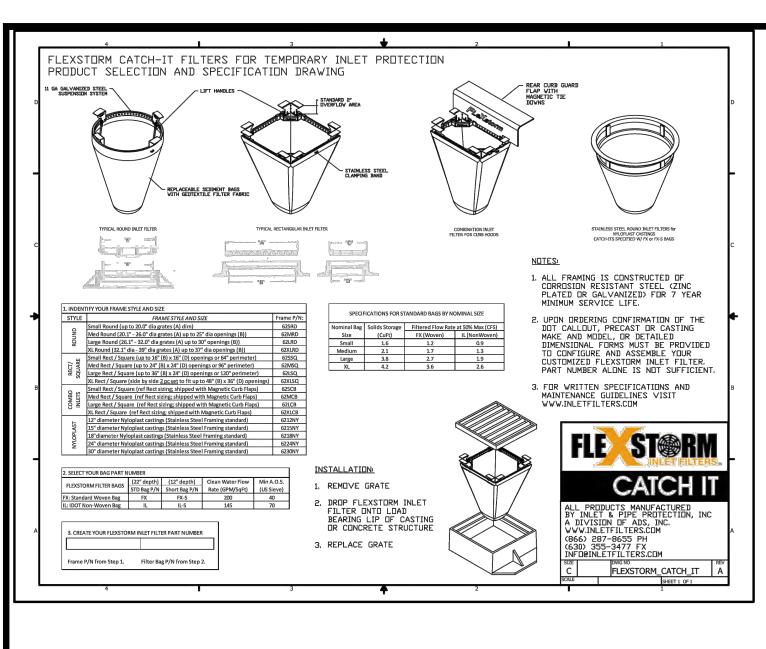
**P**(

OR

TOR

STORMWATER POLLUTIO

PREVENTION DETAILS



#4 GAGE WIRE-YARD CASTING ∕-GRASS SILT PROTECTION FOR DITCH GRATE (NEENAH R-4342)-CASTINGS.

MAINTENANCE

1. INSPECT THE DROP INLET PROTECTION AFTER EACH STORM EVENT, AND MAKE NEEDED REPAIRS IMMEDIATELY REMOVE SEDIMENT FROM THE POOL AREA TO ENSURE ADEQUATE RUNOFF STORAGE FOR THE NEXT RAIN. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ALL BARRELS, CONSTRUCTION MATERIAL, AND SEDIMENT AND DISPOSE OF PROPERLY,
GRADE THE DISTURBED AREA TO THE ELEVATION OF THE TOP OF THE INLET AND

### **Drop Inlet Protection Basket**

(317) 894-3276.

It is the intent of this device to detain water for the purpose of allowing suspended solids in the water to settle out before the water enters the storm structure. Some filtering will occur as water passes through the device.

The bottom of this device is to seal against the flat outer part of the casting. The overall dimension of the basket shall be no smaller than the water inlet perforations in the casting and no larger than the outer dimensions of the casting. The height shall be 15" The basket frame shall be welded wire mesh rolled or bent and welded to itself to fit the casting. The wire size shall be no smaller than .149" dia. and openings no larger than 18 sq in. It is important that the bottom of the wire frame be smooth so as not to allow any leakage between the basket and casting. The top of the basket shall be open to prevent flooding during heavy storm events. Fabric shall be woven polypropylene allowing 15-25gal/min/sq in. If non-woven fabric

is used, the maintenance intervals should be increased to replace silt laden fabric. The fabric shall be attached to the frame and folded under the bottom to help seal against the This device should be used in conjunction with other Best Management Practices to maximize the efficiency of the erosion control plan.

Suppliers for this product include: Lakeside Supply Inc. (317) 281-2661, Turfgrass Inc

BEEHIVE PROTECTION DETAIL

### INSERT (BASKET) CURB INLET PROTECTION

- At curb inlets on paved roads and parking lots. Down grade from construction activities (e.g., individual home sites).
- Metal frame or basket with a top width and length such that the frame fits into the inlet. (The frame is supported by the structural integrity of the storm
- The metal frame or geotextile should be designed with a bypass to allow storm
- The system should be designed for ease of maintenance.
- Geotextile fabric.

### Table 1. Geotextile Fabric Specifications

Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month mini- mum life at temperatures of 0°F to 120°F)	70%	85%
Tensile Strength at 20% Elongation: Standard Strength Extra Strength	30 lbs./linear inch 50 lbs./linear inch	50 lbs./linear inch 70 lbs./linear inch
Slurry Flow Rate	0.3 gal./min./sq. ft.	4.5 gal./min./sq. f
Water Flow Rate	15 gal./min./sq. ft.	220 gal./min./sq.

- 1. Remove the storm sewer grate and place the frame into the grate opening. 2. Place geotextile fabric into the frame and secure according to the manufac-
- Replace the storm sewer grate.

### 178 Chapter 7

### GEOTEXTILE FABRIC DROP INLET PROTECTION

- 3. Use the wrap join method when joining posts (see Silt Fence on page 215). 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
- 5. Backfill the trench with soil material and compact it in place. 6. Brace the posts by nailing braces into each comer post or utilize rigid panels
- Note: In situations where storm water may bypass the structure,
- · 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
- · 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 (see Excavated Drop Inlet Protection on page 145).

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- Inspect daily.
- Inspect geotextile fabric and make needed repairs immediately
- · When contributing drainage area has been stabilized, remove sediment, prop-

### Remove sediment from pool area to provide storage for the next storm event. Avoid damaging or undercutting fabric during sediment removal. Source: Adapted from North Carolina. Erosion and Sediment Control Planning and Design Manual, 1993 erly dispose of all construction material, grade area to the elevation of the storm drain inlet top, then stabilize immediately.

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# Exhibit 1

**GEOTEXTILE FABRIC DROP INLET PROTECTION** 

INSERT (BASKET) CURB INLET PROTECTION

Replace or clean geotextile fabric as needed.

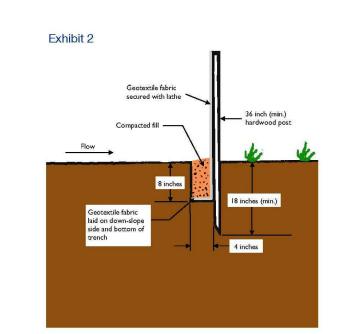
### GEOTEXTILE FABRIC DROP INLET PROTECTION

- Remove accumulated sediment and debris after each storm event. Deposit Three feet length, minimum. sediment in an area where it will not re-enter the paved area or storm drains.
- · Lathe. · When the contributing drainage area has been stabilized, remove inlet pro-
  - Staples or nails

Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month minimum life at temperatures of 0° to 120° F)	70%	85%
Tensile Strength at 20% Elongation: Standard Strength Extra Strength	30 lbs./linear inch 50 lbs./linear inch	50 lbs./linear inch 70 lbs./linear inch
Slurry Flow Rate	0,3 gal./min./sq. ft.	4.5 gal./min./sq. ft.
Water Flow Rate	15 gal./min./sq. ft.	220 gal./min./sq. ft.

- 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 farthest from the inlet.)

### GEOTEXTILE FABRIC DROP INLET PROTECTION



Chapter 7

### Support posts

- 2 x 2 inch or 2 x 4 inch hardwood posts.
- 1 x 2 inch or 1 x 3 inch hardwood cross bracing lumber.
- - Geotextile fabric

	Table 1.	Geotextile Fabric Spec	cifications
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Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month minimum life at temperatures of 0° to 120° F)	70%	85%
Tensile Strength at 20% Elongation: Standard Strength Extra Strength	30 lbs./linear inch 50 lbs./linear inch	50 lbs./linear inch 70 lbs./linear inch
Slurry Flow Rate	0,3 gal./min./sq. ft.	4.5 gal./min./sq. ft.
Water Flow Rate	15 gal./min./sq. ft.	220 gal./min./sq. ft.

- 1. Dig an eight-inch deep, four-inch wide trench around the perimeter of the

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

	(stretching the fabric between posts as it is fastened).	r to the po
Chapter 7		October

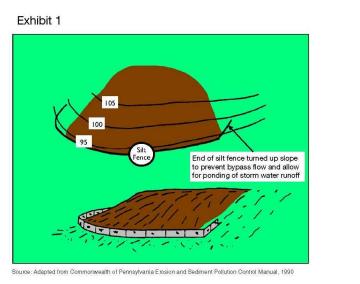
site by run-off.

regulations.

The Builder will provide a designated location for

In accordance with Indiana Rule 6.1: 327 IAC 2-6.1-1 Spills; Reporting, Containment, and response: spills of objectionable substances, that exceed a quantity of one pound or one pint (i.e. from a portable toilet unit) shall be contained, cleaned, removed, and properly disposed. Spills of reportable quantity, as defined by Indiana Rule 6.1 will be managed in accordance with applicable statutes and regulations.

### SILT FENCE



A silt fence is a temporary barrier of entrenched geotextile fabric stretched across and attached to supporting posts and installed on the

contour to intercept and treat sediment-laden storm water runoff from small, unvegetated

Chapter 7

drainage areas.

To trap sediment from small, disturbed areas by reducing the velocity of sheet

Note: Silt fence is not recommended for use as a diversion and should not be used across a stream, channel, ditch, swale, or anywhere that

Minimum of 10 feet beyond the toe of the slope to provide a broad, shallow

Accessible for maintenance (removal of sediment and silt fence repair).

concentrated flow is anticipated.

Limited to one-quarter acre per 100 linear feet of fence.

Further restricted by slope steepness (see Table 1).

Installed parallel to the slope contour.

Drainage Area

Effective Life

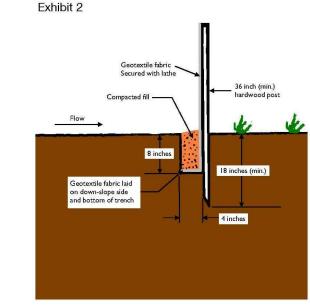
Location

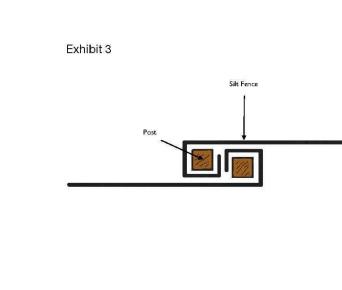
Six months (maximum).

SEDIMENT BARRIERS & FILTERS

Silt Fence

SILT FENCE





SILT FENCE



		Table 2.	
Stee	pness Restrictions	Physic	
rcent Slope		Maximum Distance	Filtering
	< 50:1	100 feet	Textile st
	50:1 to 20:1	75 feet	20% eloi Standa
	20:1 to 10:1	50 feet	Extra s
	10:1 to 5:1	25 feet	Slurry flo
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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- Note: Multiple rows of silt fence are not recommended on the same slope.
- Depth eight inches minimum.

Trench

SILT FENCE

- Width four inches minimum. · After installing fence, backfill with soil material and compact (to bury and
- Note: An alternative to trenching is to use mechanical equipment to plow
- in the silt fence. Materials and Silt Fence Specifications
- Fabric woven or non-woven geotextile fabric meeting specified minimums outlined in Table 2.

### October 2007

### SILT FENCE

Table 2.	Geotextile Fabric Specifications for Silt	Fence (mini

Physical Property	Woven Geotextile Fabric	Non-Woven Geotextile Fabric
Filtering efficiency	85%	85%
Textile strength at 20% elongation Standard strength Extra strength	30 lbs, per linear inch 50 lbs, per linear inch	50 lbs. per linear inc 70 lbs. per linear inc
Slurry flow rate	0.3 gal./min./square feet	4.5 gal./min./square t
Water flow rate	15 gal./min./square feet	220 gal./min./square
UV resistance	70%	85%
Post spacing	7 feet	5 feet

- Height a minimum of 18 inches above ground level (30 inches maximum). Reinforcement – fabric securely fastened to posts with wood lathe.
- 2 x 2 inch hardwood posts. Steel fence posts may be substituted for
- hardwood posts (steel posts should have projections for fastening fabric). · Eight feet maximum if fence is supported by wire mesh fencing.
- Six feet maximum for extra-strength fabric without wire backing

### Prefabricated silt fence (see Exhibits 1, 2, and 3)

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 sedimen 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 (see Exhibit 1).

2. Excavate an eight-inch deep by four-inch wide trench along the entire length of the fence line (see Exhibit 2). Installation by plowing is also acceptable.

3. Install the silt fence with the filter fabric located on the up-slope side of the

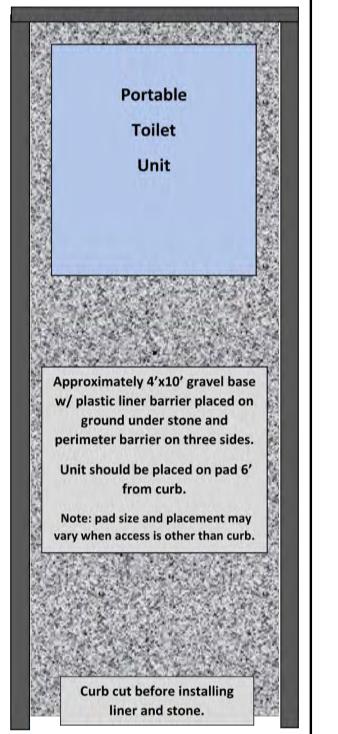
### Portable Toilet Sequence

Portable toilets (port-o-lets) will be provided on the construction site for employees and trade workers in compliance with applicable statutes and regulations. In accordance with Indiana 327 IAC 15-5-7 General requirements for storm water quality control: appropriate measures shall be implemented to minimize or eliminate wastewater (i.e. objectionable substances from a portable toilet unit) being carried from the project

All portable toilet units will provided by a professional sanitation service contractor who will transport, deliver, stage, and maintain each unit in accordance with applicable statutes and regulations. Each unit shall be equipped with one urinal, one toilet, and one hand sanitizer dispenser. Objectionable waste contained within the unit will be disposed of by the sanitation service contractor in compliance with applicable statutes and

placement and staging of each portable toilet unit. The location will promote long term staging, in order to discourage the constant relocation of the unit. However, the Builder may relocated the unit as needed. The unit will be typically be staged at least 6' back of a street curb and approximately 50' from any stormwater inlet. The Builder will prepare the location by directing the installation of a plastic barrier on the soil surface, placing a gravel cover over the barrier, and installing a perimeter barrier product on three sides of the staging area (see diagram).

### Diagram w/ overhead perspective of staging area for Portable Toilet Unit for curb access:



### THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL: BILL BRYANT LENNAR HOMES OF INDIANA, INC.

Phone: (317) 450-4634

INDIANAPOLIS - TERRE HAUTE

LAFAYETTE - MUNCIE - NEW ALBANY

www.hwcengineering.com

DATE | DESCRIPTION | BY

S CORD MCCORD ORM

TD/GM CHECKED BY NOVEMBER 22, 2019 SCALE AS SHOWN

TORMWATER POLLUTION PREVENTION DETAILS

• Introduction - The project site owner has identified eight (8) phases within the vertical construction sequence. During the period of construction activities, all storm water quality measures necessary to meet the requirements of the Indiana storm water Rule shall be maintained in working order. The SWPPP shall serve as a guideline for storm water quality, but should not be interpreted to be the only basis for implementing, in accordance with the Rule, all measures to adequately prevent polluted storm water run—off. Alternative measures to site stabilization are acceptable if the site owner or their representative can demonstrate they have implemented erosion and sediment control measures adequate to prevent sediment discharge. Generally, the project site owner will have projects within multiple municipalities; therefore, BMP practices will be modified in a manner permitted by applicable regulation.

From time construction activity begins, and until the individual lot is stabilized, the lot owner will:

- Protect adjacent properties from sedimentation;

- Prevent mud/sedimentation from depositing on the public street; - Protect drainage ways from erosion and sedimentation;

- Prevent sediment laden water from entering storm sewer inlets.

The following storm water auality measures will take place on an individual lot/home- site:

Phase 1 — Foundation — During the period of construction activities: • A auglified professional shall install silt fence at front curb and rear swale; wattles may be utilized as permitted by applicable regulations (i.e. frozen around conditions, feasibility for site access, transitional BMP, etc.). When applicable regulations require, additional silt fence will be installed the full perimeter of lot/home-site. A qualified professional shall verify the presence of appropriate BMP protection for nearby storm water inlets; if not present, these BMP devices will be

• Portable toilets will be staged throughout the project site in accordance with the site SWPPP and applicable regulations.

• Townhome Projects: A gravel staging area will be established on the site to accommodate storage of construction materials and equipment, concrete washout, and portable toilets. Perimeter silt fence or silt sock will be installed around the staging area. The project Construction Manager will evaluate each site for the appropriate location for the staging area.

• A temporary construction entrance shall be installed, as permitted by applicable regulations.

• Foundation soil stock pile may remain active throughout the estimated twenty—one day foundation phase. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the integrity of perimeter BMPs. Soil will be distributed on site by machine grade in a timely manner.

• Up to two loads of soil may remain on site after backfill of foundation. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the integrity of perimeter BMPs. Soil will be distributed on site by machine grade in a timely manner.

• All concrete washout will occur at the designated concrete washout area. Washout may occur onsite utilizing disposable washout devices.

• All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately contained on site by end of day. Where permitted lumber trash /debris may be set at curb for weekly trash pick-up.)

• A qualified person(s) shall inspect and maintain all storm water measures. Lennar site Associates will participate in weekly stormwater toolbox talks.

Phase 2 — Framing — During the period of construction activity:

• All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately contained on site by end of day. Where permitted lumber trash /debris may be set at curb for weekly trash pick-up.)

• Up to two loads of soil may remain on site. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the integrity of perimeter BMPs. Soil will be distributed on site by machine grade in a timely manner.

• A qualified person(s) shall inspect and maintain all storm water Lennar site Associates will participate in weekly measures. stormwater toolbox talks.

Phase 3 — Mechanical Rough — During the period of construction activity: • A machine grade will be accomplished on site for purposes of filling

ground settlement and surface erosion. • Paint washout shall be done utilizing paint containers. All paint containers shall be removed from the lot/home— site by the paint

• Up to two loads of soil may remain on site. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the integrity of perimeter BMPs. Soil will be distributed on site by machine grade in a timely manner.

• All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately contained on site by end of day. Where permitted lumber trash /debris may be set at curb for weekly trash pick—up.)

• A qualified person(s) shall inspect and maintain all storm water measures. Lennar site Associates will participate in weekly stormwater toolbox talks.

Phase 4 — Insulation/Drywall — During the period of construction activity:

• All drywall scrap and debris shall be removed from the lot/home site by the drywall contractor. Washout of drywall spackling compounds shall be contained and removed from the lot/home site by the drywall contractor.

• While in the process of installing brick veneer, bagged dry mix mortar will be covered by a vapor barrier material to prevent exposure to a rain event. A vapor barrier material will be applied to the soil surface where brick mortar will be mixed. Washout of mortar material may occur on site when utilizing appropriate portable washout container. Hardened mortar debris and brick trash will be staged at curb side for

• All concrete washout will occur at the designated concrete washout area. Washout may occur onsite utilizing disposable washout devices.

• All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately contained on site by end of day. Where permitted lumber trash /debris may be set at curb for weekly trash pick-up.)

• Up to two loads of soil may remain on site. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the integrity of perimeter BMPs. Soil will be distributed on site by machine grade in a timely manner.

• A qualified person(s) shall inspect and maintain all storm water measures. Lennar site Associates will participate in weekly stormwater toolbox talks.

Phase 5 — Exterior Finish — During the period of construction activity: • A machine grade will occur on site to prepare for the installation of the permanent concrete driveway and walkways. During this transition. Curb cut and/or wattles may be utilized as submittal BMP measures to adequately prevent polluted storm water run-off.

 All concrete washout will occur at the designated concrete washout area. Washout may occur onsite utilizing disposable washout devices. • Washout of drywall spackling compounds, paint, tile grout, etc., shall be

contained and removed from the lot/home site by the appropriate All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately

contained on site by end of day. Where permitted lumber trash /debris may be set at curb for weekly trash pick—up.) • Up to two loads of soil may remain on site. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the

integrity of perimeter BMPs. Soil will be distributed on site by machine grade in a timely manner. • A qualified person(s) shall inspect and maintain all storm water measures. Lennar site Associates will participate in weekly stormwater

Phase 6 — Interior Finish — During the period of construction activity:

toolbox talks.

contractor.

• Washout of drywall spackling compounds, paint, tile grout, etc., shall be contained and removed from the lot/home—site by the appropriate

• All concrete washout will occur at the designated concrete washout area. Washout may occur onsite utilizing disposable washout devices.

 All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately contained on site by end of day. Where permitted lumber trash /debris may be set at curb for weekly trash pick-up.)

• Up to two loads of soil may remain on site. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the integrity of perimeter BMPs. Soil will be distributed on site by machine grade in a timely manner.

• A qualified person(s) shall inspect and maintain all storm water measures. Lennar site Associates will participate in weekly stormwater toolbox talks.

Phase 7 — Mechanical Trim — During the period of construction activity: • A machine grade will be accomplish on site for purposes of filling

ground settlement and surface erosion. Washout of drywall spackling compounds, paint, tile grout, etc., shall be contained and removed from the lot/home site by the appropriate

• All concrete washout will occur at the designated concrete washout area. Washout may occur onsite utilizing disposable washout devices.

• All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately contained on site by end of day. Where permitted lumber trash /debris may be set at curb for weekly trash pick—up.)

• Up to two loads of soil may remain on site. Soil stock piles shall be placed on the lot/home site in a manner as not to challenge the integrity of perimeter BMPs. Soil will be distributed on site by machine arade in a timely manner

• A qualified person(s) shall inspect and maintain all storm water measures. Lennar site Associates will participate in weekly stormwater toolbox talks.

Phase 8 — Home Site Finish — During the period of construction activity:

• During seasonal conditions, all silt fence will be removed, wattles or turf matt may be utilized as transitional BMP, a machine grade will be accomplished on site in preparation for final stabilization (Note: adverse soil conditions my limit winter grading). Sod will be installed at front yard to front corners of house structure.

Side and rear yards will be seeded and PennMulch soil stabilizer/fertilizer applied to soil surface, a row of turf matting will be installed at the rear swale easement line. If full sod option is chosen. sod will be installed at side and rear yard in-lieu-of seed, no turf mat will be applied rear easement line, rear swale shall be over seeded. The new property owner will be informed of the requirement for, and benefits of, final stabilization.

 Upon the completion of construction activity, and during unseasonable conditions, existing erosion and sediment control measures will remain in place on site, wattles or turf mat may be applied at curb in-lieu-of silt fence. A qualified person shall inspect and maintain all storm water measures. When seasonal conditions return, all perimeter BMPs will be removed, wattles or turf mat may be utilized as transitional BMP, sod will be installed at front yard, side and rear yards will be seeded and PennMulch soil stabilizer/fertilizer w/ tackifier property owner will be informed of the requirement for, and benefits of,

• All concrete washout will occur at the designated concrete washout

• All construction trash/debris will be contained on site in a manner permitted by applicable regulations (i.e. trash containers utilized as required by municipal authority, fly—a—way trash will be appropriately contained on site by end of day. Where permitted lumber trash /debris

• A qualified person(s) shall inspect and maintain all storm water measures, until transfer of ownership has occurred and the new property owner has been informed of the requirement for, and benefits of, final stabilization. Lennar site Associates will participate in weekly stormwater toolbox talks.

**CONCRETE WASHOUT** 

Concrete Washout (Above Grade System) Worksheet

Wood or metal stakes to secure the Metal pins or staples to lining to the straw bales extend over the L=\_\_\_Fee L = inside length W = inside width

Metal pins or Wood or metal stakes to Metal pins or staples staples to secure the secure the straw bales polyethylene lining \
to the straw bales over the straw lining to the straw bales products may be used to provide structural Section A-A

**CONCRETE WASHOUT** 

alternative fastener to secure polyethylene lining to the containment system. Non-collapsing and non-water holding cover for use during rain events

Installation

. Install and locate according to the manufacturer's recommendations

. Utilize and follow the design in the storm water pollution prevention plan to install the system. · Dependent upon the type of system, either excavate the pit or install the

ebris that may cause tears or punctures in the polyethylene lining. Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be

· Place a non-collapsing, non-water holding cover over the washout facility

prior to a predicted rainfall event to prevent accumulation of water and ossible overflow of the system (optional)

Install signage that identifies concrete washout areas.

Chapter 7

Overflow Areas

Stabilized to reduce scour/erosion along sides and below the dam. Filter Medium

Placed on up-slope side of dam.

. Height - to base of overflow weir notch

· Geotextile fabric (8 ounce or heavier: nonwoven) Indiana Department of Transportation Revelment ripgap (see Appendix D) for

INDOT CA No. 5 aggregate (see Appendix D) for use as filter medium

Note: INDOT CA No. 8 aggregate is acceptable if No. 5 aggregate is not available. The use of No. 8 aggregate may result in more frequent overtopping of the structure and will increase the frequency of

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 wh 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

7. Stabilize the channel above the uppermost dam. 8. Install an erosion-resistant lining in the channel below the lowermost dam. The lining should extend a minimum distance of six feet below the dam.

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**CONCRETE WASHOUT** 

residual loads due to potential to exceed the design capacity of the washout system. Small amounts of excess or residual concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be

> . Install systems at strategic locations that are convenient and in close proximity to work areas and in sufficient number to accommodate the demand for

Straw bale (alternative material or products may be used to will require design modificatio

. Metal oins or staples at a minimum of six inches in length, sandbags, or

Prefabricated Washout Systems/Containers

Designed and Installed Systems

· A base shall be constructed and prepared that is free of rocks and other

istalled over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, sta-

Place flags, safety fencing, or equivalent to provide a barrier to construction

· Post signs directing contractors and suppliers to designated locations.

 Where necessary, provide stable ingress and egress (see Temporary Construction Ingress/Egress Pad on page 17) or alternative approach pad

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**ROCK CHECK DAM** 

applied to soil surface, a single row of turf matting will be installed at the rear swale easement line. . If full sod option is chosen, sod will be installed at side and rear yard in-lieu-of seed, no turf mat will be applied rear easement line, rear swale shall be over seeded. The new

· Washout of drywall spackling compounds, paint, tile grout, etc., shall be contained and removed from the lot/home site by the appropriate

area. Washout may occur onsite utilizing disposable washout devices.

may be set at curb for weekly trash pick-up.)

damage to the system.

· Install signage identifying the location of concrete washout systems.

ditches, karst features, or storm drains/manmade conveyance s . To the extent practical, locate concrete washout systems in relatively flat areas that have established vegetative cover and do not receive runoff from

. Locate concrete washout systems at least 50 feet from any creeks, wetlands,

. Locate in areas that provide easy access for concrete trucks and other . Locate away from other construction traffic to reduce the potential for

General Design Considerations · The structure or system shall be designed to contain the anticipated washout water associated with construction activities

. The system shall be designed, to the extent practical, to eliminate runoff

· Washout will not impact future land uses (i.e., open spaces, landscaped ar-

· Runoff from a rainstorm or snowmelt should not carry wastes away from the

eas, home sites, parks). Washout systems/containment measures may also be utilized on smaller individual building sites. The design and size of the system can be adjusted to accommodate the expected capacity.

Prefabricated Washout Systems/Containers · Self-contained sturdy containment systems that are delivered to a site and located at strategic locations for concrete disposal

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**CONCRETE WASHOUT** 

. Inspect daily and after each storm event. Inspect the integrity of the overall structure including, where applicable, the

. Inspect the system for leaks, spills, and tracking of soil by equipment. . Inspect the polyethylene lining for failure, including tears and puncture

. Once concrete wastes harden, remove and dispose of the material. . Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued

cated systems should also utilize this criterion, unless the manufacturer has . Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.

. Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building he availability for recycling should be checked locally.

. The plastic liner should be replaced after every cleaning; the removal of

material will usually damage the lining. . The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste. · Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an accept

provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering Prefabricated units are provides this service.

able method. Disposal may be allowed at the local sanitary sewer authorit

 Inspect construction activities on a regular basis to ensure suppliers, contracfors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate

October 2007

**ROCK CHECK DAM** 

9. Additional sediment storage can be provided by excavating a small sediment trap on the upstream side of the check dam.

• Inspect within 24 hours of each rain event and at least once every seven

. If significant erosion occurs between dams, install an erosion-resistant line 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 pre-

stabilize the channel, using an erosion-resistant lining if necessary. (Riprap

and aggregate from the dam may be removed or utilized to stabilize the

vent large flow from displacing sediment. Add riprap and aggregate as needed to maintain design height and cross When dams are no longer needed, remove the riprap and aggregate and

A = Crest of Dam B = Toe of Dam

CONCRETE WASHOUT

These systems are manufactured to resist damage from construction equip-

 Manufacturer or supplier provides the containers. The project site manager maintains the system or the supplier provides complete service that includes maintenance and disposal.

. Units are often available with or without ramps. Units with ramps lend themselves to accommodate pump trucks.

 Maintain according to the manufacturer's recommendations. Designed and Installed Units

These units are designed and installed on site. They tend to be less reliable than prefabricated systems and are often prone to failure. Concrete washout systems an be constructed above or below grade. It is not uncommon to have a system that is partly below grade with an additional containment structure above grade

· Washout systems shall utilize a pit or bermed area designed and maintained at a capacity to contain all liquid and concrete waste generated by washout . The volume of the system must also be designed to contain runoff that drains

frequency, 24-hour storm event.

 Below Grade System A washout system installed below grade should be a minimum of ten

feet wide by ten feet long, but sized to contain all liquid and waste hat is expected to be generated between scheduled cleanout periods The size of the pit may be limited by the size of polyethylene available. The polyethylene lining should be of adequate size to extend over the entire excavation.

structure will not overtop during a rain event.

. Line the pit with ten millimeter polyethylene lining to control seepage.

. The bottom of excavated pit should be above the seasonal high water Above Grade System

A system designed and built above grade should be a minimum of

ten feet wide by ten feet long, but sized to contain all liquid and waste

that is expected to be generated between scheduled cleanout period

Include a minimum 12-inch freeboard to reasonably ensure that the

The size of the containment system may be limited by the size of

**CONCRETE WASHOUT** 

October 2007

October 2007

ROCK CHECK DAM

Exhibit 2

 When concrete washout systems are no longer required, the concrete washout systems shall be closed. Dispose of all hardened concrete and other mate

· Holes, depressions and other land disturbances associated with the system

rials used to construct the system.

should be backfilled, graded, and stabilized.

CONCRETE WASHOUT

polyethylene available. The polyethylene lining should be of

idequate size to extend over the berm or containment syste

. The system design may utilize an earthen berm, straw bales,

. Include a minimum four-inch freeboard as part of the design.

. Do not leave excess mud in the chutes or hopper after the pour. Every effort

left in the chutes and hopper, the quicker and easier the cleanout. Small

 At the washout location, scrape as much material from the chutes as possible before washing them. Use non-water cleaning methods to minimize the chance for waste to flow off site.

· Stop washing out in an area if you observe water running off the designated

. Do not back flush equipment at the project site. Back flushing should be

restricted to the plant as it generates large volumes of waste that more than likely will exceed the capacity of most washout systems. If an emergency

arises, back flush should only be performed with the permission of an on-site

. Do not use additives with wash water. Do not use solvents or acids that may

Minimum of ten millimeter polyethylene sheeting that is free of holes, tears,

Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile

construct a containment system (above grade systems).

fabric), soil material, or other appropriate materials that can be used to

and other defects. The sheeting selected should be of an appropriate size to

fit the washout system without seams or overlap of the lining (designed and

at will not result in flow to an area that is to be protected.

· Remove as much mud as possible when washing out.

be used at the target plant.

installed systems).

· Orange safety fencing or equivalent

· Signage.

**RUNOFF CONTROL** 

**Rock Check Dam** 

should be made to empty the chutes and hopper at the pour. The less material

tmounts of excess concrete (not washout water) may be disposed of in areas

and integrity and support the polyethylene lining.

 To reduce erosion in a drainage channel by slowing velocity of flow. (Check dams are commonly used (a) in channels that are eroding, but where permanent stabilization is impractical due to their short period of usefulness prevent timely installation of erosion-resistant linings.)

A rock check dam is a

series of runoff control

structures, consisting of

geotextile fabric and aggre

gate, placed across drain-

age channels to slow storn

water runoff. This measure

may also provide limited

effectiveness as a sediment

control measure.

Chapter 7

 To reduce flow velocities in a drainage channel. Note: Do not use check dams in perennial streams

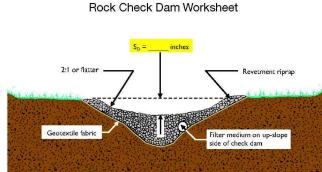
**Specifications** 

Contributing Drainage Area

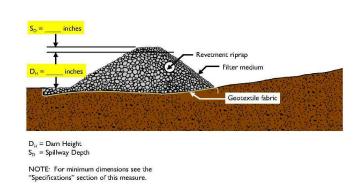
Riprap Check Dam Dam height.

> between the uppermost points of the riprap dam and channel banks. Side slope ratio of 2:1 or flatter. Spacing toe of the upstream dam at same elevation as overflow weir of the

center of the dam at least nine inches lower than the points of contact



S<sub>D</sub> = Spillway Depth NOTE: For minimum dimensions see the "Specifications" section of this measure.



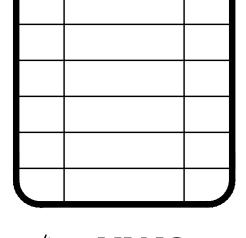
Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

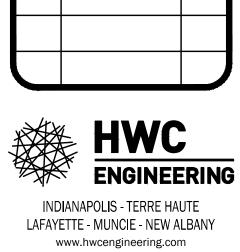
THIS SHEET TO BE USED FOR EROSION CONTROL ONLY

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL: BILL BRYANT LENNAR HOMES OF INDIANA, INC.

Phone: (317) 450-4634

DATE | DESCRIPTION | BY





4 S П OR EX MC

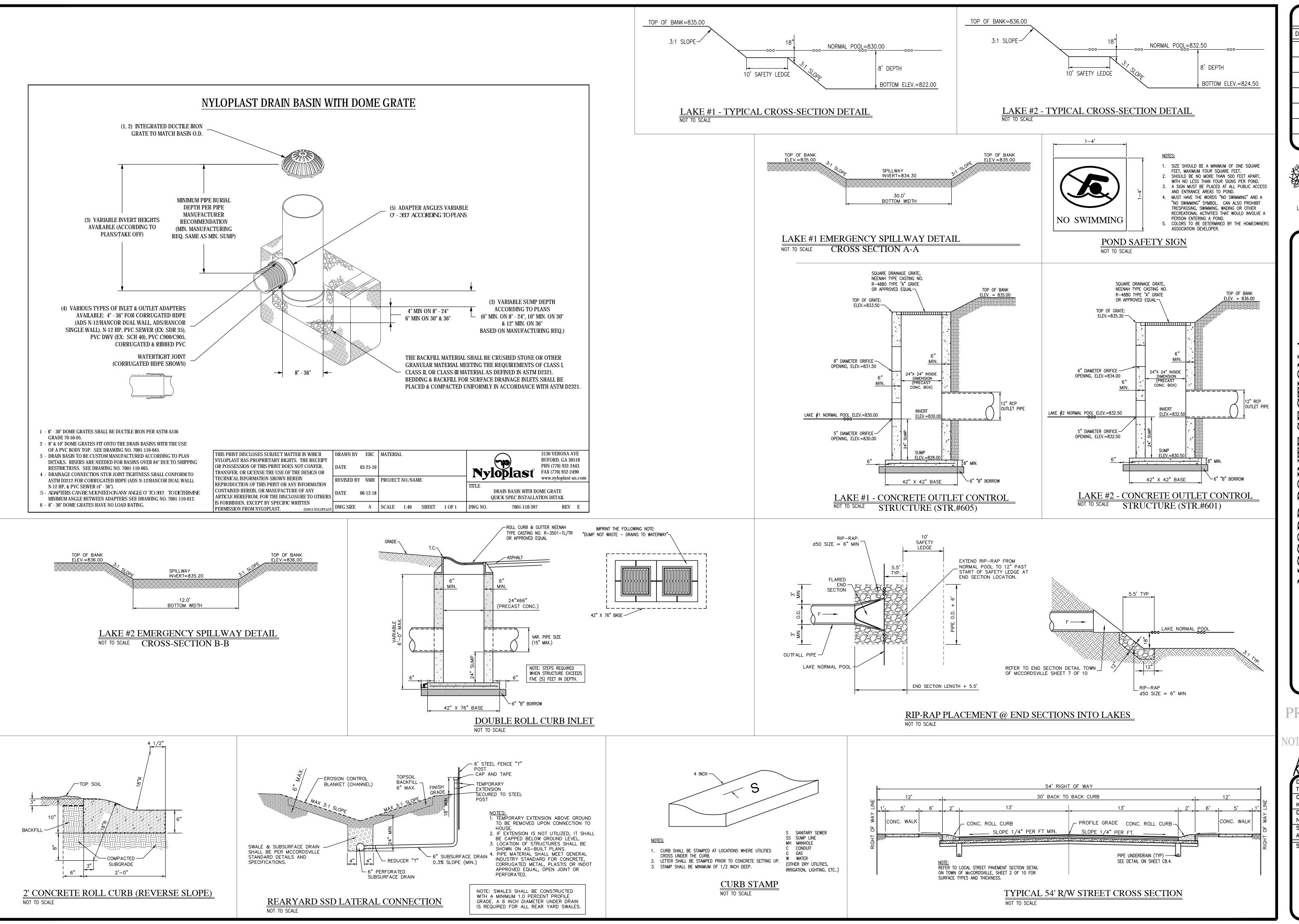
STATE OF stopher L. Uchom ΓD/GM CHECKED BY

SCALE AS SHOWN

NOVEMBER 22, 2019

PREVENTION DETAILS

TORMWATER POLLUTION



REVISIONS

DATE DESCRIPTION BY

HWC ENGINEERING

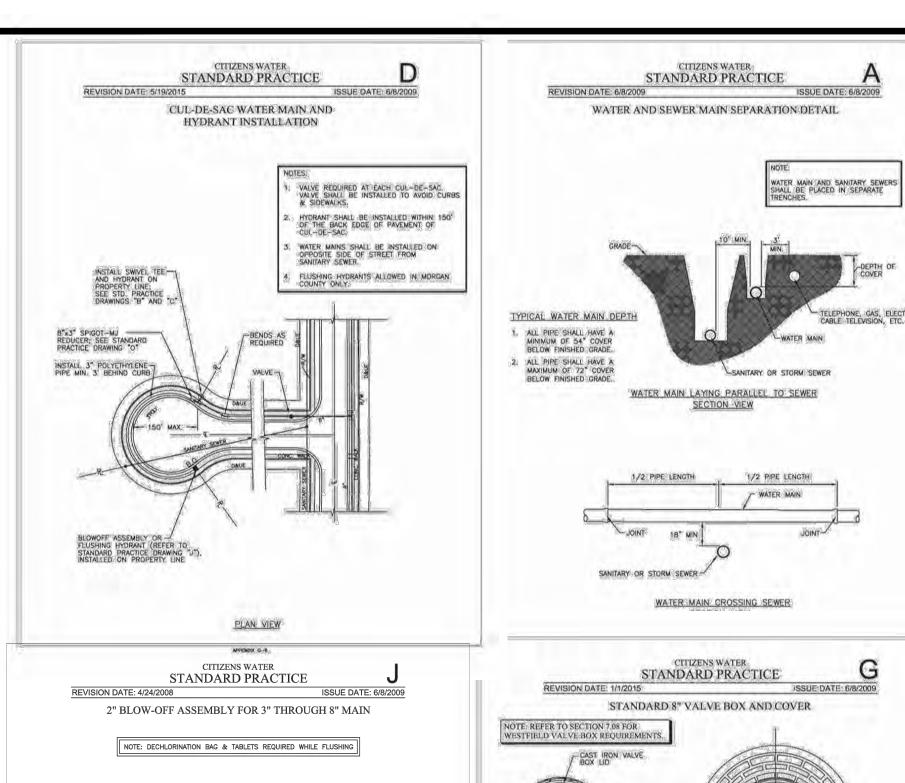
INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

ORD POINTE SECTION 4 CORDSVILLE, INDIANA

DRAWN BY
TD/GM
CHECKED BY
KE
DATE
NOVEMBER 22, 2019
SCALE
AS SHOWN
SHEET

C8.4

CONSTRUCTION DETAILS



2" GALV. PIPE 2"x1/2" GALV. TEE

THREADED END

BLEED ASSEMBLY DETAIL

BLEED ASSEMBLY REQ'D-(SEE DETAIL AT RIGHT)

TRACING WIRE ——
1/2" B.I. VALVE STEM

3". 4". 6". OR 8"

WATER MAIN

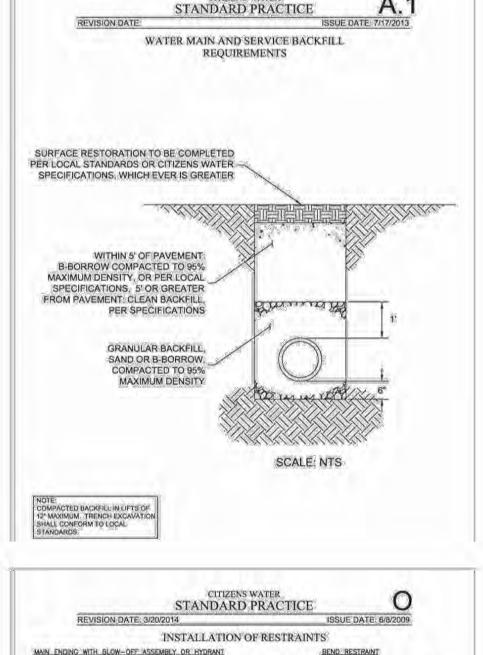
MJ PLUG WITH 2" TAP ON 4", 6", & 8" MAINS OR

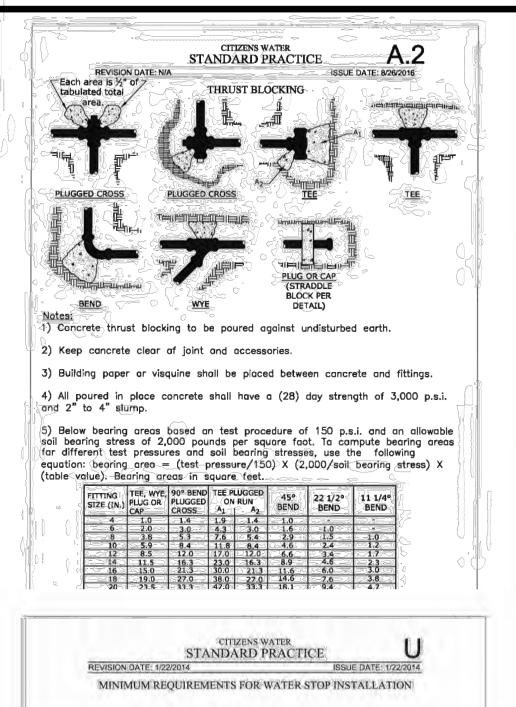
3" FUSED MJ ADAPTER WITH 2" DRILL/TAPPED END CAP

2"x8" BRASS PIPE

2" BRONZE BODY BALL
VALVE WITH CHROME PLAT'
BALL, AUTOMATIC WEEP
(NOT TO BE USED AS
CONTROL VALVE)

SECTION





- 12" - 24" MINIMUM

MINIMUM 12"

3' TO B' FROM END OF PIPE

WATER STOP WILL BE FUSED INLINE INTO P.E. 4

CONCRETE WILL NOT BE CLOSER THAN 3 FEET AND NO FURTHER THAN 8 FEET, TO THE END OF PIPE THAT TRANSMONS TO THE MICHARICAL JOINT OR PUSH ON JOINT PIPE.

CONCRETE IS TO BE POURED OVER THE ANCHOR RING IN A AWNER TO KEY INTO UNDSTURNED SOIL NO LESS THAN 18 INCHES BELOW BOTTOM OF DOCH AND WILL EXTEND THE WIDTH OF THE DITCH.

WATER STOPS ARE REQUIRED WHEN THERE IS A TRANSITION TO DISSIMILAR MATERIALS REGARDLESS OF LEMTTH OF POLY MATERIAL.

CONCRETE SHOULD EXTEND NO LESS THAN 12 INCHES TO EACH SIDE AND ABOVE THE PIPE.

AND AGOVE THE PIPE.

13. TO G IN PLE PIPE MINIMUM I YARD CONCRETE INSTALLED AROUND ARCHOR RING OF WAREN STOP.

19. TO 12-IN PLE PIPE MINIMUM I YARD OF CONCRETE INSTALLED. AROUND ANCHOR RING OF WATER STOP.

116. TO 20 IN PLE PIPE MINIMUM I YARDS OF CONCRETE INSTALLED AROUND ANCHOR RING. OF WATER STOP.

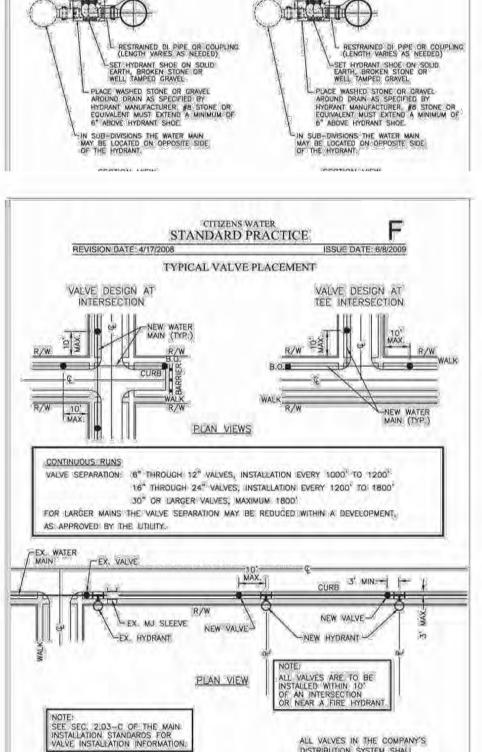
124. TO 30 IN PLE PIPE MINIMUM I YARDS OF CONCRETE INSTALLED AROUND ANCHOR RING. OF WATER STOP.

136. THE PIPE MINIMUM I FOUR YARDS OF CONCRETE INSTALLED AROUND ANCHOR RING. OF WATER STOP.

MINIMUM T2"

MINIMUM 12"

THIS WATER STOP SERVES TO RESTRUM AND ANCHOR ADMINST THERMAL EXPANSION AND CONTRACTION IT IS DESIGNED TO HOLD THE PIPE IN PLACE BY TRANSFERRING THE REPREMAL FORCE FROM THE PIPE TO THE SOLD LIVE A LARGE AREA FOR REPREMAL FORCE FROM THE PIPE TO THE SOLD LIVE A LARGE AREA FOR THE MINISTER SHOWN AND A MEAL AS WELL AS THE THEORY SHOWN FOR THE MINISTER THE PIPE THE SOLD AND A SUPPLIENT FOR THE WINDOW.



DISTRIBUTION SYSTEM SHALL OPEN IN A CLOCKWISE ROTATION.

STANDARD PRACTICE

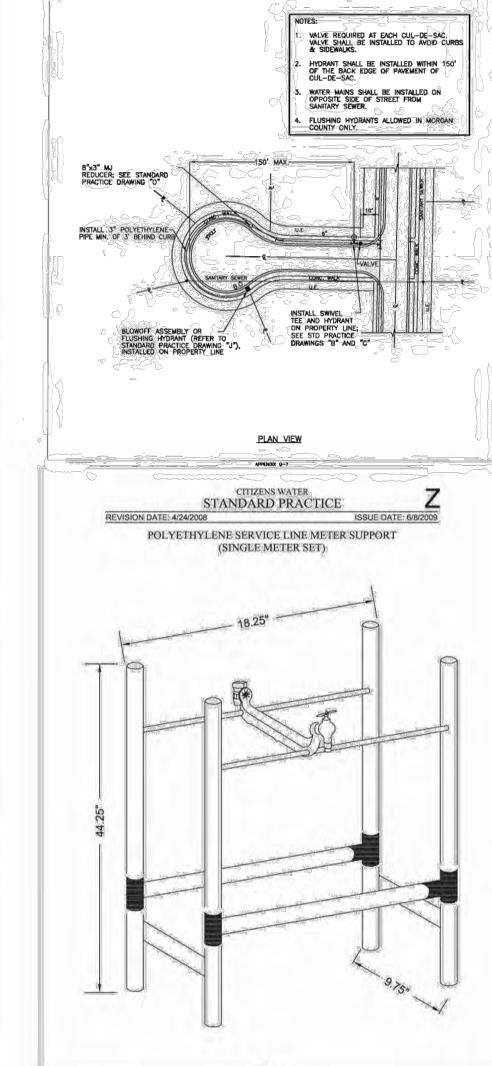
STANDARD HYDRANT SETTING FOR 6" & 8" WATER MAIN SIZES

FOR INSTALLATION ON 6" AND 8" DISTRIBUTION MAINS IN CITIZENS WATER TERRITORY.

HYDRANTS IN CITIZENS WESTFIELD TERRITORY SHALL HAVE A VALVE. SEE STANDARD PRACTICE B' ALL HYDRANTS SHALL BE RESTRAINED TO THE HYDRANT TEE WITH DUCTILE IRON BRANCH PIPING ENCASED IN POLYETHYLENG WRAP.

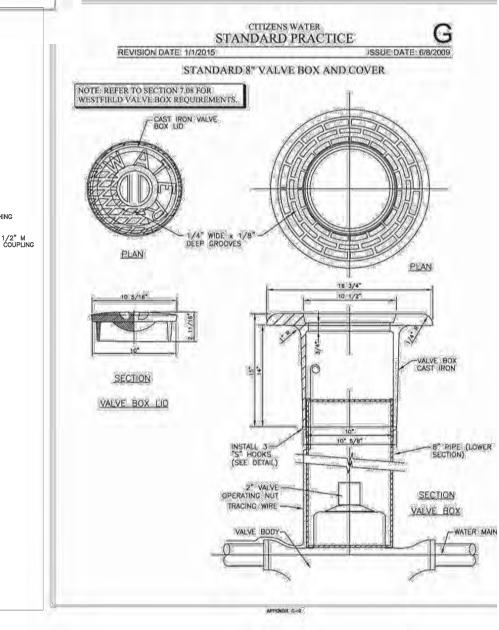
SWIVEL 90' BEND MAY BE USED TO INSTALL HYDRANT IN GRASS STRIP BETWEEN CURB & SIDEWALK

HYDRANTS WILL BE MARKED OUT OF SERVICE UNTIL THE INSPECTOR HAS PLACED THE MAIN IN SERVICE HTDRANTS CAN BE MARKED OUT OF SERVICE USING A MANUFACTURED "OUT OF SERVICE" SIGN OR BY RENDERING THE HYDRANT INACCESSIBLE.



CITIZENS WATER

STANDARD PRACTICE



STANDARD PRACTICE

STANDARD HYDRANT SETTING FOR WATER MAIN SIZES 12" OR LARGER

IN CITIZENS WATER AND 6" OR LARGER IN CITIZENS WESTFIELD.

FOR INSTALLATION ON 12" & LARGER DISTRIBUTION MAIN IN CHIZENS WATER TERRITORY. FOR INSTALLATION ON 6" & LARGER DISTRIBUTION MAIN IN CITIZENS WESTFIELD TERRITORY. ALL HYDRANTS SHALL BE RESTRAINED TO THE HYDRANT TEE WITH DUCTILE IRON BRANCH PIPING ENCASED IN POLYETHYLENE WRAP.

SWIVEL 90' BEND MAY BE USED TO INSTALL HYDRANT AND VALVE IN GRASS STRIP BETWEEN CURB & SIDEWALK.

A MANUPACTURED "OUT OF SERVICE" SIGN WILL BE REQUIRED ON HYDRANTS UNITL MAIN HAS BEEN PLACED "IN SERVICE" BY THE INSPECTOR.

>-TRACING WIRE

5" HYDRANT VALVE

SET HYDRANT SHOE ON SOLID EARTH, BROKEN STONE OR WELL TAMPED GRAVEL

PLACE WASHED STONE OR GRAVEL AROUND DRAIN AS SPECIFIED BY HYDRAIN MANUFACTURER, #B STONE OR EQUIVALENT MUST EXTEND A MINIMUM OF 12" ABOVE HYDRAINT DRIP. LINE.

IN SUB-DIVISIONS THE WATER MAIN AND VALVE MAY BE LOCATED ON OPPOSITE SIDE OF THE HYDRANT.

SECTION VIEW (WITH SIDEWALK)

RESTRAINED DE PIPE OR COUPLING (LENGTH VARIES AS NEEDED)

SWIVEL THE REQUIRED FOR 12" & LARGER PI

REVISION DATE: 1/26/2015

-6" HYDRANT VALVE

SET HYDRANT SHOE ON SOLID EARTH, BROKEN STONE OR WELL TAMPED CRAVEL

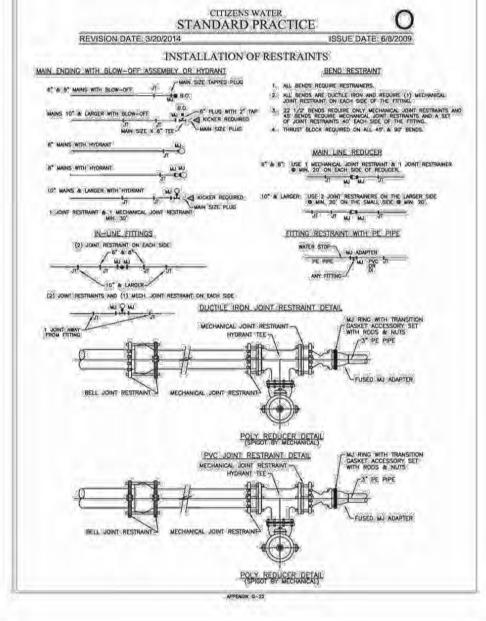
L PLACE WASHED STONE OR GRAVEL AROUND DRAIN AS SPECIFIED BY

HYDRANT MANUFACTURER #8 STONE OR EQUIVALENT MUST EXTEND A MINIMUM OF 12" ABOVE HYDRANT SHOE

IN SUB-DIVISIONS THE WATER MAIN AND VALVE MAY BE LOCATED ON OPPOSITE SIDE OF THE HYDRANT.

SECTION VIEW (WITHOUT SIDEWALK)

RESTRAINED DI PIPE OR COUPLING (LENGTH VARIES AS NEEDED)



STANDARD PRACTICE

STANDARD SERVICE LINE INSTALLATION AND SETTING

FOR TWO (2) 5/8" METERS IN SINGLE PIT

/See Note #2

Meter furnished & set by C.E.G.

2. Yoke including angle compression valves furnished to plumber by C.E.G.
3. All service lines must have 4: 1/2" of cover regardless of the water main depth.
At least 2' of flow, sand, or pea gravel required at each tap and service location.
4. Locate meter pit within 1:-3" of ROW line on covering proceeds side.

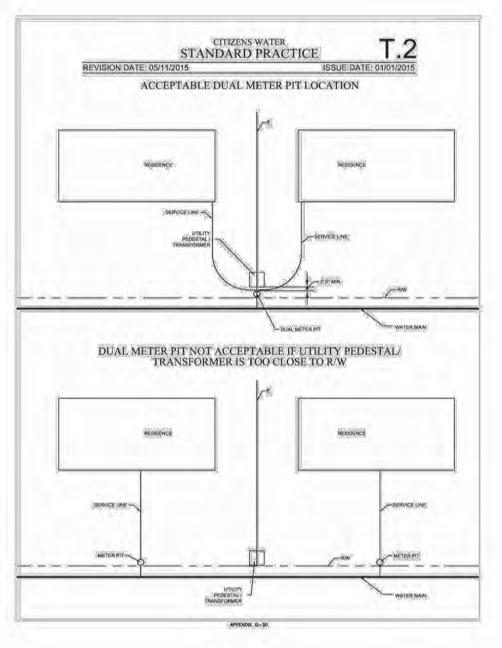
customer property side.
The location must be accessible and in a level place.
The pit SHALL NOT be located in driveways.

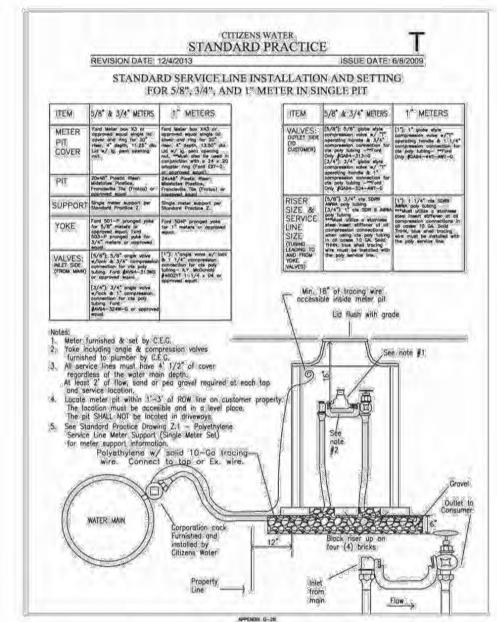
Poly service lines require double meter support. See Standard Practice Drawing Z.1 — Polyethylene Service Line Meter Support (Double Meter Set).

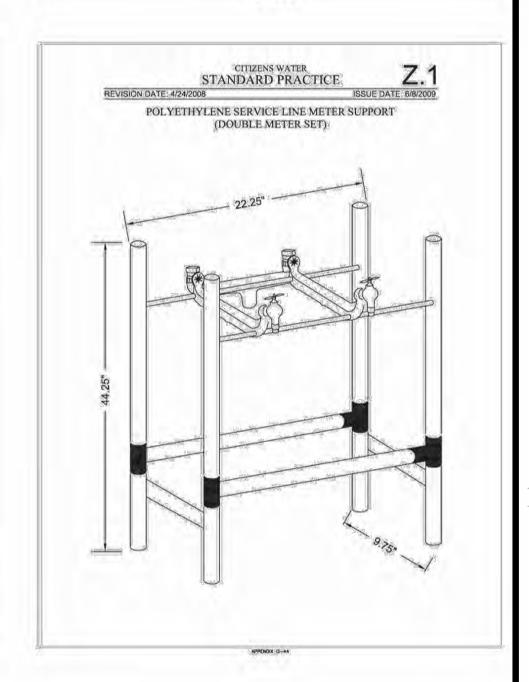
— Lid Flush with grade-y — Riser furnished and erected by plumber;

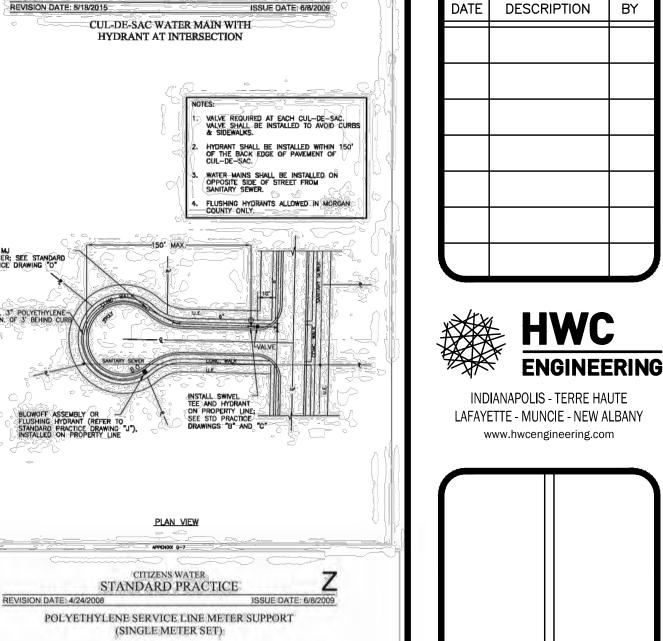
YOKE FORD METER BOX CO.
SUPPORT Deable meter support.
See Standard Prosition
FORD METER BOX CO.
Angle & Compression
volves for Iron, pipe

SERVICE LINE 3/4" for 5/0" meter SIZE 1" for 3/4" meter









PC

**REVISIONS** 

No. STATE OF MOIANA DRAWN BY TD/GM CHECKED BY NOVEMBER 22, 2019 SCALE AS SHOWN SHEET CONSTRUCTION

**DETAILS** ©2019

THIS INSTRUMENT PREPARED BY: KRISTOPHER K. EICHHORN HWC ENGINEERING 135 N. PENNSYLVANIA STREET, SUITE 2800 INDIANAPOLIS, INDIANA 46204 PHONE: (317) 347-3663 **DEVELOPED BY:** 

LENNAR HOMES OF INDIANA, INC. 9025 NORTH RIVER ROAD, SUITE 100

INDIANAPOLIS, IN 46240 PHONE: (317) 659-3200

**Assumed North** 

**Scale: 1" = 200**'

## McCORD POINTE SECTION 4

### SECONDARY PLAT

### TOWN OF McCORDSVILLE

VERNON TOWNSHIP, HANCOCK COUNTY, INDIANA

(PART OF SECTION 13, TOWNSHIP 17 NORTH, RANGE 5 EAST)

ZONED McCORD POINTE AMENDED PUD ORDINANCE NO. 101017B, AN ORDINANCE AMENDING THE TOWN OF McCORDSVILLE ZONING ORDINANCE NO. 121410, AS AMENDED.

### DEVELOPMENT STANDARDS

MAXIMUM NUMBER OF LOTS MINIMUM LOT AREA MINIMUM LOT WIDTH AT BUILDING LINE MINIMUM FRONT YARD SETBACK MINIMUM SIDE YARD SETBACK MINIMUM REAR YARD SETBACK MINIMUM LIVABLE FLOOR AREA

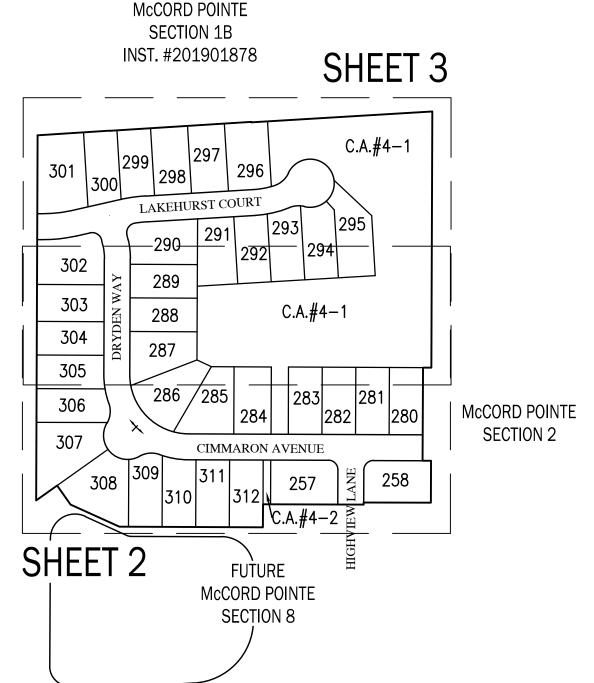
MIN. GROUND FLOOR LIVING AREA MAXIMUM LOT COVERAGE MAXIMUM HEIGHT - PRINCIPAL

AREA "B"

25 FEET 7.5 FEET 25 FEET 1,500 SF (SINGLE STORY) 1,800 SF (MULTI STORY) 900 SF (MULTI STORY)

9,000 SQ. FT

35 FEET



		(	Curve Table	)	
Curve #	Length	Radius	Chord Length	Chord Bearing	Delta
C-1	31.42'	20.00'	28.28'	S45°13'35"W	90°00'0
C-2	31.42'	20.00'	28.28'	N44°46'25"W	90°00'0
C-3	193.21	123.00'	173.95'	S44°46'22"E	90°00'0
C-4	235.62'	150.00'	212.14'	S44°46'22"E	90°00'0
C-5	61.20'	177.00'	60.90'	S79°52'04"E	19°48'43
C-6	61.20'	177.00'	60.90'	S09°40'40"E	19°48'4
C-7	43.51	50.00'	42.15'	N05°20'40"E	49°51'2
C-8	130.98	50.00'	96.61'	S44°46'22"E	150°05'2
C-9	43.51	50.00'	42.15'	S85°06'37"W	49°51'2
C-10	27.59	123.00'	27.53'	N06°11'51"W	12°51'0
C-11	33.64	150.00'	33.57'	N06°11'51"W	12°51'0
C-12	39.70'	177.00'	39.62'	N06°11'51"W	12°51'0
C-13	31.42'	20.00'	28.28'	N57°37'24"W	90°00'0
C-14	32.76	20.00'	29.22'	S34°18'11"W	93°51'0
C-15	61.24	273.00'	61.11'	N83°48'08"E	12°51'08
C-16	67.29	300.00'	67.15	N83°48'08"E	12°51'0
C-17	73.35	327.00'	73.20'	N83°48'08"E	12°51'08
C-18	25.47	273.00'	25.46'	S83°54'06"W	5°20'43
C-19	48.16'	300.00'	48.11'	S81°58'31"W	9°11'52
C-20	52.50'	327.00'	52.44'	S81°58'31"W	9°11'53
C-21	43.57	173.00'	43.45'	N79°21'36"E	14°25'42
C-22	80.27	200.00'	79.73'	N75°04'34"E	22°59'4
C-23	73.91'	227.00'	73.59'	N77°14'47"E	18°39'20
C-24	31.43'	50.00'	30.91'	S85°55'31"W	36°00'49
C-25	40.98	50.00'	39.85'	N48°39'48"E	46°57'5
C-26	225.80'	50.00'	77.30'	N25°26'36"W	258*45'0

Kristopher K. Eichhorn

Professional Surveyor No. 21000230

STATE OF

**Assumed North** 

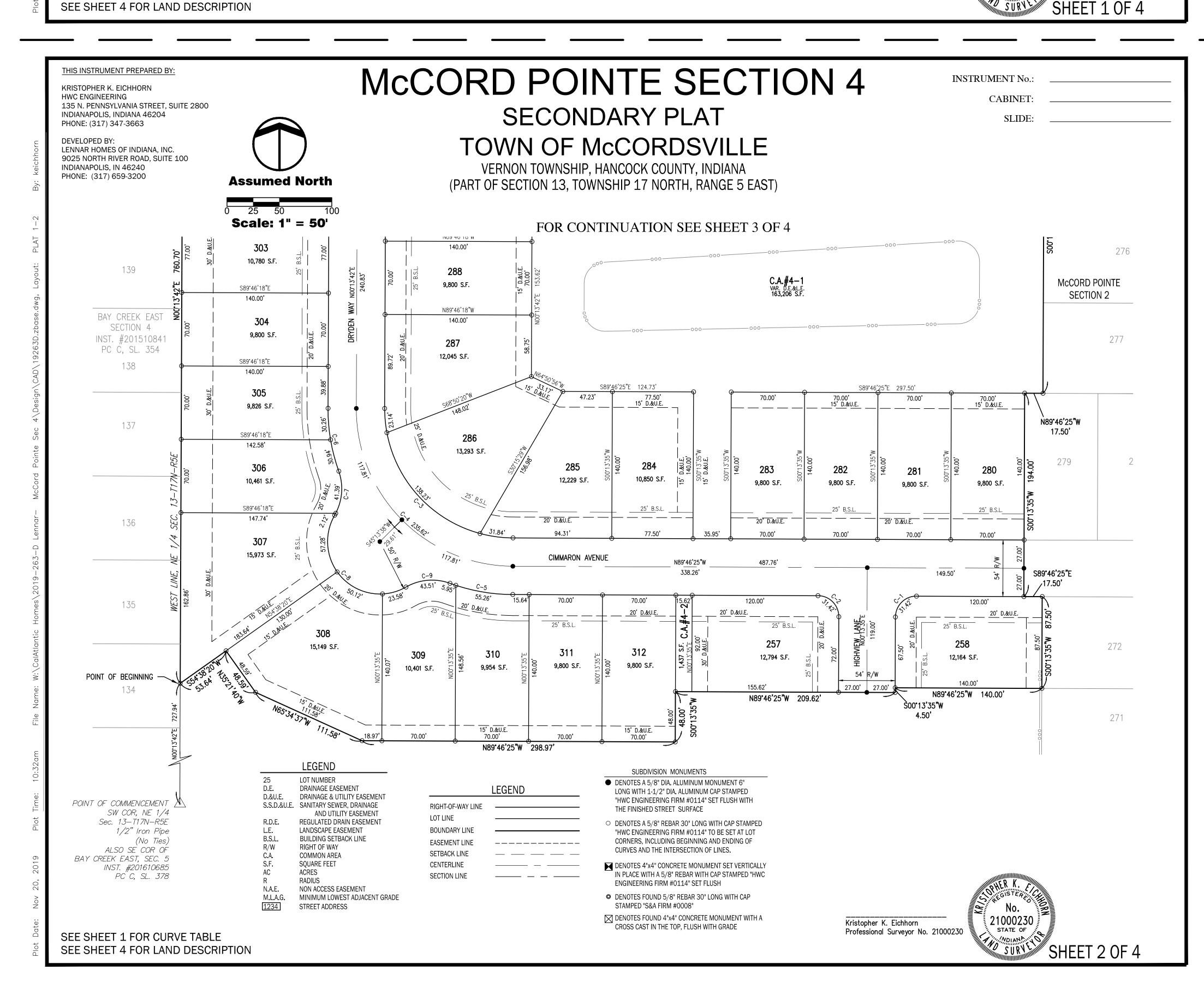
**INSTRUMENT No.:** 

CABINET:

Site Map

SCALE: 1" = 200'

SEE SHEET 1 FOR CURVE TABLE SEE SHEET 4 FOR LAND DESCRIPTION



### THIS INSTRUMENT PREPARED BY:

KRISTOPHER K. EICHHORN HWC ENGINEERING 135 N. PENNSYLVANIA STREET, SUITE 2800 INDIANAPOLIS, INDIANA 46204 PHONE: (317) 347-3663

Hancock County, Indiana being more particularly described as follows:

DEVELOPED BY:
LENNAR HOMES OF INDIANA, INC.
9025 NORTH RIVER ROAD, SUITE 100
INDIANAPOLIS, IN 46240
PHONE: (317) 659-3200

## McCORD POINTE SECTION 4

### SECONDARY PLAT

### TOWN OF McCORDSVILLE

VERNON TOWNSHIP, HANCOCK COUNTY, INDIANA (PART OF SECTION 13, TOWNSHIP 17 NORTH, RANGE 5 EAST)

(PART OF S I, the undersigned Registered Land Surveyor, hereby certify that the included plat correctly represents a subdivision of part of the Northeast Quarter of Section 13, Township 17 North, Range 5 East of the Second Principal Meridian, Vernon Township,

COMMENCING at the southwest corner of said Quarter Section, said corner also being the southeast corner of Bay Creek East, Section 5, per plat recorded in Plat Cabinet C, Slide 378 as Instrument Number 201610685 in the Office of the Recorder of Hancock County, Indiana; thence North 00 degrees 13 minutes 42 seconds West (assumed bearing per survey recorded as Instrument Number 201805353 in said Recorder's Office) along a west line of said guarter section a distance of 727.94 feet to the POINT OF BEGINNING; thence continuing North 00 degrees 13 minutes 42 seconds East along said west line a distance of 760.70 feet; thence North 86 degrees 19 minutes 58 seconds East a distance of 150.00 feet; thence South 00 degrees 13 minutes 42 seconds West a distance of 0.51 feet; thence North 86 degrees 19 minutes 58 seconds East a distance of 296.00 feet; thence South 00 degrees 13 minutes 42 seconds West a distance of 1.15 feet; thence North 86 degrees 34 minutes 27 seconds East a distance of 378.04 feet to a northwest corner of McCord Pointe, Section 2 and the following five (5) courses are along the westerly lines of said McCord Pointe, Section 2; (1) thence South 00 degrees 13 minutes 35 seconds West a distance of 533.44 feet; (2) thence North 89 degrees 46 minutes 25 seconds West a distance of 17.50 feet; (3) thence South 00 degrees 13 minutes 35 seconds West a distance of 194.00 feet; (4) thence South 89 degrees 46 minutes 25 seconds East a distance of 17.50 feet; (5) thence South 00 degrees 13 minutes 35 seconds West a distance of 87.50 feet; thence North 89 degrees 46 minutes 25 seconds West a distance of 140.00 feet; thence South 00 degrees 13 minutes 35 seconds West a distance of 4.50 feet; thence North 89 degrees 46 minutes 25 seconds West a distance of 209.62 feet; thence South 00 degrees 13 minutes 35 seconds West a distance of 48.00 feet; thence North 89 degrees 46 minutes 25 seconds West a distance of 298.97 feet; thence North 65 degrees 34 minutes 37 seconds West a distance of 111.58 feet; thence North 35 degrees 21 minutes 40 seconds West a distance of 48.59 feet; thence South 54 degrees 38 minutes 20 seconds West a distance of 53.64 feet to the POINT OF BEGINNING, containing 15.239 acres, more or less.

This subdivision consists of 35 lots numbered 257—258 and 280—312, all inclusive, and 2 Common Areas denoted as CA #4—1 and CA #4—2.

Cross—Reference is hereby made to a survey plat prepared by Stoeppelwerth & Associates, Inc. in accordance with Title 865, Article 1, Chapter 12 of the Indiana Administrative Code, recorded as Instrument Number <u>201805353</u> in the Office of the Recorder of Hancock County, Indiana.

I further certify that I am a Registered Land Surveyor, licensed in compliance with the laws of the State of Indiana and that the within plat represents a subdivision of the lands surveyed within the cross referenced survey plat, and that to the best of my knowledge and belief there has been no change from the matters of survey revealed by the cross referenced survey on any lines that are common with the new subdivision.

Witness by signature this \_\_\_\_ day of \_\_\_\_, 20 \_\_\_.

Kristopher K. Eichhorn
Professional Surveyor No. 21000230
STATE OF
SURVEYORM

### ACCEPTANCE OF DEED OF DEDICATION

We, the undersigned Lennar Homes of Indiana, Inc., a Delaware Corporation, owners of the real estate shown and described on the plat herein and recorded in the Office of the Recorder of Hancock County, Indiana, do hereby lay off, plat and subdivide, said real estate in accordance with the within plat. We further certify that this plat is made and submitted with our free consent and desires.

This subdivision shall be known and designated as McCord Pointe, Section 4. All streets shown and not heretofore dedicated are hereby dedicated to the public.

Dedicated right—of—way in this subdivision consists of 3.031 acres and 2,430 lineal feel as measured along the centerline of the road.

Title to the foregoing real estate is subject to a certain Declaration of Covenants, Conditions and Restrictions for McCord Pointe, recorded as Instrument Number 201900184 in the Office of the Recorder of Hancock County, Indiana, and amended by Instrument Number 201903207 in said Recorder's Office, as the same may be amended or supplemented. Such Declaration and the Covenants and Restrictions set forth therein run with the land described hereon and are incorporated herein by reference. Each owner of a lot depicted on this plat shall take title to such lot subject to the terms and conditions of the Declaration.

Front yard building setback lines are hereby established as shown on this plat, between which lines and the property lines of the street, there shall be erected or maintained no building or structure.

A perpetual utility easement is hereby granted to any private or public utility or municipal department, their successors and assigns, within the area shown on the plat and marked "Utility Easement", to install, lay, construct, renew, operate, maintain and remove conduits, cables, pipes, poles and wires, overhead and underground, with all necessary braces, guys, anchors and other equipment for the purpose of serving the subdivision and other property with telephone, internet, cable tv, electric and gas, sewer and water service as a part of the respective utility systems; also is granted (subject to the prior rights of the public therein or other governing codes and ordinances) the right to use the streets and lots with aerial service wires to serve adjacent lots and street lights, the right to cut down and remove or trim and keep trimmed any trees or shrubs that interfere or threaten to interfere with any of the said private or public utility equipment, and the right is hereby granted to enter upon the lots at all times for all of the purposes aforesaid. No permanent structures, fences, or trees shall be placed on said area as shown on the plat and marked "Utility Easement", but same may be used for gardens, shrubs, landscaping and other purposes that do not then or later interfere with the aforesaid user or the rights herein granted.

Tree Conservation Easement — A tree conservation easement is shown on this plat an abbreviated as "T.C.E.". Within the tree conservation area, no trees with a diameter at breast height ("DBH") in excess of six inches (6") or more (the "Protected Trees") shall be removed unless the tree is damaged, diseased, dead, or is to be removed in order to: (1) comply with the safety requirements of any governmental agency; or (2) to accommodate the installation of drainage utilities, street connections, walking path or other infrastructure. If a Protected Tree is damaged or otherwise removed by the developer or builder, except as permitted to be removed as listed above, then the developer or builder shall reestablish the Protected Tree with a tree or trees of combined equal or greater DBH subject to the availability of space for their healthy growth in the tree conservation area.

In addition, this Deed shall dedicate to the Town of McCordsville, Indiana, any and all sewer infrastructure installed for, by or on behalf of the undersigned, said infrastructure to include but not be limited to the sewer collection system, force main, lift station, or any other component part of the sewer system which serves the subject subdivision.

The right to enforce these provisions by injunction, together with the right to cause the removal, by due process of law, of any structure or part thereof erected, or maintained in violation hereof, is hereby maintained in violation hereof, is hereby dedicated to

### CERTIFICATE OF OWNERSHIP

We, Lennar Homes of Indiana, Inc., do hereby certify that we are the owner of the property described in the above caption and that as such owner it has caused the said above described property to be surveyed and subdivided as shown on the herein drawn plat, as its free and voluntary act and deed.

Owner/Developer
Lennar Homes of Indiana, Inc., a Delaware Corporation

By: \_\_\_\_\_ Keith Lash, Vice President Land Acquisition and Development

State of Indiana ) ) SS County of Hamilton )

Before me, the undersigned, a Notary Public in and for said County and State, personally appeared Keith Lash, Vice President Land Acquisition and Development, Lennar Homes of Indiana, Inc., and acknowledged the execution of this instrument as his voluntary act

and deed and affixed his signature thereto.

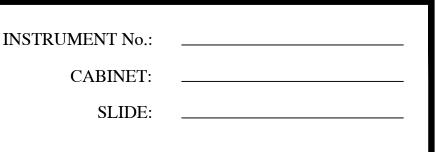
Witness my signature and seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,

the Town of McCordsville. Indiana, its assigns or designated agent or representative.

Notary Public

Printed Name

County of Residence: \_\_\_\_\_



### DRAINAGE COVENANT

Channels, tile drains 8—inch or larger, inlets and outlets of detention and retention ponds, and appurtenances thereto within designated drain easements are extensions of the McCordsville's stormwater drainage system and are the responsibility of the McCordsville Drainage Board and/or the McCordsville Public Works Commissioner. Drainage swales and tile drains less than 8—inch in inside diameter shall be the responsibility of the property owner or homeowner association.

A petition addressed to the McCordsville Drainage Board has been filed in duplicate with the McCordsville Town Engineer, requesting that the subdivision's storm drainage system and its casements be accepted into the regulated drain system. Channels, tile drains 8—inch or larger, inlets and outlets of detention and retention ponds, and appurtenances thereto within designated drain easements are extensions of the McCordsville's stormwater drainage

detention and retention ponds, and appurtenances thereto within designated drain easements are extensions of the McCordsville's stormwater drainage system and are the responsibility of the McCordsville Drainage Board and/or the McCordsville Public Works Commissioner. Drainage swalcs and tile drains less than 8-inch in inside diameter shall be the responsibility of the property owner or homeowner association. The storm drainage system and its easements that are accepted in to the regulated drainage system are delineated on the plat as Regulated Drainage Easements (RDE's). Regulated Drainage Easements are stormwater easements and drainage rights of way that are hereby dedicated to the public and to McCordsville, Indiana, for the sole and exclusive purpose of controlling surface water and/or for installation, operation, and maintenance of storm sewers and tile drains as defined in McCordsville Stonnwater Management Ordinance. These drainage easements are established under authority of the Indiana Drainage Code and the said Board may exercise powers and duties as provided in said code. All other storm drainage easements have not been accepted into the town's system. All drainage improvements performed relative to the conveyance of Stormwater runoff and the perpetual maintenance thereof, with the latter easements, shall be the responsibility of the owner or homeowner association. The McCordsville Drainage Board assumes no responsibility relative to said improvements or the maintenance thereof. This subdivision contains 0 linear feet of open ditches and 0 feet of subsurface drains that will be included in the Town's Regulated Drainage System.

### TOWN APPROVAL

### McCORDSVILLE ADVISORY PLAN COMMISSION

This is to certify that this plat has been approved by the McCordsville Advisory Plan Commission

dic,	20, under the duthority provided by.
Signature	Signature

under the authority provided by

Signature	Signature
Printed Name	Printed Name

### REDACTION STATEMENT

day of

I affirm under the penalties for perjury, that I have taken reasonable care to redact each social security number in this document, unless required by law. <u>Kristopher K. Eichhorn</u>

### PUD, COVENANTS & OTHER NOTES

The subject tract is zoned McCord Pointe Amended PUD ORDINANCE No. 101017B and Ordinance amending the Town of McCordsville ZONING ORDINANCE No. 121410, as amended.

SHEET 4 OF 4