



FRANKLIN POLE YARD EXPANSION
 2515 NORTH MORTON STREET
 FRANKLIN, INDIANA 46131



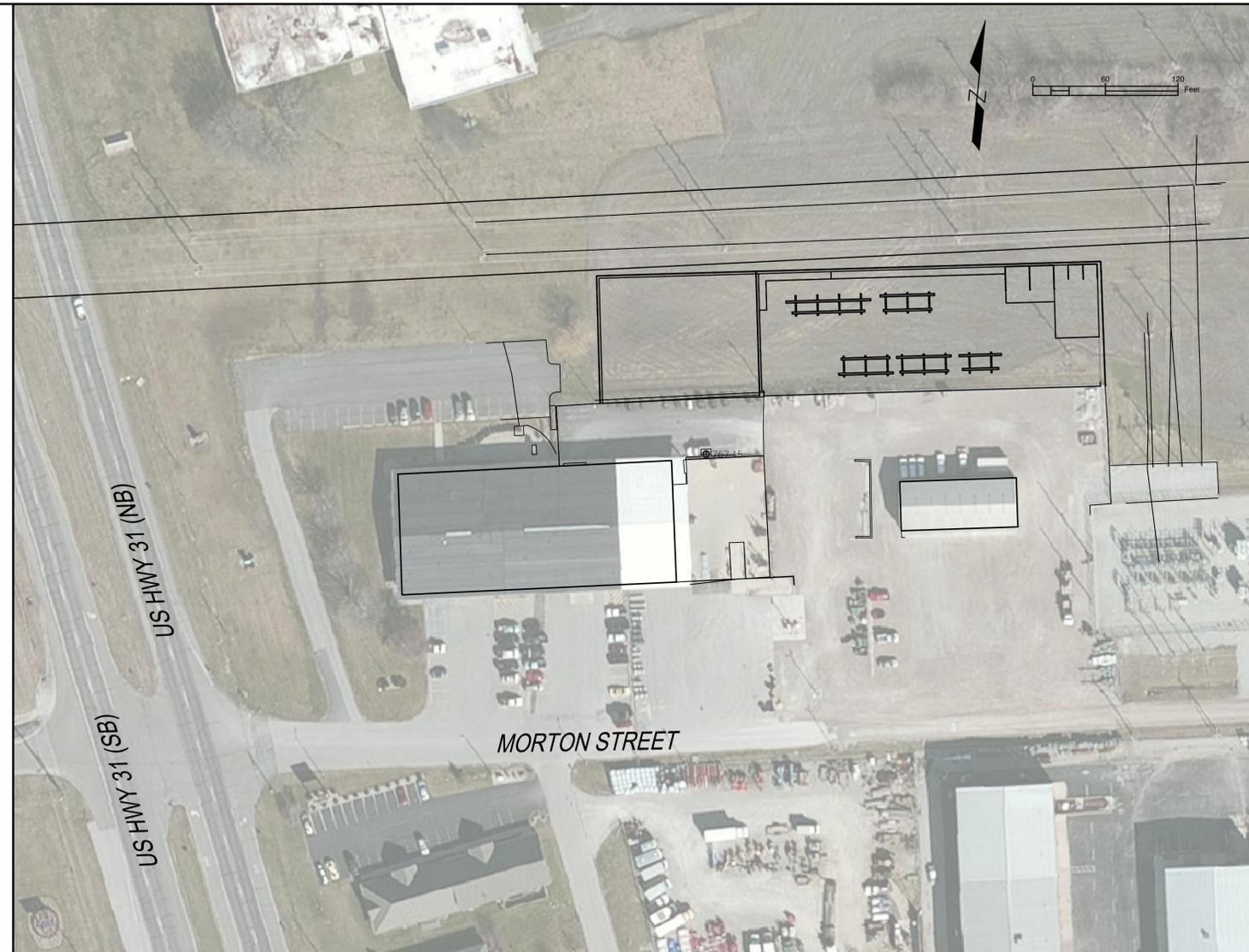
853 COLUMBIA RD, SUITE 101
 PLAINFIELD, IN 46168
 CONTACT KEVIN STEELY, PE, CPESC
 317-707-3756, KSTEELY@BANNING-ENG.COM
 BANNING ENGINEERING PN: 13254

DRAWING INDEX

CIVIL

SHEET INDEX:
 G-001 TITLE SHEET
 CD-110 TOPOGRAPHIC AND DEMOLITION SITE PLAN
 CS-110 CIVIL SITE PLAN
 CG-110 GRADING AND EROSION CONTROL PLAN
 C-501 SITE DETAILS
 C-502 EROSION CONTROL DETAILS

BY OTHERS:
 E-001 ELECTRICAL LEGEND AND GENERAL NOTES
 ESL-101 ELECTRICAL SITE LIGHTING
 ESL-101A ELECTRICAL SITE LIGHTING ALTERNATE
 E-500 ELECTRICAL DETAILS & SCHEDULES



DRAWING NUMBER
 CFD-IN0010-G-0001-150247



MAILING ADDRESS:
 P.O. BOX 1007
 CHARLOTTE, NC 28201

Safety Expectations:



SEAL

FRANKLIN
 POLE YARD

2515 NORTH MORTON STREET
 FRANKLIN, IN

POLE YARD
 EXPANSION

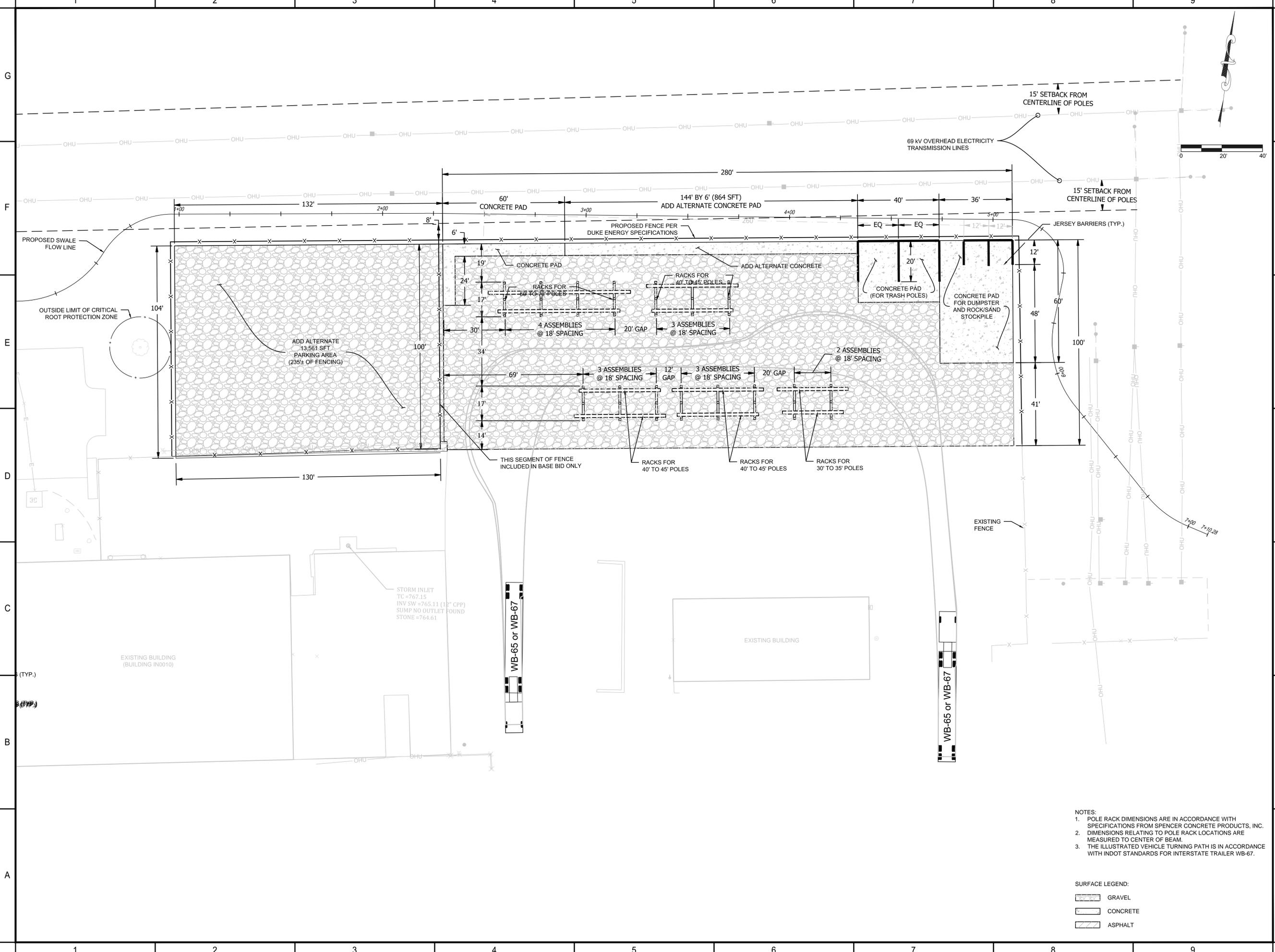
REVISION	DATE	BY	REVIEW
FOR BID	9-23-15	BE	BE
90% REVIEW	9-17-15	BE	BE
60% REVIEW	9-8-15	BE	BE

PROJECT NO: 150247
 DRAWING NUMBER
 CFD-IN0010-G-0001-150247
 ELECTRONIC FILE NAME: G0001.dwg
 DRAWN BY: CMG 08/31/15
 CHK'D BY: KLS
 E-MAIL: KSTEELY@BANNING-ENG.COM

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF BANNING ENGINEERING AND IS CONFIDENTIAL. IT SHALL NOT BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF BANNING ENGINEERING. THIS DRAWING SHOULD ONLY BE USED FOR THE SPECIFIC PROJECT.

SHEET TITLE:
COVER SHEET

SHEET NO.
G-001



DRAWING NUMBER
CFD-IN0010-CS-0110-150247



MAILING ADDRESS:
P.O. BOX 1007
CHARLOTTE, NC 28201

Safety Expectations:
 Reduce Risk
 Remove Exposures to Hazards
 Reinforce Safe Behavior

BANNING ENGINEERING
 853 COLUMBIA ROAD, SUITE #101
 PLAINFIELD, IN 46166
 BUS: (317) 707-3700, FAX: (317) 707-3800
 E-MAIL: Banning@BanningEngineering.com
 WEB: www.BanningEngineering.com
 BE PROJECT #: 13254

SEAL
FRANKLIN POLE YARD
 2515 NORTH MORTON STREET
 FRANKLIN, IN

POLE YARD EXPANSION

REVISION	DATE	BY	REVIEW
FOR BID	8/20/15	BE	90% REVIEW
	9/11/15	BE	60% REVIEW
	9/8/15	BE	

PROJECT NO.: 150247
 DRAWING NUMBER
 CFD-IN0010-CS-0110-150247

ELECTRONIC FILE NAME: CS0110.dwg
 DRAWN BY: CMG 08/31/15
 CHKD BY: KLS
 E-MAIL: KSTEELY@BANNING-ENG.COM

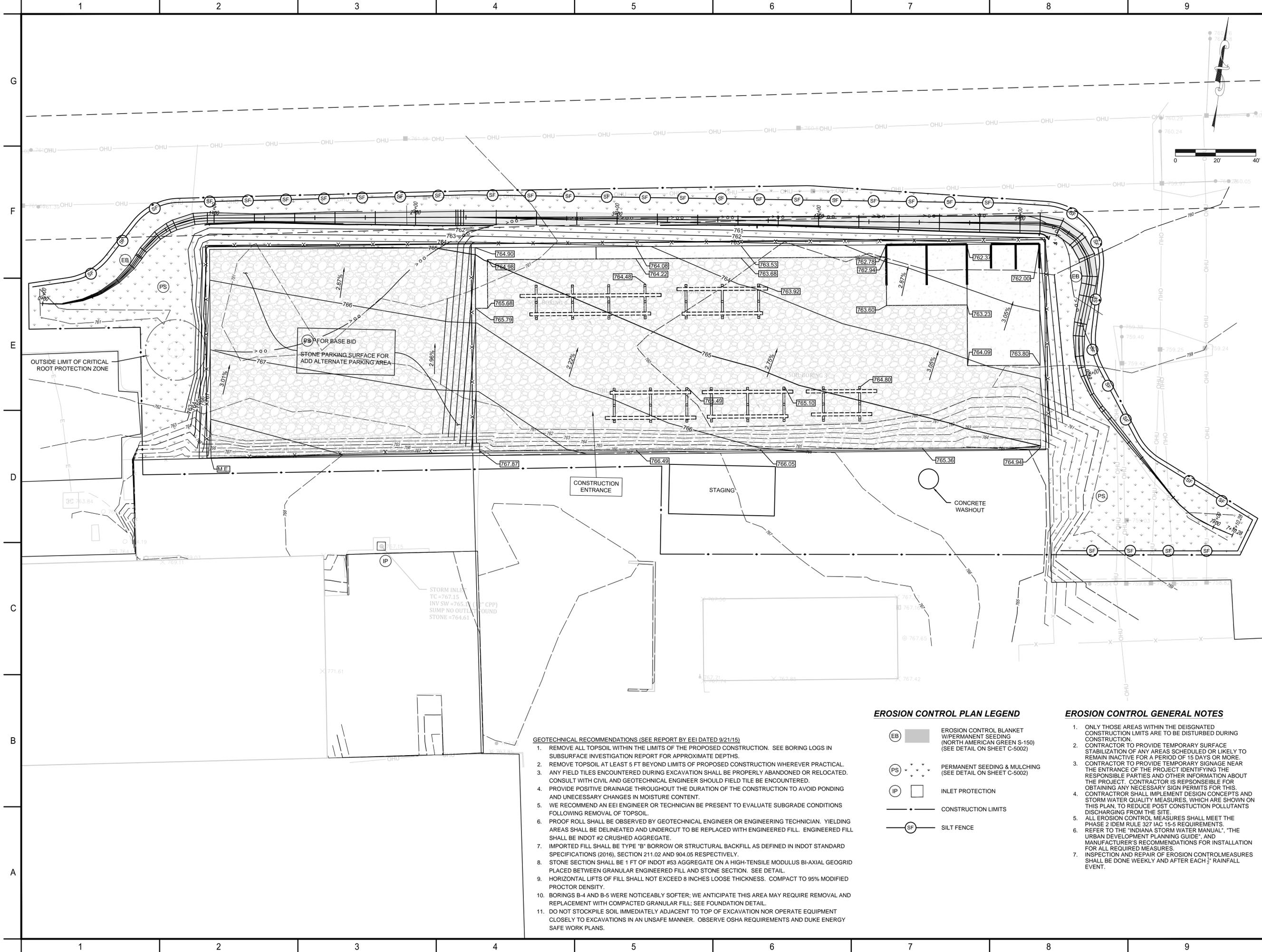
THIS DRAWING IS THE EXCLUSIVE PROPERTY OF BANNING ENGINEERING AND IS CONFIDENTIAL. IT SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF BANNING ENGINEERING.

SHEET TITLE:
SITE PLAN

SHEET NO.
CS-110

- NOTES:
- POLE RACK DIMENSIONS ARE IN ACCORDANCE WITH SPECIFICATIONS FROM SPENCER CONCRETE PRODUCTS, INC.
 - DIMENSIONS RELATING TO POLE RACK LOCATIONS ARE MEASURED TO CENTER OF BEAM.
 - THE ILLUSTRATED VEHICLE TURNING PATH IS IN ACCORDANCE WITH INDOT STANDARDS FOR INTERSTATE TRAILER WB-67.

SURFACE LEGEND:
 GRAVEL
 CONCRETE
 ASPHALT



- GEOTECHNICAL RECOMMENDATIONS (SEE REPORT BY EEI DATED 9/21/15)**
1. REMOVE ALL TOPSOIL WITHIN THE LIMITS OF THE PROPOSED CONSTRUCTION. SEE BORING LOGS IN SUBSURFACE INVESTIGATION REPORT FOR APPROXIMATE DEPTHS.
 2. REMOVE TOPSOIL AT LEAST 5 FT BEYOND LIMITS OF PROPOSED CONSTRUCTION WHEREVER PRACTICAL.
 3. ANY FIELD TILES ENCOUNTERED DURING EXCAVATION SHALL BE PROPERLY ABANDONED OR RELOCATED. CONSULT WITH CIVIL AND GEOTECHNICAL ENGINEER SHOULD FIELD TILE BE ENCOUNTERED.
 4. PROVIDE POSITIVE DRAINAGE THROUGHOUT THE DURATION OF THE CONSTRUCTION TO AVOID PONDING AND UNNECESSARY CHANGES IN MOISTURE CONTENT.
 5. WE RECOMMEND AN EEI ENGINEER OR TECHNICIAN BE PRESENT TO EVALUATE SUBGRADE CONDITIONS FOLLOWING REMOVAL OF TOPSOIL.
 6. PROOF ROLL SHALL BE OBSERVED BY GEOTECHNICAL ENGINEER OR ENGINEERING TECHNICIAN. YIELDING AREAS SHALL BE DELINEATED AND UNDERCUT TO BE REPLACED WITH ENGINEERED FILL. ENGINEERED FILL SHALL BE INDOT #2 CRUSHED AGGREGATE.
 7. IMPORTED FILL SHALL BE TYPE 'B' BORROW OR STRUCTURAL BACKFILL AS DEFINED IN INDOT STANDARD SPECIFICATIONS (2016), SECTION 211.02 AND 904.05 RESPECTIVELY.
 8. STONE SECTION SHALL BE 1 FT OF INDOT #53 AGGREGATE ON A HIGH-TENSILE MODULUS BI-AXIAL GEOGRID PLACED BETWEEN GRANULAR ENGINEERED FILL AND STONE SECTION. SEE DETAIL.
 9. HORIZONTAL LIFTS OF FILL SHALL NOT EXCEED 8 INCHES LOOSE THICKNESS. COMPACT TO 95% MODIFIED PROCTOR DENSITY.
 10. BORINGS B-4 AND B-5 WERE NOTICEABLY SOFTER; WE ANTICIPATE THIS AREA MAY REQUIRE REMOVAL AND REPLACEMENT WITH COMPACTED GRANULAR FILL; SEE FOUNDATION DETAIL.
 11. DO NOT STOCKPILE SOIL IMMEDIATELY ADJACENT TO TOP OF EXCAVATION NOR OPERATE EQUIPMENT CLOSELY TO EXCAVATIONS IN AN UNSAFE MANNER. OBSERVE OSHA REQUIREMENTS AND DUKE ENERGY SAFE WORK PLANS.

EROSION CONTROL PLAN LEGEND

- (EB) EROSION CONTROL BLANKET W/PERMANENT SEEDING (NORTH AMERICAN GREEN S-150) (SEE DETAIL ON SHEET C-5002)
- (PS) PERMANENT SEEDING & MULCHING (SEE DETAIL ON SHEET C-5002)
- (IP) INLET PROTECTION
- CONSTRUCTION LIMITS
- (SF) SILT FENCE

EROSION CONTROL GENERAL NOTES

1. ONLY THOSE AREAS WITHIN THE DESIGNATED CONSTRUCTION LIMITS ARE TO BE DISTURBED DURING CONSTRUCTION.
2. CONTRACTOR TO PROVIDE TEMPORARY SURFACE STABILIZATION OF ANY AREAS SCHEDULED OR LIKELY TO REMAIN INACTIVE FOR A PERIOD OF 15 DAYS OR MORE.
3. CONTRACTOR TO PROVIDE TEMPORARY SIGNAGE NEAR THE ENTRANCE OF THE PROJECT IDENTIFYING ABOUT THE RESPONSIBLE PARTIES AND OTHER INFORMATION ABOUT THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY SIGN PERMITS FOR THIS.
4. CONTRACTOR SHALL IMPLEMENT DESIGN CONCEPTS AND STORM WATER QUALITY MEASURES, WHICH ARE SHOWN ON THIS PLAN, TO REDUCE POST CONSTRUCTION POLLUTANTS DISCHARGING FROM THE SITE.
5. ALL EROSION CONTROL MEASURES SHALL MEET THE PHASE 2 IDEM RULE 327 IAC 15-5 REQUIREMENTS.
6. REFER TO THE 'INDIANA STORM WATER MANUAL', 'THE URBAN DEVELOPMENT PLANNING GUIDE', AND MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION FOR ALL REQUIRED MEASURES.
7. INSPECTION AND REPAIR OF EROSION CONTROL MEASURES SHALL BE DONE WEEKLY AND AFTER EACH 'R' RAINFALL EVENT.

DRAWING NUMBER
CFD-IN0010-CG-0110-150247



MAILING ADDRESS:
P.O. BOX 1007
CHARLOTTE, NC 28201

Safety Expectations:

ILL NE ZER

- Reduce Risk
- Remove Exposures to Hazards
- Reinforce Safe Behavior

BANNING ENGINEERING
853 COLUMBIA ROAD, SUITE #101
PLAINFIELD, IN 46166
BUS: (317) 707-3700, FAX: (317) 707-3800
E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com
BE PROJECT #: 13254

SEAL
FRANKLIN POLE YARD

2515 NORTH MORTON STREET
FRANKLIN, IN

POLE YARD EXPANSION

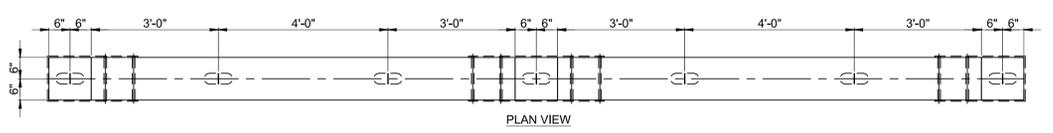
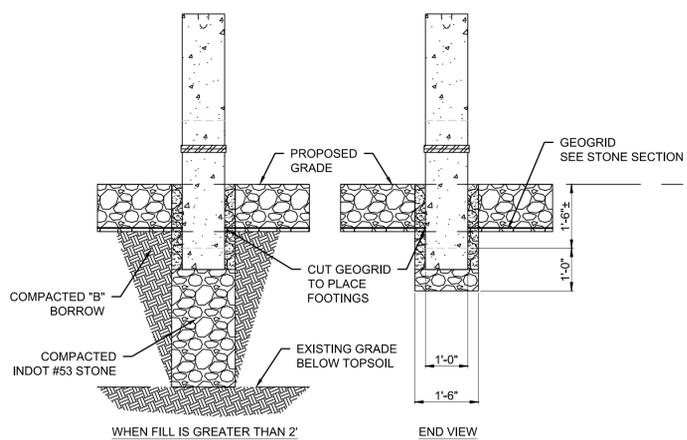
REVISION	DATE	BY	FOR BID
1	8/25/15	BE	FOR BID
2	9/17/15	BE	90% REVIEW
3	9/22/15	BE	50% REVIEW

PROJECT NO: 150247
DRAWING NUMBER
CFD-IN0010-CG-0110-150247
ELECTRONIC FILE NAME: CG0110.dwg
DRAWN BY: CMG 8/6/15
CHK'D BY: KLS
E-MAIL: KSTEELY@BANNING-ENG.COM

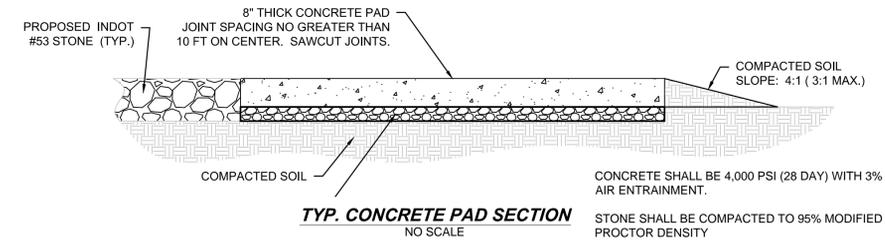
GRADING AND EROSION CONTROL PLAN
SHEET NO.
CG-110

C:\Vault_Workspace\Projects\13\obs\13254\Engineering\Sheet Files\CG0110.dwg, 9/25/2015 1:09:27 PM, DWG To PDF.pc3

- NOTES:
 1. POLE RACK DIMENSIONS ARE IN ACCORDANCE WITH SPECIFICATIONS FROM SPENCER CONCRETE PRODUCTS, INC.
 2. STRUCTURAL REINFORCEMENT STEEL SHALL BE INCLUDED WITHIN THE POLE RACK. STRUCTURAL REINFORCEMENT STEEL DESIGN AND CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER SHALL BE PROVIDED WITH A SHOP DRAWING SUBMITTAL.
 3. SEE GEOTECHNICAL RECOMMENDATIONS ON GRADING & EROSION CONTROL SHEET.

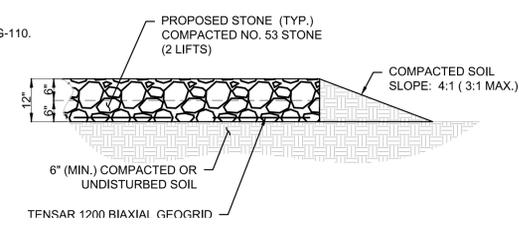


TYP. POLE RACK DETAIL
NO SCALE

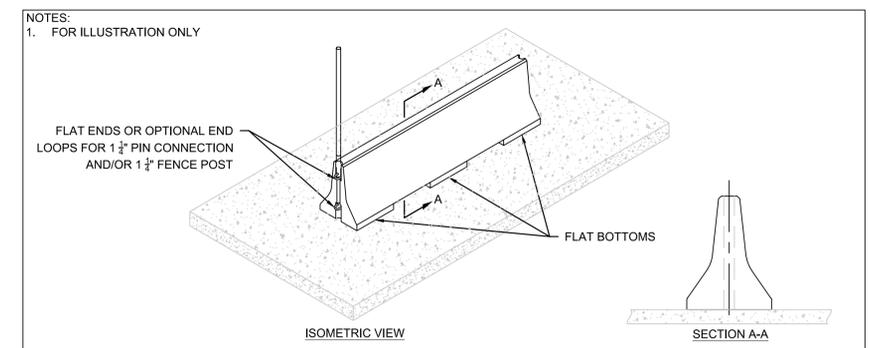


TYP. CONCRETE PAD SECTION
NO SCALE

- NOTES:
 SEE GEOTECHNICAL RECOMMENDATIONS ON CG-110.
 FENCE DETAILS PROVIDED BY OWNER.



TYP. STONE POLE YARD SECTION
NO SCALE



TYP. JERSEY WALL DETAIL
NO SCALE



MAILING ADDRESS:
P.O. BOX 1007
CHARLOTTE, NC 28201

Safety Expectations:
 ILL NE
ZERO
 INJURY
 Reduce Risk
 Remove Exposures to Hazards
 Reinforce Safe Behavior

SEAL
FRANKLIN POLE YARD
 2515 NORTH MORTON STREET
 FRANKLIN, IN

POLE YARD EXPANSION

REVISION	DATE	BY	REVIEW
1	8/31/15	BE	FOR BID
2	9/11/15	BE	90% REVIEW
3	9/30/15	BE	60% REVIEW

PROJECT NO.: 150247
 DRAWING NUMBER
CFD-IN0010-C-5001-150247

ELECTRONIC FILE NAME: C5001.dwg
 DRAWN BY: CMG 8/31/15
 CHKD BY: KLS
 E-MAIL: KSTEELY@BANNING-ENG.COM

THIS DESIGN DRAWING IS THE EXCLUSIVE PROPERTY OF BANNING ENGINEERING AND IS CONFIDENTIAL. IT SHALL NOT BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF BANNING ENGINEERING.

SHEET TITLE:
SITE DETAILS

SHEET NO.
C-501

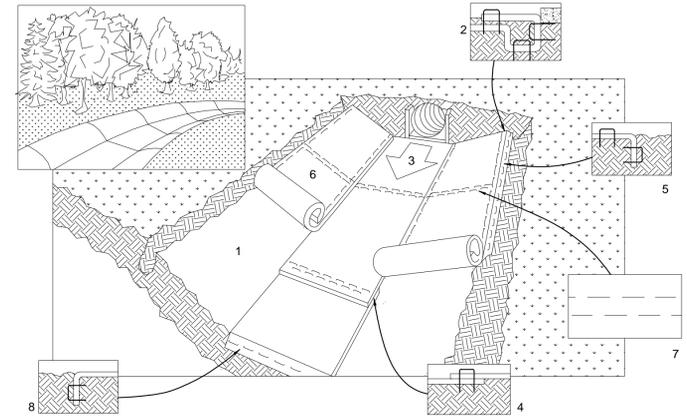
Stabilization Practice	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Permanent Seeding			A			*/////			*//			
Dormant Seeding	B											B
Temporary Seeding			C	E		*/////		D				
Sodding			F**			*/////						
Mulching	G											

A = Kentucky Bluegrass 40 lbs/acre; or 40 lbs. tall Fescue; plus 2 tons straw mulch/acre or add Annual Ryegrass 20 lbs/acre.
 B = Kentucky Bluegrass 60 lbs/acre; or 40 lbs. tall Fescue; plus 2 tons straw mulch/acre or add Annual Ryegrass 30 lbs/acre.
 C = Spring Oats 100 lbs./acre
 D = Wheat or Rye 150 lbs./acre.
 E = Annual Ryegrass 40 lbs/acre. (1 lb./1000 sq. ft.)
 F = Sod
 G = Straw Mulch 2 tons/acre.
 *// Irrigation needed during June, July, and/or September.
 ** Irrigation needed for 2 to 3 weeks after applying sod.
 Lime and fertilize to site specific soils tests or apply fertilizer at a rate of 1000 lbs. per acre or 12-12-12 or equivalent.
 All swales shall be seeded with 2 lbs. Adelphi bluegrass and 2 lbs. Perennial Derby rye, or equivalent per 1000 square feet. mulch with one bale of straw per 1000 square feet. Fertilize with 5 lbs. of 20-5-5 per 1000 square feet unless specified otherwise.

MAINTENANCE
 Inspect weekly and after each 1/2" rainfall event, until the stand is successfully established. (Characteristics of a successful stand include: vigorous dark green or bluish-green seedlings; uniform density with nurse plants, legumes, and grasses well inter-mixed; green leaves; and the perennials remaining green throughout the summer, at least at the plant base.)
 Plan to add fertilizer the following growing season according to soil test recommendations.
 Repair damaged, bare, or sparse areas by filling any gullies, re-fertilizing, over- or re-seeding, and mulching.
 If plant cover is sparse or patchy, review the plant materials chosen, soil fertility, moisture condition, and mulching; then repair the affected area either by over-seeding or by re-seeding and mulching after re-preparing the seedbed.
 If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems. (Contact your SWCD or Cooperative Extension office for assistance.)
 If additional fertilization is needed to get a satisfactory stand, do so according to the soil test recommendations.

SEEDING CHART
NO SCALE

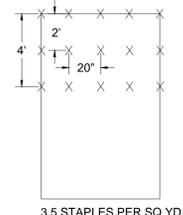
NOTE: HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
 REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE RECOMMENDATIONS FOR CHANNELS.
 CRITICAL POINTS
 A. OVERLAPS AND SEAMS
 B. PROJECTED WATER LINE
 C. CHANNEL BOTTOM/SIDE SLOPE VERTICES



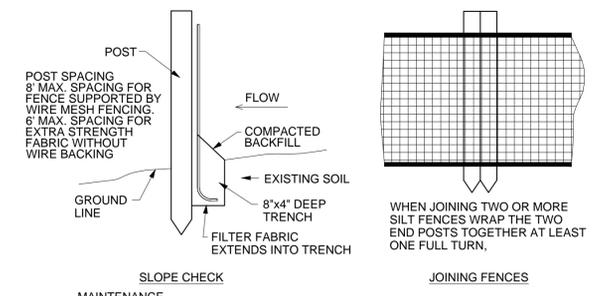
1. Prepare soil before installing blankets, including application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the blanket in a 6" deep by 6" wide trench. Backfill and compact the trench after stapling.
3. Roll center blanket in direction of water flow on bottom of channel.
4. Place blankets end over end (shingle style) with a 6" overlap. Use a double row of staggered staples 4" apart to secure blankets.
5. Full length edge of blankets at the top of side slopes must be anchored in 6" deep by 6" wide trench. Backfill and compact the trench after stapling.
6. Blankets on side slopes must be overlapped 4" over the center blanket and stapled. (2" for C350 matting)
7. In high flow channel applications, a staple check slot is recommended at intervals of 30 to 40 feet. Use a Row of staples 4" apart over entire width of the channel. Place a second row 4" below the first row in a staggered pattern.
8. The terminal end of the blankets must be anchored in a 6" deep x 6" wide trench. Backfill and compact the trench after stapling.

MAINTENANCE
 *During vegetative establishment, inspect weekly and after each 1/2" rainfall event for any erosion below the blanket.
 *If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
 *After vegetative establishment, check the treated area periodically.

CHANNEL INSTALLATION
NO SCALE



STAPLE PATTERN GUIDE
NO SCALE



MAINTENANCE
 *Inspect the silt fence weekly and after each 1/2" rainfall event.
 *If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately.
 *Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
 *Take care to avoid undermining the fence during clean out.
 *After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade, stabilize.

SILT FENCE DETAIL
NO SCALE



MAILING ADDRESS:
P.O. BOX 1007
CHARLOTTE, NC 28201

Safety Expectations:

ILL NE ZERO
 Reduce Risk
 Remove Exposures to Hazards
 Reinforce Safe Behavior

SEAL

FRANKLIN POLE YARD

2515 NORTH MORTON STREET
FRANKLIN, IN

POLE YARD EXPANSION

REVISION	DATE	BY	REVIEW
1	8-20-15	BE	FOR BID
2	9-11-15	BE	90% REVIEW
3	9-8-2015	BE	60% REVIEW

PROJECT NO:
DRAWING NUMBER
CFD_NUMBER_2

ELECTRONIC FILE NAME:
DRAWN BY:
CHK'D BY:
E-MAIL:

THIS DESIGN DRAWING IS THE EXCLUSIVE PROPERTY OF DUKE ENERGY CORPORATION AND IS CONFIDENTIAL. IT SHALL NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF DUKE ENERGY CORPORATION. THIS PERMISSION SHOULD ONLY BE USED FOR THE SPECIFIC PROJECT.

SHEET TITLE:
EROSION CONTROL DETAILS