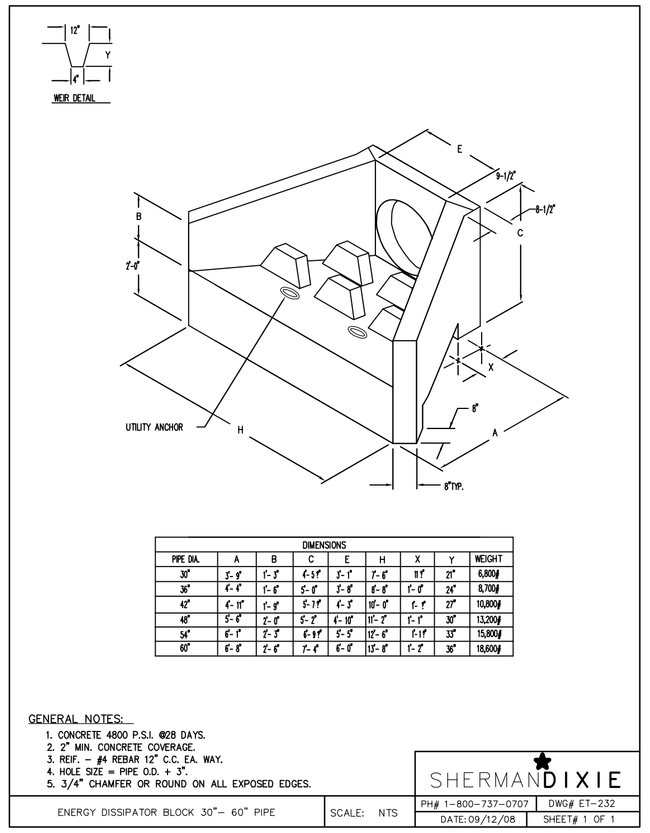
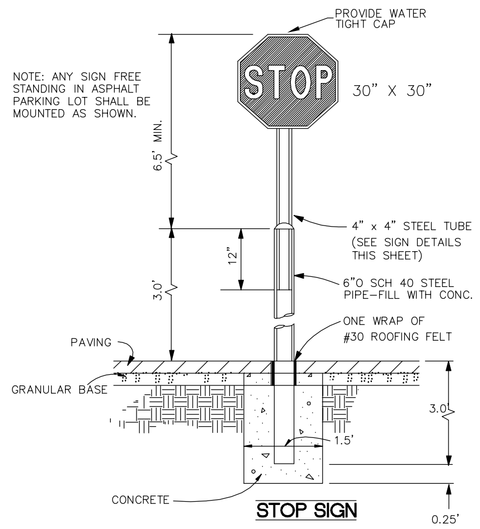


DIMENSIONS								
PIPE DIA.	A	B	C	E	H	X	Y	WEIGHT
30"	5'-9"	7'-3"	6'-11"	5'-7"	7'-6"	9'9"	21"	6,800#
36"	6'-6"	7'-8"	5'-8"	5'-8"	8'-6"	7'-6"	26"	8,700#
42"	6'-11"	7'-9"	5'-11"	6'-3"	10'-6"	8'-1"	17"	10,800#
48"	5'-7"	5'-7"	5'-7"	6'-10"	10'-7"	8'-7"	30"	13,200#
54"	6'-1"	7'-7"	6'-11"	5'-9"	12'-6"	7'-11"	33"	15,800#
60"	6'-8"	7'-8"	7'-4"	6'-8"	12'-8"	7'-7"	36"	18,600#

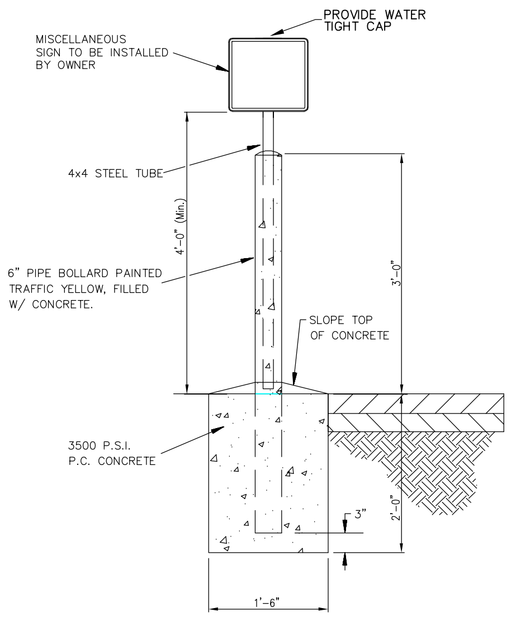
GENERAL NOTES:
1. CONCRETE 4500 P.S.I. @28 DAYS.
2. 2" MIN. CONCRETE COVERAGE.
3. REF. – #4 REBAR 12" C.C. EA. WAY.
4. HOLE SIZE = PIPE O.D. + 3".
5. 3/4" CHAMFER OR ROUND ON ALL EXPOSED EDGES.

SHERMANDIXIE
Ph# 1-800-737-0707 | DWG# ET-232

ENERGY DISSIPATOR BLOCK 30"– 60" PIPE | SCALE: NTS | DATE:09/12/08 | SHEET# 1 OF 1



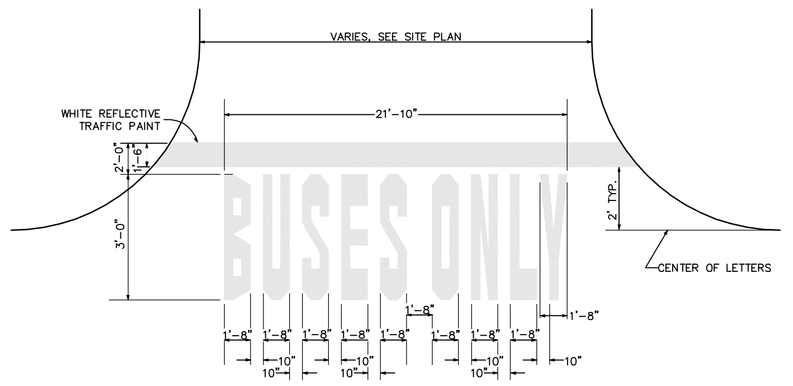
STOP SIGN



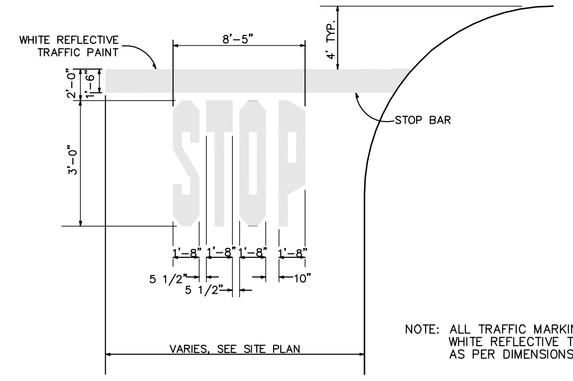
MISCELLANEOUS PARKING SIGN

NOT TO SCALE

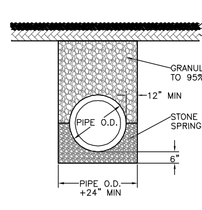
NOTE:
1) ALL SIGNS SHALL BE REFLECTIVE MATERIAL.
2) ALL SIGNS SHALL BE INSTALLED W/ TAMPER PROOF FASTENERS.



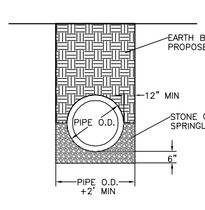
TYPICAL PAVEMENT MARKINGS



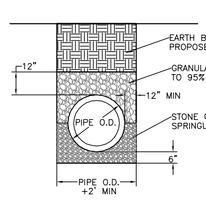
NOTE: ALL TRAFFIC MARKINGS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS SHOWN



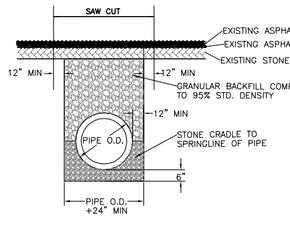
STANDARD TRENCH DETAIL UNDER ASPHALT PAVEMENT FOR RCP AND CMP PIPE
N.T.S.



STANDARD TRENCH DETAIL IN NON PAVED AREAS FOR RCP AND CMP PIPE
N.T.S.

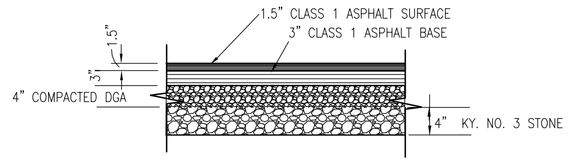


STANDARD TRENCH DETAIL IN NON PAVED AREAS FOR ADS PIPE
N.T.S.



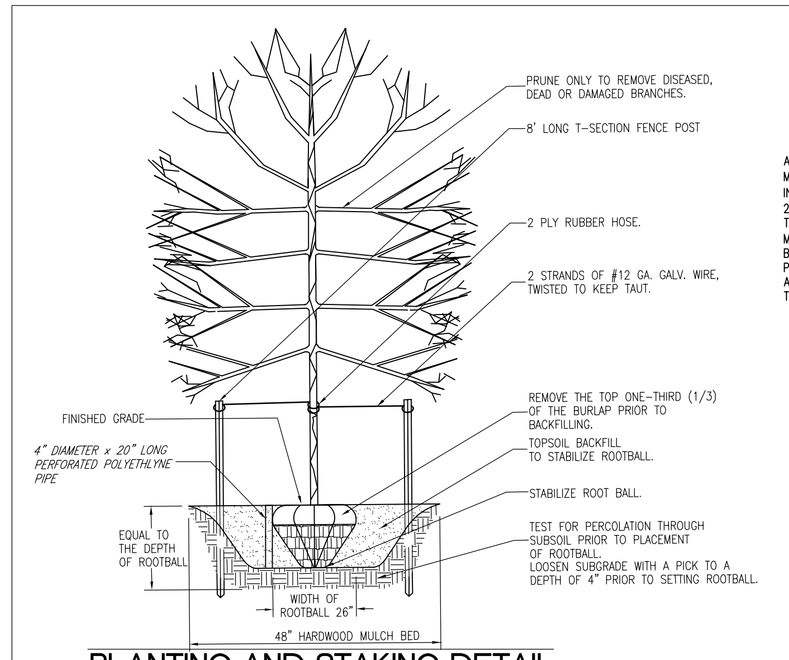
STANDARD TRENCH DETAIL UNDER EXISTING ASPHALT PAVEMENT FOR RCP AND CMP PIPE
N.T.S.

TRENCH DETAILS FOR STORM DRAINAGE



ALL PAVING MATERIAL SHOULD COMPLY WITH THE CURRENT KENTUCKY DEPARTMENT OF HIGHWAYS SPECIFICATION. THE DCA GRANULAR BASE SHOULD BE COMPACTED TO AT LEST 98 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698)

PAVEMENT DETAIL



PLANTING AND STAKING DETAIL

TREE PLANTING NOTE

ALL TREE PLANTING SHALL INCLUDE – TREE SHALL BE LOCALLY PURCHASED, MINIMUM 1 1/2" CALIPER DIAMETER TRUNK, 26" DIAMETER B & B BALL, AND IN HEALTHY CONDITION UPON PLANTING. A MINIMUM 30" DIAMETER x 18" – 20" DEEP HOLE FOR PLANTING SHALL BE EXCAVATED, TREE SHALL BE PLANTED TO PROPER DEPTH AND HOLE SHALL BE BACKFILLED WITH LOOSE TOPSOIL MATERIAL. A 4" DIAMETER x 20" LONG PERFORATED POLYETHLYNE PIPE SHALL BE INSTALLED VERTICALLY IN THE HOLE NEXT TO THE BALL FOR WATERING PURPOSES. A 4–FOOT DIAMETER HARDWOOD MULCH BED SHALL BE INSTALLED AROUND THE TREE UPON COMPLETION OF PLANTING. APPROVAL OF TREE AND TREE PLANTING PROCEDURE SHALL BE AT THE DISCRETION OF THE ENGINEER.

GENERAL NOTES

1) THE PROPERTY SHOWN HEREON IS LOCATED IN THE CITY OF RADCLIFF ALONG THE WESTERN RIGHT–OF–WAY OF U.S. HWY. 31W (DIXIE HIGHWAY) JUST NORTH OF IT'S INTERSECTION WITH KY.. HWY. 220
2) CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE ENGINEER. IT IS THE OWNER'S INTENT TO HAVE THE PARKING AREAS FREE OF ALL VEHICLES TO EXPEDITE THE CONSTRUCTION. PAVEMENT STRIPING SHALL BE PERFORMED ON THE WEEKEND OR IN PHASES TO ALLOW FOR USE OF THE PARKING LOT BY THE OWNER.

COMPLETION NOTE

1) ALL PORTIONS OF THIS PROJECT RELATED TO SITE WORK SHALL BE COMPLETED PRIOR TO THE START OF THE 2015–2016 SCHOOL YEAR.

SCHEDULING AND SPECIAL NOTES

1) CONTRACTORS SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO ANY WORK.
2) THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT. THIS WORK SHALL BE COMPLETED UNDER THE DIRECTION OF A KENTUCKY LICENSED SURVEYOR, OR OTHER AS APPROVED BY THE ENGINEER.

CONSTRUCTION SAFETY

1) ALL OPEN TRENCHES SHALL BE FILLED AT THE END OF EACH WORK DAY. IF A TRENCH MUST BE LEFT OPEN, IT SHALL HAVE THE MACHINERY SET ACROSS THE DITCH AND SHALL BE SURROUNDED WITH SAFETY FENCING. THIS OPERATION SHALL BE FOLLOWED AT THE END OF EACH WORK DAY THROUGHOUT THE PROJECT.
2) ALL MACHINERY SHALL BE LOCATED AS FAR AWAY AS POSSIBLE FROM SCHOOL AT THE END OF EACH WORK DAY.
3) BLASTING IS NOT ANTICIPATED ON THIS PROJECT. IF ROCK IS ENCOUNTERED THAT REQUIRES BLASTING, A BLASTING PLAN MUST BE SUBMITTED AND APPROVED.
4) IF TRUCKS BEGIN TO TRACK MUD ONTO RIGHT OF WAY(S) THE CONTRACTOR SHALL IMMEDIATELY PROVIDE ADDITIONAL ROCK AT THE ENTRANCE AND PROVIDE A WASHING STATION FOR THE TRUCKS TO BE CLEANED PRIOR TO ENTERING THE RIGHT OF WAY.
5) IMMEDIATELY AFTER THE INSTALLATION OF A DRAINAGE OR SANITARY SEWER STRUCTURE CONTRACTOR SHALL SET ALL BARRELS ON TOP AND PLACE CASTING OVER STRUCTURE. IF CASTING IS NOT STABLE, CONTRACTOR SHALL PLACE A PIECE OF PLYWOOD OVER HOLE AND SET CASTING ON TOP OF WOOD.
6) THE CONTRACTOR SHALL PROVIDE FENCING AT ANY LOCATION WHERE CONSTRUCTION MANDATES A TRENCH OR OTHER HOLE REMAIN OPEN OVER NIGHT.

BENCHMARKS

BENCHMARKS AND HORIZONTAL CONTROL ARE AS SHOWN. SHOULD THE CONTRACTOR HAVE ANY QUESTION REGARDING THE EXACT LOCATION OF ANY BENCHMARK CONSULT THE ENGINEER. ELECTRONIC FILES OF THE CIVIL PLANS WILL BE AVAILABLE TO THE CONTRACTOR FROM THE ENGINEER FOR LAYOUT PURPOSES. ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY ERRORS IN SAID ELECTRONIC FILES.

CONCRETE PAVEMENT DESIGN

CONCRETE PAVEMENT DESIGN SHALL BE AS FOLLOWS:
8" OF COMPACTED DGA
4" OF 4000 PSI REINFORCED CONCRETE (USE 6 GAUGE STEEL REINFORCING MATS) THE CONCRETE PAVEMENT SHOULD HAVE ENTRAINED AIR IN THE RANGE OF 4 TO 6 PERCENT, PROPER JOINT SPACING TO PREVENT EXCESSIVE SLAB CURLING AND CONTROL SHRINKAGE CRACKING, AND SUFFICIENT DOWELS OR KEY SECTION AT JOINTS TO PROPERLY TRANSFER LOADS BETWEEN PAVEMENT SECTIONS. CONTROL JOINTS SHOULD BE PROVIDED WHENEVER CONCRETE PAVEMENT ABUTS ANY FIXED STRUCTURES OR PROTRUSIONS. FIBERS OR MATS OF STEEL BARS SHALL BE USED TO HELP REDUCE SHRINKAGE CRACKING IN THE CONCRETE. PROPER CONCRETE MIX DESIGNS, PLACEMENT PROCEDURES, SAW CUTTING, AND CURING METHODS SHALL BE UTILIZED. ALL CONCRETE SIDEWALK SHALL BE BROOMED FINISHED. WHERE PROPOSED CONCRETE PAVEMENT ABUTS ANY EXISTING CONCRETE PAVEMENT, SAID PROPOSED CONCRETE SHALL BE PROPERLY DOWELLED INTO THE EXISTING CONCRETE PAVEMENT.

PROPOSED PAVEMENT DESIGN NOTE

PROPOSED ASPHALT PAVEMENT MINIMUM DESIGN:
4" COMPACTED KY. NO. 3 STONE
4" COMPACTED PUGGED DGA
3" CLASS 1 ASPHALT BASE
1 1/2" CLASS 1 ASPHALT SURFACE
THIE PROPOSED ASPHALT PAVEMENT DESIGN AS NOTED HEREIN SHALL BE USED AS A MINIMUM PAVEMENT DESIGN.

EXISTING PAVEMENT SAWCUT NOTE

ALONG ALL EDGES OF EXISTING ASPHALT PAVEMENT WHERE PROPOSED ASPHALT PAVEMENT, CONCRETE SIDEWALK, OR PROPOSED CURB AND GUTTER ABUTS EXISTING ASPHALT, THE EDGE OF THE EXISTING ASPHALT SHALL BE SAW CUT PRIOR TO INSTALLATION OF PROPOSED ASPHALT PAVEMENT, CONCRETE SIDEWALK, OR PROPOSED CURB AND GUTTER.

PAVEMENT AND STRIPING

1. UNLESS OTHERWISE SPECIFIED, EXTERIOR CONCRETE SHALL BE BROOM FINISHED PERPENDICULAR TO THE DIRECTION OF TRAFFIC.
2. ALL EXTERIOR CONCRETE SHALL BE 4000 PSI EXCEPT FOR FENCE ANCHORS WHICH SHALL BE 3500 PSI
3. ALL FINISHES AND SCORING FOR HANDICAP RAMPS AND CURB CUTS SHALL FULLY COMPLY WITH ADA.
4. PLACE EXPANSION JOINTS AND SAW CONTRACTION JOINTS AS SHOWN ON DETAILS.
5. ONCE THE CONTRACTOR BEGINS PLACING STONE HE ACCEPTS THE GRADE AND THE STABILITY OF THE SUB–GRADE
6. ALL DIMENSIONS ARE TO EDGE OF ASPHALT UNLESS OTHERWISE INDICATED
7. ALL STRIPING AND SIGNAGE SHALL COMPLY WITH DETAILS. SIGN SIZE SHALL COMPLY WITH STANDARD HIGHWAY SIGNS AS PUBLISHED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES.
8. PARKING SPACES TO BE SIZED AS SHOWN
9. ALL NEW UTILITIES AND CROSSINGS LOCATED UNDER A PAVED SURFACE, CURBING OR SIDEWALK SHALL BE FILLED WITH COMPACTED DGA

GRADING AND IMPROVEMENTS NOTE

GRADING –
ALL SAW CUTTING, PAVEMENT REMOVAL, PAVEMENT WIDENING, CONCRETE SIDEWALK, AND CONCRETE AREAS SHALL BE CONSTRUCTED PRIOR TO THE INSTALLATION OF ANY PROPOSED ASPHALT SURFACE.
PROPOSED FULL DEPTH PAVEMENT DESIGN FOR AREAS TO BE WIDENED: 4" KY. NO. 3 STONE, 4" COMPACTED PUGGED DGA, 3" ASPHALT BASE, 1 1/2" ASPHALT SURFACE.
PORTIONS OF THE EXISTING PARKING AREA WILL REQUIRE LEVELING AND WEDGING TO ACHIEVE PROPER DRAINAGE PATTERNS. FINAL PAVEMENT SURFACE SHALL HAVE STRAIGHT EDGES WITH SMOOTH GRADE TRANSITIONS IF REQUIRED. ALL PAVEMENT AREAS SHALL BE THOROUGHLY PREPARED, CLEANED AND SWEPT PRIOR TO THE INSTALLATION OF ANY ASPHALT PAVEMENT.
UPON COMPLETION OF ALL CONSTRUCTION AND PAVING ALL DISTURBED AREAS SHALL BE GRADED TO ACHIEVE POSITIVE DRAINAGE AND TO THE TOP OF ALL SIDEWALKS AND OR CURBS.
IMPROVEMENTS –
ALL IMPROVEMENTS SHALL BE AS SHOWN HEREON AND SHALL BE IN ACCORDANCE WITH ALL ADA GUIDELINES AND WITH THE SPECIFICATIONS AND DETAILS AS SHOWN HEREIN.

SEDIMENTATION AND EROSION CONTROL

1. ALL CONTRACTORS ON SITE ARE RESPONSIBLE FOR ANY EROSION OR ENVIRONMENTAL CONCERNS THEY CREATE. THE EARTH CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL DEVICES AS PART OF THEIR CONTRACT.
2. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION CONTROL DEVICES AFTER EVERY STORM EVENT.

EARTHWORK NOTE

1) PRIOR TO ANY GRADING THE EROSION CONTROL PLAN SHALL BE IMPLEMENTED.
2) CONTRACTOR IS RESPONSIBLE FOR ALL EROSION CONTROL.
3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COMPACTED FILLS.
4) LIFTS IN FILL AREAS SHALL NOT EXCEED 8 INCHES.
5) CONTRACTOR SHALL PROVIDE SPILL PREVENTION FOR FUELING EQUIPMENT AS WELL AS CONTROLLING OIL AND GREASE SPILLAGE. ON SITE FUEL STORAGE SHALL HAVE SECOND CONTAINMENT. EARTH BERMS SURROUNDING EQUIPMENT MAINTENANCE, REPAIR, AND FUELING AREA.
6) CONTRACTOR SHALL PLACE 8" OF TOPSOIL ON ALL AREAS TO BE SEEDED. ALL OTHER AREAS SHALL HAVE SOD OR LANDSCAPING PLACED AS INDICATED.
7) ONCE THE CONTRACTOR BEGINS PLACING STONE, HE ACCEPTS THE GRADE AND THE STABILITY OF THE SUB–GRADE.

STORM DRAINAGE

1) THE SITE CONTRACTOR SHALL CLEAN ALL STORM INLETS AND PIPING FROM MUD AND DEBRIS PRIOR TO ASPHALT BEING PLACED.
2) ALL GRATES SHALL BE SECURED SO NOT TO ROCK WHEN VEHICLES PASS OVER THEM.
3) FRAME AND LIDS SHALL BE TILTED TO MATCH PAVEMENT GRADE UNLESS INLET IS TO RECEIVE STORM WATER.
4) THE ENGINEER MAY REQUIRE A CONCRETE COLLAR WHEN THE DROP INLET WALL BETWEEN PIPES BECOMES SMALL AND UNABLE TO SUPPORT HEAVY TRAFFIC.
5) ALL PIPING FOR STORM SHALL BE SMOOTH INTERIOR WALL BLACK PLASTIC PIPE (N–12) OR REINFORCED CONCRETE. THE CONTRACTOR SHALL BACKFILL PER MANUFACTURES RECOMMENDATION USE EXTREME CARE TRAVELING OVER NEW PIPE WHERE DEPTH TO FLOW LINE IS LESS THAN 48". ALL DRAINAGE PIPING SHALL BE N–12 UNLESS SHOWN AS REINFORCED CONCRETE.

TOPSOIL NOTE

ALL TOPSOIL MATERIAL REQUIRED FOR THIS PROJECT SHALL BE FREE OF ROCKS, DEBRIS, AND DIRT CLODS AND SHALL CONSIST OF GOOD ORGANIC MATERIAL. CONTRACTOR SHALL FINAL GRADE AND HARLEY RAKE ALL DISTURBED AREAS PRIOR TO INSTALLATION OF SEED AND EROSION CONTROL BLANKET.

VEGETATION RESTORATION NOTE

IN ALL DISTURBED AREAS THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING THE SITE AS NOTED HEREON OR TO ITS EXISTING CONDITION. SAID FINAL GRADE SHALL INCLUDE A MINIMUM OF 8" OF TOPSOIL TO BE PLACED IN A SUITABLE MANNER TO ESTABLISH GRASS VEGETATION AND AS SPECIFIED. ALL DISTURBED AREAS SHALL BE COVERED WITH WESTERN EXCELSIOR SR–1–RAPID GO EROSION CONTROL BLANKET, (OR EQUAL). ALTERNATE METHODS TO ESTABLISH GRASS VEGETATION IN SAID DISTURBED AREAS MAY BE USED UPON PRIOR APPROVAL FROM THE OWNER, HIS AGENT OR THE ENGINEER. IN ANY CASE THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING GRASS VEGETATION IN ALL DISTURBED AREAS. CONTRACTOR SHALL NOTE PLANS AND SPECIFICATIONS FOR ALL AREAS TO BE SODDED. ESTABLISHING GRASS VEGETATION IN A TIMELY MANNER HAS BEEN AN ISSUE FOR THE OWNER ON PAST PROJECTS, THE PLANS AND SPECIFICATIONS WILL BE STRICTLY ADHERED TO WHEN IT RELATES TO THIS MATTER.

GRASS ESTABLISHMENT NOTE

UNLESS OTHERWISE DESCRIBED IN THE TECHNICAL SPECIFICATIONS:
THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING THE SOURCE OF WATER FOR ANY WATER REQUIRED TO ESTABLISH GRASS VEGETATION.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY LABOR AND EQUIPMENT NECESSARY RELATED TO WATERING TO ESTABLISH GRASS VEGETATION.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIR TO GRASS AREAS CAUSED BY VEHICULAR TRAFFIC AFTER THE GRASS AREAS HAVE INITIALLY BEEN PREPARED FOR GRASS VEGETATION. THIS RESPONSIBILITY SHALL BE LIMITED TO THE ONE TIME REPAIR OF SAID GRASS AREAS DAMAGED BY VEHICULAR TRAFFIC. IF SAID GRASS AREAS ARE DAMAGED A SECOND TIME BY VEHICULAR TRAFFIC IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO REPAIR SAID AREAS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MOWING ALL GRASS AREAS RELATED TO THE PROJECT A MINIMUM OF TWO TIMES PRIOR TO FINAL ACCEPTANCE BY THE OWNER.

UTILITY COMPANIES

ELECTRIC COMPANY
KENTUCKY UTILITIES CO.
(270) 765–4102
CONTACT: IRVIN BORING

ELECTRIC COMPANY
NOLIN R.E.C.C.
(270) 765–6153
CONTACT: PAUL BAKER

TELEPHONE COMPANY
BRANDENBURG TELECOM
(270) 351–4466
CONTACT: KYLE DALTON

TELEPHONE COMPANY
WINDSTREAM
(270) 765–1807
CONTACT: RICKY BROOKS

GAS COMPANY
CITY OF ELIZABETHTOWN
(270) 765–6121
CONTACT: DON HILL

GAS COMPANY
LG&E
(502) 364–8552
CONTACT: DAVE HARMELING

CABLE TV COMPANY
INSIGHT
(270) 352–0257
CONTACT: BILL BRIGMAN

CABLE TV, TELEPHONE CO.
COMCAST
(270) 765–2731
CONTACT: KEN DASHNAW

ENCROACHMENT PERMITS
KDOT DIST 4
(270) 766–5066
CONTACT: KEVIN BLAIN

POTABLE WATER COMPANY
HARDIN COUNTY WATER DIST. 2
(270) 737–1056
CONTACT: JAMES JEFFRIES

SANITARY SEWER COMPANY
HARDIN COUNTY WATER DIST. 1
(270) 351–3222
CONTACT: BRETT PYLES

STORM SEWER/DRAINAGE
CITY OF RADCLIFF
(270) 351–4714
CONTACT: TOBY SPALDING PE

EXISTING UTILITY LINE NOTE

CONTRACTOR SHALL RE RESPONSIBLE FOR CONTACTING "BUD" AND FOR HAVING ALL UTILITY LINES LOCATED PRIOR TO ANY CONSTRUCTION ACTIVITY. SHOULD ANY UTILITY LINE CONFLICTS OCCUR AFTER THE CONTRACTOR HAS CONTACTED "BUD" THE CONTRACTOR SHALL NOTIFY THE ENGINEER. IN ANY CASE THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO AND THE RELOCATION OF ANY EXISTING UTILITY LINES AS A RESULT OF THIS PROJECT.

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PRIOR TO ANY EXCAVATION CONTACT KENTUCKY UNDERGROUND @ 811

\HCBE\HARDIN-BUS-GARAGE\ACCESS-ROAD\WILSON-ROAD-ACCESS-ROAD.DWG

ACCESS ROAD BUS GARAGE GENERAL NOTES & DETAILS

Engineering Design Group, Inc. EDG Land Development • Civil Division • Subdivisions

ENGINEER / SURVEYOR:
ENGINEERING DESIGN GROUP, INC
315 SOUTH MULBERRY ST
ELIZABETHTOWN, KY. 42702–2484
(270) 769–1436 (270)765–9908 FAX
MBILLINGS_EDG@WINDSTREAM.NET

SCALE: NTS

DATE: NOVEMBER 13, 2015

CLIENT:
HARDIN COUNTY
BOARD OF EDUCATION
65 W.A. JENKINS ROAD
ELIZABETHTOWN, KY. 42701
(270) 769–8800
P.O.C. GARY MILBY

HCBE 2015 PARKING IMPROVEMENTS
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