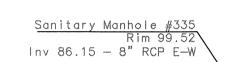
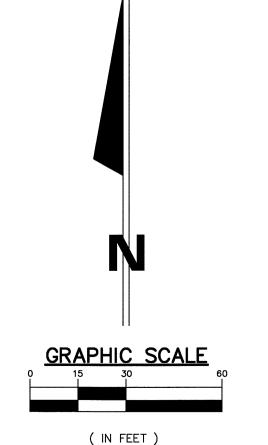


TEMPORARY CONSTRUCTION EQUIPMENT STAGING/ Inv 90.13 - 15" RCP N? MAINTENANCE / FUELING PAD Inv 89.57 - 15" RCP S 2-4" HDPE ROOF DRAINS N-NE INSTALL 10' X 10' TEMPORARY CONCRETE WASH AREA





1 INCH = 30 FT



I. THE CONTRACTOR IS ADVISED THAT THE WORK MUST BE DONE IN COMPLIANCE WITH THE FOLLOWING SPECIFICATIONS, SOME OF WHICH RESULT FROM THE REQUIREMENTS OF THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY STORM WATER PERMITS SECTION. AN APPROVED PERMIT FROM THIS AGENCY IS BASED ON THE CONTRACTOR'S COMPLIANCE WITH THE SPECIFICATIONS AND THE ACTUAL PERMIT DOCUMENTS.

2. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL PRACTICES WEEKLY AND AFTER STORM EVENTS OF 1/2" OR MORE PRECIPITATION OR AFTER HEAVY USE AND REPAIR IMMEDIATELY.

3. THE CONTRACTOR SHALL KEEP A LOG OF THE CONTRACTOR'S INSPECTION OF TEMPORARY EROSION CONTROL MEASURES. THE LOG SHALL BE AVAILABLE AT THE JOB SITE FIELD OFFICE DURING ALL WORK DAY HOURS FOR REVIEW BY VISITING MDEQ INSPECTORS AND THE ENGINEER. THE LOG SHALL BE BRIEF, BUT SHALL INCLUDE THE NAME OF CONTRACTOR'S INSPECTOR, DATE OF INSPECTION. MAN HOURS OF CONTRACTOR'S INSPECTION TIME AND COMMENTS ON ANY AND ALL FAILED OR FAILING EROSION CONTROL FEATURES ALONG WITH THE MEASURES TAKEN FOR

4. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL PRACTICES UNTIL COMPLETION OF

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING WITH UTILITIES WITH RESPECT TO AVOIDING CONFLICTS AND DISTURBANCE OF SERVICES.

6. THE CONTRACTOR SHALL HAVE ON FILE, AT THE SITE, THE "MDOT STORMWATER DRAINAGE MANUAL"

7. THE CONTRACTOR SHALL CLEAN OUT ALL CATCH BASINS AND STORM SEWER UPON COMPLETION OF THE PROJECT.

8. THE CONTRACTOR SHALL STRIP AND STOCKPILE TOPSOIL AND REMOVE EXCESS FROM SITE AS APPROVED BY THE OWNER UPON SUBSTANTIAL COMPLETION OF THE WORK.

9. ANY TOPSOIL STOCKPILES ARE TO BE PROTECTED FROM EROSION, PRECIPTATION, AND WIND USING NON-EROSIVE COVER OR OTHER BEST MANAGEMENT PRATICES. TEMPORARY TOPSOIL STOCKPILES WILL BE PERMITTED IN AREAS APPROVED BY THE ENGINEER.

10. THE CONTRACTOR SHALL CONTROL DUST ON THE PROJECT SITE WHEN NECESSARY USING METHODS WHICH COMPLY WITH THE "MDOT STORMWATER DRAINAGE MANUAL"

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL AND CONTAINING OF LIQUID OR SOLUBLE CONSTRUCTION MATERIALS FOR THE PROTECTION OF THE GROUNDWATER RESOURCE. ANY ACCIDENTAL SPILLAGE SHALL BE CLEANED UP IMMEDIATELY BY ACCEPTABLE MEANS, REGARDLESS OF THE TIME OF DAY OR DAY OF WEEK.

12. THE CONTRACTOR IS ADVISED THAT THE ENVIRONMENTAL REVIEW FOR THIS PROJECT HAS DETERMINED THAT THE PROJECT HAS LIMITED POTENTIAL TO ADVERSELY AFFECT THE WATER BEARING AQUIFER. THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO AVOID THE CREATION OF THE POTENTIAL FOR STORM WATER TO ENTER THE GROUND WATER.

13. STOCKPILES OF EARTH MATERIALS SHALL BE SHAPED AS PER STATE STANDARDS. TOPSOIL MATERIALS SHALL BE STOCKPILED SEPARATELY FROM OTHER SOILS.

14. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PADS PRIOR TO OTHER SITE OPERATIONS. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA AND GRADE AND CROWN FOR POSITIVE DRAINAGE. CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE "MDOT STORMWATER DRAINAGE MANUAL".

15. THE CONTRACTOR'S BID SHALL INCLUDE THE USE OF TEMPORARY GRAVEL ENTRANCE PADS (INCIDENTAL TO THE CONTRACT) WHERE APPROVED HAULING ROUTES CONNECT TO ROADWAYS. THE WORK SHALL INCLUDE THE EVENTUAL REMOVAL OF SUCH GRAVEL PADS, AND THE INCIDENTAL GRADING, SEEDING, OR SODDING REQUIRED TO RETURN THE PAD AREAS TO ORIGINAL CONDITION. THE TEMPORARY GRAVEL PADS SHALL HAVE A MINIMUM 6" THICK APPLICATION OF 2" TO 3" COARSE AGGREGATE AT A MINIMUM 12' WIDE AND 50' LONG, WITH SUFFICIENT RADII AT THE ROADWAY. GEOTEXTILE FOR STABILIZATION BELOW THE GRAVEL PADS SHALL BE INCLUDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPTLY CLEANING UP ANY MATERIALS FROM PUBLIC ROADWAYS, WHICH ARE THE RESULT OF WORK OPERATIONS.

16. THE CONTRACTOR SHALL PERMANENTLY SEED, FERTILIZE, AND MULCH ALL FINAL GRADE AREAS (I.E., LANDSCAPE BERMS, RETENTION SWALES, ETC.) AS EACH IS COMPLETED. SEEDING, FERTILIZING, AND MULCHING SHALL BE IN COMPLIANCE WITH PRACTICES AS DESCRIBED IN

17. TEMPORARY GRASS SEEDING SHALL BE PERFORMED ON ALL AREAS SCHEDULED, OR LIKELY, TO REMAIN INACTIVE FOR A PERIOD OF 15 DAYS OR MORE. TEMPORARY SEEDING SHALL BE INCIDENTAL TO THE CONTRACT AND SHALL INCLUDE THE FOLLOWING SPECIES AND RATES: RATE/ACRE OPTIMUM PLANTING

WHEAT OR RYE 9/15 TO 10/30 SPRING OATS 3/1 TO 4/15 3/1 TO 5/1, 8/1 TO 9/1 ANNUAL RYE GRASS 40#

A FERTILIZER APPLICATION OF 400#/ACRE OF 12-12-12 ANALYSES MATERIAL SHALL ACCOMPANY THE SEEDING APPLICATION. MULCHING OF TEMPORARY SEEDING SHALL BE 'AS NEEDED'.

18. PERMANENT SEEDING SHOULD BE APPLIED FROM MARCH 1ST THRU MAY 10TH OR FROM AUGUST 10TH THRU SEPTEMBER 30TH, ANY

PERMANENT SEEDING BETWEEN JUNE 1ST AND AUGUST 10TH MUST BE IRRIGATED TO ALLOW FOR PROPER SEED GERMINATION. 19. SEEDING SHALL BE DONE PROMPTLY AND PROGRESSIVELY AS WORK IS COMPLETED IN ORDER TO ALLOW FOR THE EARLIEST POSSIBLE

ESTABLISHMENT OF STABILIZED GRASS. MULTIPLE MOBILIZATIONS FOR THE SEEDING OF SPECIFIC SECTIONS SHALL BE INCLUDED IN THE WORK.

20. THE JOB WIDE SEQUENCE OF GENERAL WORK OPERATIONS RELATING TO EARTH DISTURBING ACTIVITIES SHALL BE SUCH AS TO PREVENT THE POTENTIAL FOR EROSION AND SEDIMENTATION. THE SEQUENCE SHALL BE GENERALLY AS FOLLOWS, WHILE ALSO CONSIDERING MAINTENANCE OF TRAFFIC:

A. SITE CLEARING AND BUILDING DEMOLITION TEMPORARY SEEDING AS NEEDED - INCIDENTAL APPLICATIONS THROUGHOUT CONSTRUCTION

UNDERGROUND CONSTRUCTION

ROUGH GRADING/FINE GRADING BUILDING CONSTRUCTION PAVEMENT CONSTRUCTION

COMPLETION OF PERMANENT SEEDING MISCELLANEOUS CONSTRUCTION

21. TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED AT THE TIME OF SITE CLEARING AS EARLY IN THE ABOVE SEQUENCE AS NEEDED, AND SHALL BE MAINTAINED THROUGHOUT THE SEQUENCE AS NEEDED. DURING THE COURSE OF WORK, CLEANUP SHALL BE DONE AS NEEDED AND AS DIRECTED TO AVOID EROSION AND SEDIMENTATION.

22. THE EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN SHALL BE CONSIDERED A MINIMUM APPLICATION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES AS NEEDED THROUGHOUT

23. THE CONTRACTOR SHALL LOCATE AND MAINTAIN A CONCRETE WASHOUT AREA FOR THE DURATION OF CONCRETE POURING ACTIVITIES. THE CONTRACTOR SHALL REMOVE ALL DRIED CONCRETE FROM THE WASHOUT AREA BY THE END OF THE PROJECT.

24. THE CONTRACTOR SHALL AVOID UNNECESSARILY DISTURBING OR REMOVING EXISTING VEGETATED TOPSOIL OR EARTH COVER ALONG THE PROJECT PERIMETER. THESE AREAS ACT AS SEDIMENT FILTERS.

25. ALL TEMPORARY SOIL EROSION AND SEDIMENTATION PROTECTION SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF THE WORK AND THE AFFILIATED AREA IS PERMANENTLY STABILIZED. 26. REMOVAL OF TEMPORARY EROSION AND SEDIMENTATION PROTECTION IS REQUIRED FOR FINAL PROJECT ACCEPTANCE.

HAZ-MAT/CHEMICAL SPILL NOTIFICATION State Fire Marshals Office: 1-517-241-0691

MICHIGAN DEPARTMENT OF **ENVIRONMENTAL QUALITY:** 1-800-292-4706

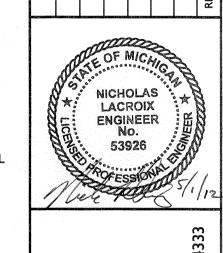
PETROLEUM PRODUCT SPILLS IN THE AMOUNT OF 55 GALLONS OR MORE MUST BE REPORTED TO MDEQ REGARDLESS OF CLEANUP METHODS.

EROSION CONTROL LEGEND

—(SF)— SILT FENCE, PROPERLY ANCHORED

SOIL TYPE

HO - HOYTVILLE SILTY CLAY LOAM



ENTWOO VOGRAND, KING

BR

DESIGNED BY:

 $\overline{\mathbf{\Omega}}$

DRAWN BY:

M. CURRIER

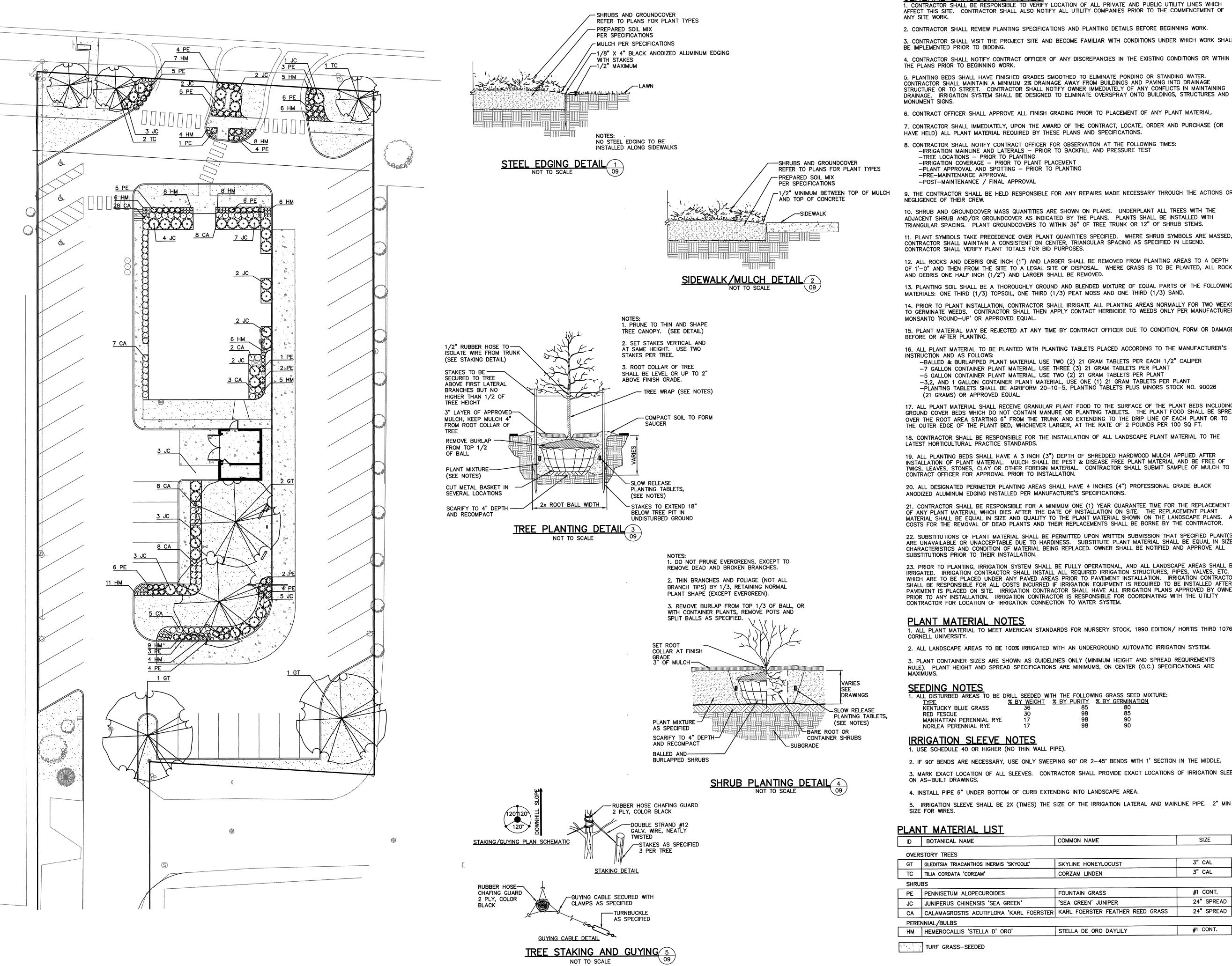
REVIEWED BY: N. LaCROIX

M. CURRIER DATE:

5/1/12

JOB NUMBER: 2010-5068

1"=20'



GENERAL LANDSCAPE NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY LOCATION OF ALL PRIVATE AND PUBLIC UTILITY LINES WHICH AFFECT THIS SITE. CONTRACTOR SHALL ALSO NOTIFY ALL UTILITY COMPANIES PRIOR TO THE COMMENCEMENT OF

2. CONTRACTOR SHALL REVIEW PLANTING SPECIFICATIONS AND PLANTING DETAILS BEFORE BEGINNING WORK.

3. CONTRACTOR SHALL VISIT THE PROJECT SITE AND BECOME FAMILIAR WITH CONDITIONS UNDER WHICH WORK SHALL BE IMPLEMENTED PRIOR TO BIDDING.

4. CONTRACTOR SHALL NOTIFY CONTRACT OFFICER OF ANY DISCREPANCIES IN THE EXISTING CONDITIONS OR WITHIN THE PLANS PRIOR TO BEGINNING WORK.

5. PLANTING BEDS SHALL HAVE FINISHED GRADES SMOOTHED TO ELIMINATE PONDING OR STANDING WATER. CONTRACTOR SHALL MAINTAIN A MINIMUM 2% DRAINAGE AWAY FROM BUILDINGS AND PAVING INTO DRAINAGE STRUCTURE OR TO STREET. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY OF ANY CONFLICTS IN MAINTAINING DRAINAGE. IRRIGATION SYSTEM SHALL BE DESIGNED TO ELIMINATE OVERSPRAY ONTO BUILDINGS, STRUCTURES AND MONUMENT SIGNS.

6. CONTRACT OFFICER SHALL APPROVE ALL FINISH GRADING PRIOR TO PLACEMENT OF ANY PLANT MATERIAL. 7. CONTRACTOR SHALL IMMEDIATELY, UPON THE AWARD OF THE CONTRACT, LOCATE, ORDER AND PURCHASE (OR

HAVE HELD) ALL PLANT MATERIAL REQUIRED BY THESE PLANS AND SPECIFICATIONS.

8. CONTRACTOR SHALL NOTIFY CONTRACT OFFICER FOR OBSERVATION AT THE FOLLOWING TIMES:
-IRRIGATION MAINLINE AND LATERALS - PRIOR TO BACKFILL AND PRESSURE TEST

-TREE LOCATIONS - PRIOR TO PLANTING -IRRIGATION COVERAGE - PRIOR TO PLANT PLACEMENT

-PLANT APPROVAL AND SPOTTING - PRIOR TO PLANTING -PRE-MAINTENANCE APPROVAL

-POST-MAINTENANCE / FINAL APPROVAL

9. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY REPAIRS MADE NECESSARY THROUGH THE ACTIONS OR NEGLIGENCE OF THEIR CREW.

10. SHRUB AND GROUNDCOVER MASS QUANTITIES ARE SHOWN ON PLANS. UNDERPLANT ALL TREES WITH THE ADJACENT SHRUB AND/OR GROUNDCOVER AS INDICATED BY THE PLANS. PLANTS SHALL BE INSTALLED WITH TRIANGULAR SPACING. PLANT GROUNDCOVERS TO WITHIN 36" OF TREE TRUNK OR 12" OF SHRUB STEMS.

11. PLANT SYMBOLS TAKE PRECEDENCE OVER PLANT QUANTITIES SPECIFIED. WHERE SHRUB SYMBOLS ARE MASSED, CONTRACTOR SHALL MAINTAIN A CONSISTENT ON CENTER, TRIANGULAR SPACING AS SPECIFIED IN LEGEND. CONTRACTOR SHALL VERIFY PLANT TOTALS FOR BID PURPOSES.

OF 1'-0" AND THEN FROM THE SITE TO A LEGAL SITE OF DISPOSAL. WHERE GRASS IS TO BE PLANTED, ALL ROCKS AND DEBRIS ONE HALF INCH (1/2") AND LARGER SHALL BE REMOVED.

13. PLANTING SOIL SHALL BE A THOROUGHLY GROUND AND BLENDED MIXTURE OF EQUAL PARTS OF THE FOLLOWING MATERIALS: ONE THIRD (1/3) TOPSOIL, ONE THIRD (1/3) PEAT MOSS AND ONE THIRD (1/3) SAND.

14. PRIOR TO PLANT INSTALLATION, CONTRACTOR SHALL IRRIGATE ALL PLANTING AREAS NORMALLY FOR TWO WEEKS TO GERMINATE WEEDS. CONTRACTOR SHALL THEN APPLY CONTACT HERBICIDE TO WEEDS ONLY PER MANUFACTURER, MONSANTO 'ROUND-UP' OR APPROVED EQUAL.

15. PLANT MATERIAL MAY BE REJECTED AT ANY TIME BY CONTRACT OFFICER DUE TO CONDITION, FORM OR DAMAGE BEFORE OR AFTER PLANTING.

16. ALL PLANT MATERIAL TO BE PLANTED WITH PLANTING TABLETS PLACED ACCORDING TO THE MANUFACTURER'S

INSTRUCTION AND AS FOLLOWS: -BALLED & BURLAPPED PLANT MATERIAL USE TWO (2) 21 GRAM TABLETS PER EACH 1/2" CALIPER

-7 GALLON CONTAINER PLANT MATERIAL, USE THREE (3) 21 GRAM TABLETS PER PLANT -5 GALLON CONTAINER PLANT MATERIAL, USE TWO (2) 21 GRAM TABLETS PER PLANT

-3.2. AND 1 GALLON CONTAINER PLANT MATERIAL, USE ONE (1) 21 GRAM TABLETS PER PLANT -PLANTING TABLETS SHALL BE AGRIFORM 20-10-5, PLANTING TABLETS PLUS MINORS STOCK NO. 90026

(21 GRAMS) OR APPROVED EQUAL.

17. ALL PLANT MATERIAL SHALL RECEIVE GRANULAR PLANT FOOD TO THE SURFACE OF THE PLANT BEDS INCLUDING GROUND COVER BEDS WHICH DO NOT CONTAIN MANURE OR PLANTING TABLETS. THE PLANT FOOD SHALL BE SPREAD OVER THE ROOT AREA STARTING 6" FROM THE TRUNK AND EXTENDING TO THE DRIP LINE OF EACH PLANT OR TO THE OUTER EDGE OF THE PLANT BED, WHICHEVER LARGER, AT THE RATE OF 2 POUNDS PER 100 SQ FT.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL LANDSCAPE PLANT MATERIAL TO THE LATEST HORTICULTURAL PRACTICE STANDARDS.

19. ALL PLANTING BEDS SHALL HAVE A 3 INCH (3") DEPTH OF SHREDDED HARDWOOD MULCH APPLIED AFTER INSTALLATION OF PLANT MATERIAL. MULCH SHALL BE PEST & DISEASE FREE PLANT MATERIAL AND BE FREE OF TMGS, LEAVES, STONES, CLAY OR OTHER FOREIGN MATERIAL. CONTRACTOR SHALL SUBMIT SAMPLE OF MULCH TO CONTRACT OFFICER FOR APPROVAL PRIOR TO INSTALLATION.

20. ALL DESIGNATED PERIMETER PLANTING AREAS SHALL HAVE 4 INCHES (4") PROFESSIONAL GRADE BLACK ANODIZED ALUMINUM EDGING INSTALLED PER MANUFACTURE'S SPECIFICATIONS.

21. CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM ONE (1) YEAR GUARANTEE TIME FOR THE REPLACEMENT OF ANY PLANT MATERIAL WHICH DIES AFTER THE DATE OF INSTALLATION ON SITE. THE REPLACEMENT PLANT MATERIAL SHALL BE EQUAL IN SIZE AND QUALITY TO THE PLANT MATERIAL SHOWN ON THE LANDSCAPE PLANS. ALL COSTS FOR THE REMOVAL OF DEAD PLANTS AND THEIR REPLACEMENTS SHALL BE BORNE BY THE CONTRACTOR.

22. SUBSTITUTIONS OF PLANT MATERIAL SHALL BE PERMITTED UPON WRITTEN SUBMISSION THAT SPECIFIED PLANT(S) ARE UNAVAILABLE OR UNACCEPTABLE DUE TO HARDINESS. SUBSTITUTE PLANT MATERIAL SHALL BE EQUAL IN SIZE, CHARACTERISTICS AND CONDITION OF MATERIAL BEING REPLACED. OWNER SHALL BE NOTIFIED AND APPROVE ALL SUBSTITUTIONS PRIOR TO THEIR INSTALLATION.

23. PRIOR TO PLANTING, IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL, AND ALL LANDSCAPE AREAS SHALL BE IRRIGATION CONTRACTOR SHALL INSTALL ALL REQUIRED IRRIGATION STRUCTURES, PIPES, VALVES, ETC. WHICH ARE TO BE PLACED UNDER ANY PAVED AREAS PRIOR TO PAVEMENT INSTALLATION. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED IF IRRIGATION EQUIPMENT IS REQUIRED TO BE INSTALLED AFTER PAVEMENT IS PLACED ON SITE. IRRIGATION CONTRACTOR SHALL HAVE ALL IRRIGATION PLANS APPROVED BY OWNER PRIOR TO ANY INSTALLATION. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE UTILITY CONTRACTOR FOR LOCATION OF IRRIGATION CONNECTION TO WATER SYSTEM.

PLANT MATERIAL NOTES

1. ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK, 1990 EDITION/ HORTIS THIRD 1076

2. ALL LANDSCAPE AREAS TO BE 100% IRRIGATED WITH AN UNDERGROUND AUTOMATIC IRRIGATION SYSTEM.

3. PLANT CONTAINER SIZES ARE SHOWN AS GUIDELINES ONLY (MINIMUM HEIGHT AND SPREAD REQUIREMENTS RULE). PLANT HEIGHT AND SPREAD SPECIFICATIONS ARE MINIMUMS, ON CENTER (O.C.) SPECIFICATIONS ARE

ALL DISTURBED AREAS TO BE DRILL SEEDED WITH THE FOLLOWING GRASS SEED MIXTURE: % BY WEIGHT
% BY PURITY
% BY GERMINATION KENTUCKY BLUE GRASS RED FESCUE MANHATTAN PERENNIAL RYE NORLEA PERENNIAL RYE

IRRIGATION SLEEVE NOTES 1. USE SCHEDULE 40 OR HIGHER (NO THIN WALL PIPE).

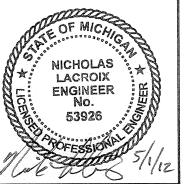
- 2. IF 90° BENDS ARE NECESSARY, USE ONLY SWEEPING 90° OR 2-45° BENDS WITH 1' SECTION IN THE MIDDLE. 3. MARK EXACT LOCATION OF ALL SLEEVES. CONTRACTOR SHALL PROVIDE EXACT LOCATIONS OF IRRIGATION SLEEVING
- 4. INSTALL PIPE 6" UNDER BOTTOM OF CURB EXTENDING INTO LANDSCAPE AREA.
- IRRIGATION SLEEVE SHALL BE 2X (TIMES) THE SIZE OF THE IRRIGATION LATERAL AND MAINLINE PIPE. 2" MIN PIPE SIZE FOR WIRES.

LANT MATERIAL LIST

ID	BOTANICAL NAME	COMMON NAME	SIZE	QTY	ROOT
OVER	RSTORY TREES				
GT	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE HONEYLOCUST	3" CAL	4	B & B
TC	TILIA CORDATA 'CORZAM'	CORZAM LINDEN	3" CAL	3	B & B
SHRU	JBS				
PE	PENNISETUM ALOPECUROIDES	FOUNTAIN GRASS	#1 CONT.	61	
JC	JUNIPERUS CHINENSIS 'SEA GREEN'	'SEA GREEN' JUNIPER	24" SPREAD	39	3 GAL.
CA	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER	KARL FOERSTER FEATHER REED GRASS	24" SPREAD	69	3 GAL.
PERE	ENNIAL/BULBS				
НМ	HEMEROCALLIS 'STELLA D' ORO'	STELLA DE ORO DAYLILY	#1 CONT.	89	

TURF GRASS-SEEDED





GRAPHIC SCALE

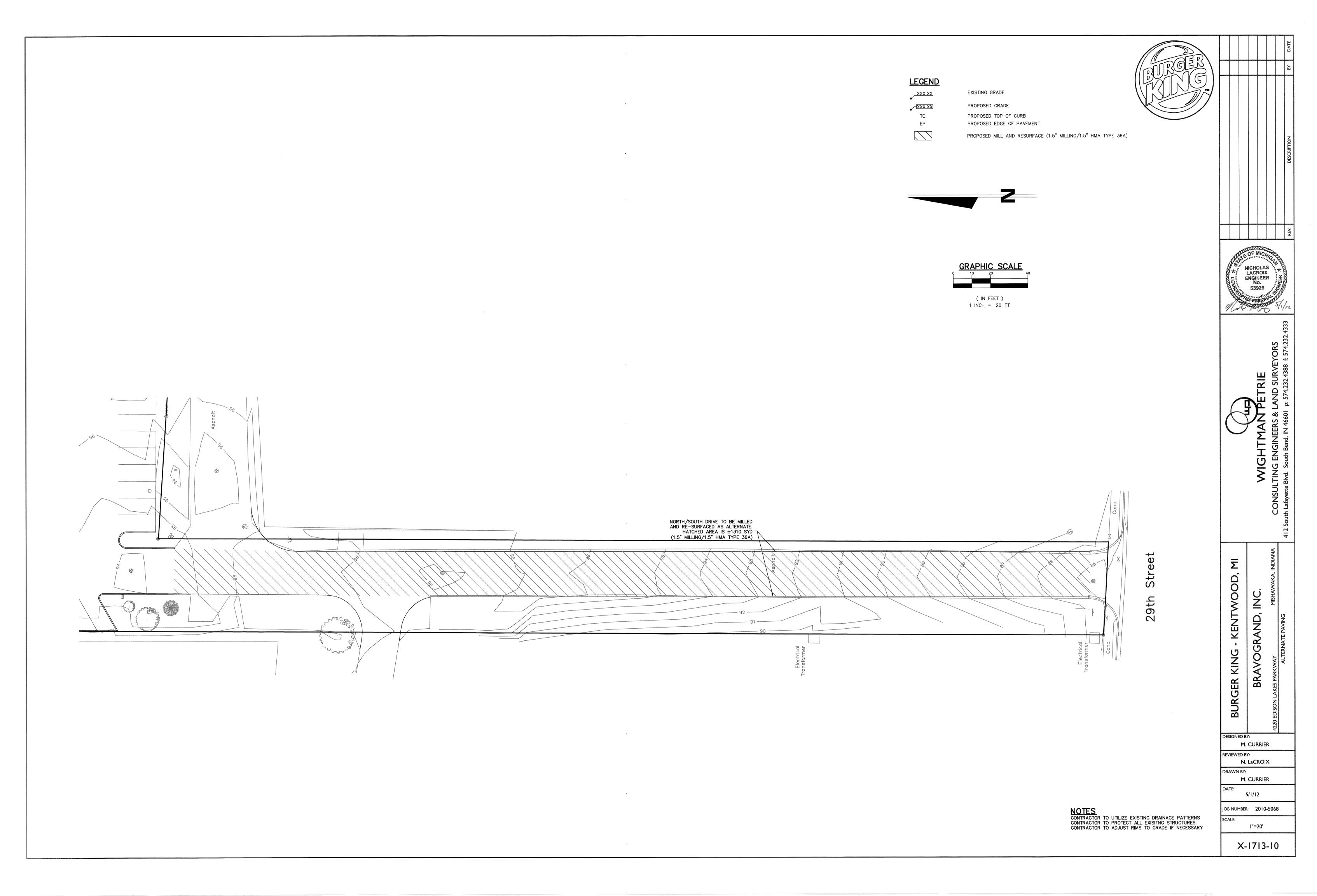
(IN FEET)

1 INCH = 20 FT

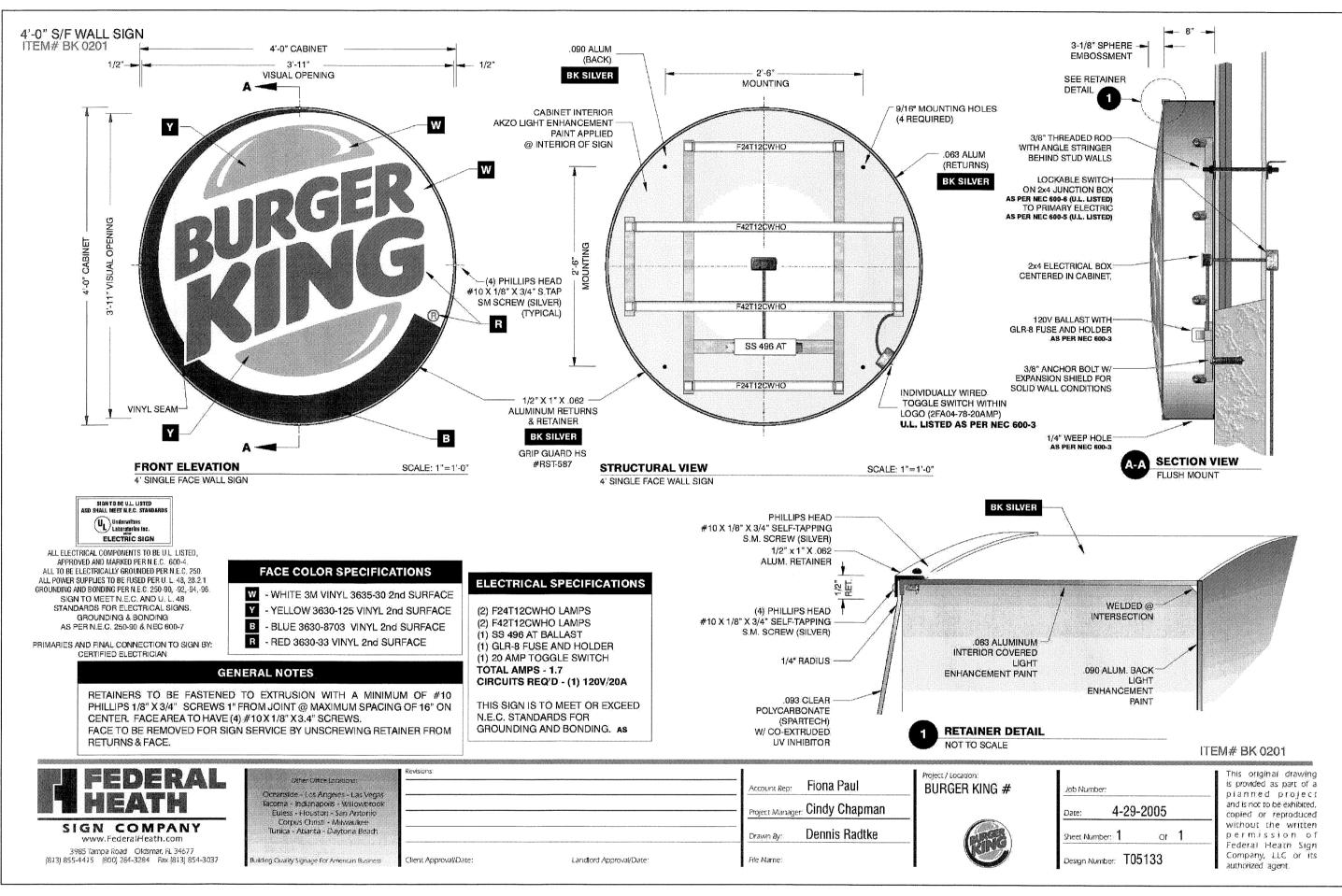
 $\mathbf{\Omega}$ DESIGNED BY: M. CURRIER REVIEWED BY: N. LaCROIX DRAWN BY:

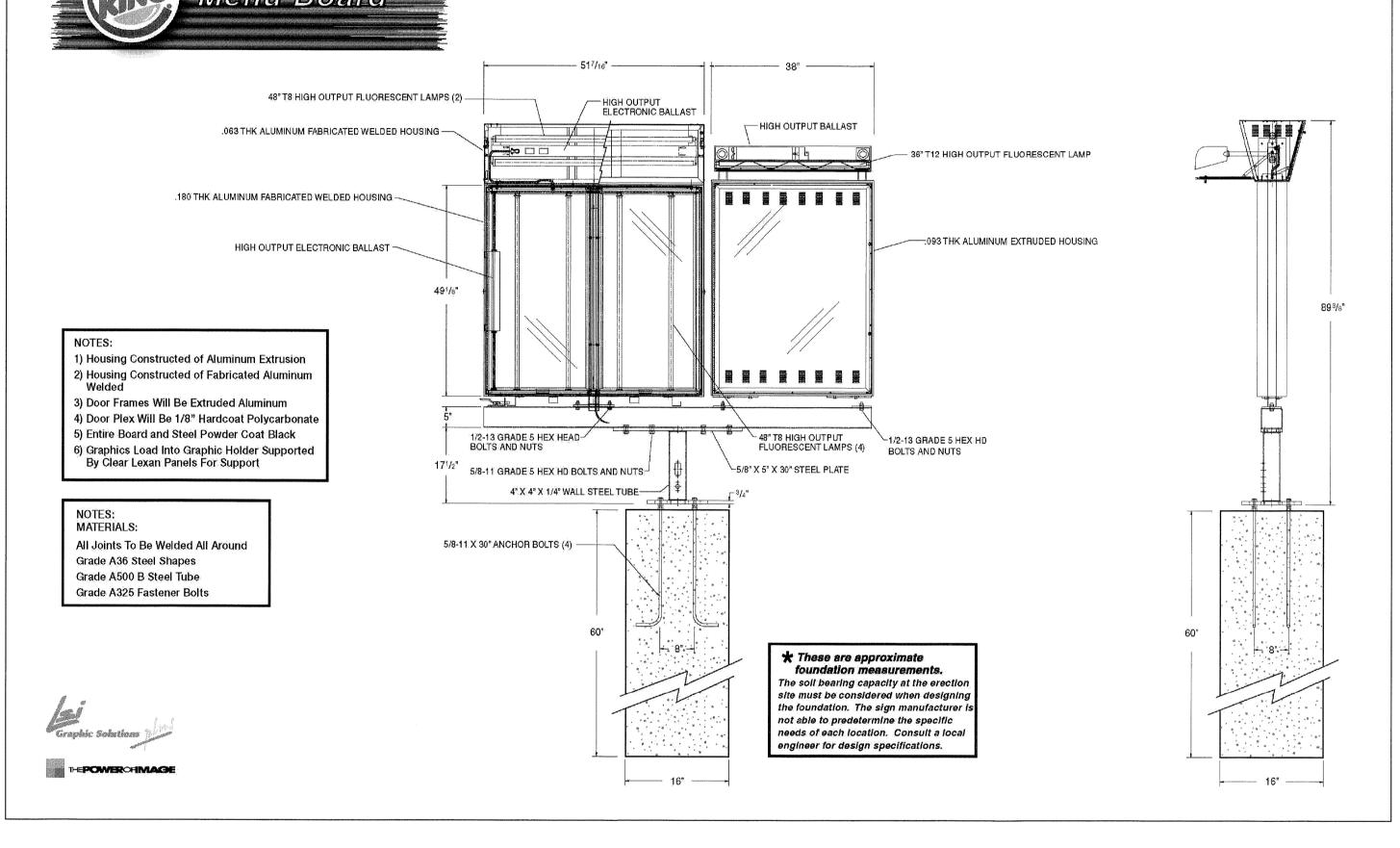
M. CURRIER 5/1/12

JOB NUMBER: 2010-5068 SCALE: 1"=20'









DRIVE THRU MENU BOARD SIGN DETAIL 3

NOT TO SCALE

9

4'Ø ROUND SIGN DETAIL

NOT TO SCALE

9

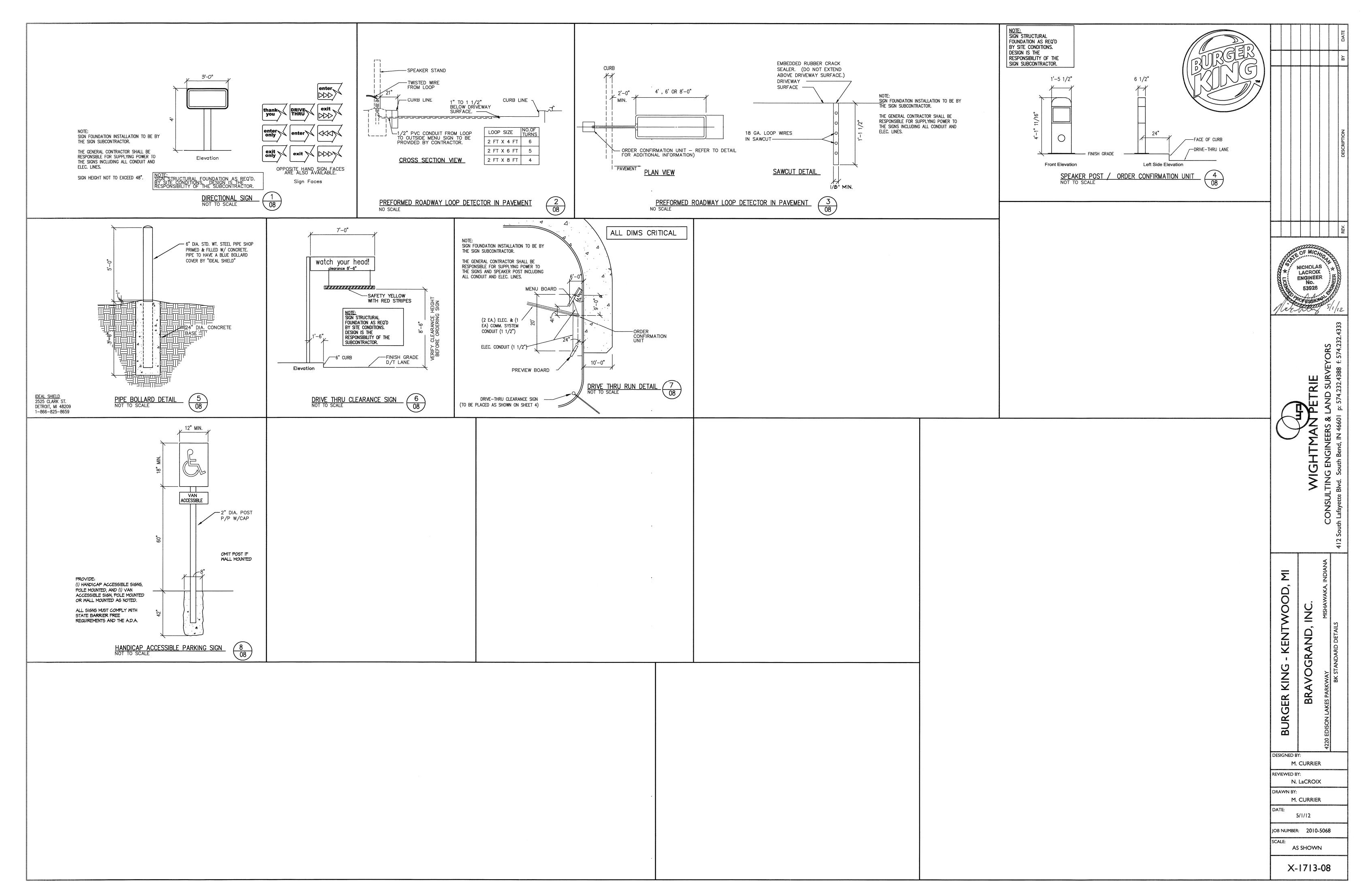
BURGER KING - KENTWOOD, BRAVOGRAND, INC

LACROIX

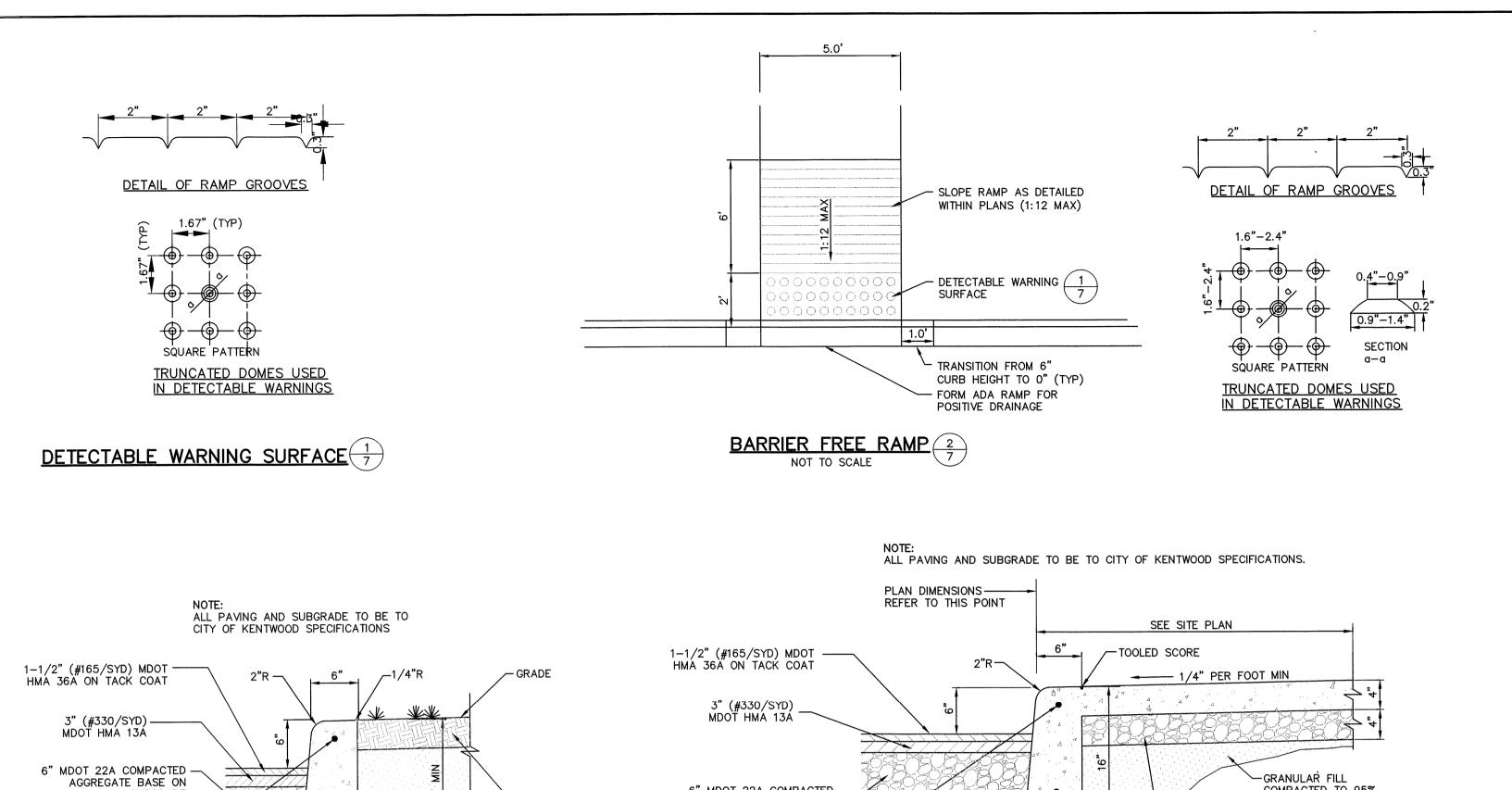
DESIGNED BY: M. CURRIER REVIEWED BY: N. LaCROIX

DRAWN BY: M. CURRIER 5/1/12

JOB NUMBER: 2010-5068 AS SHOWN

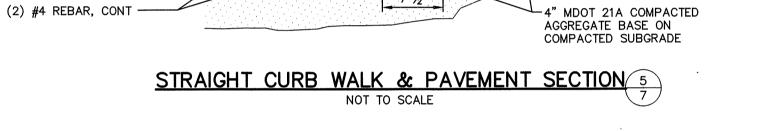


0 Projects\2010-5068\ENG\X-1713-08-BK STANDARD DETALLS.DWG, 5/1/2012 9:3



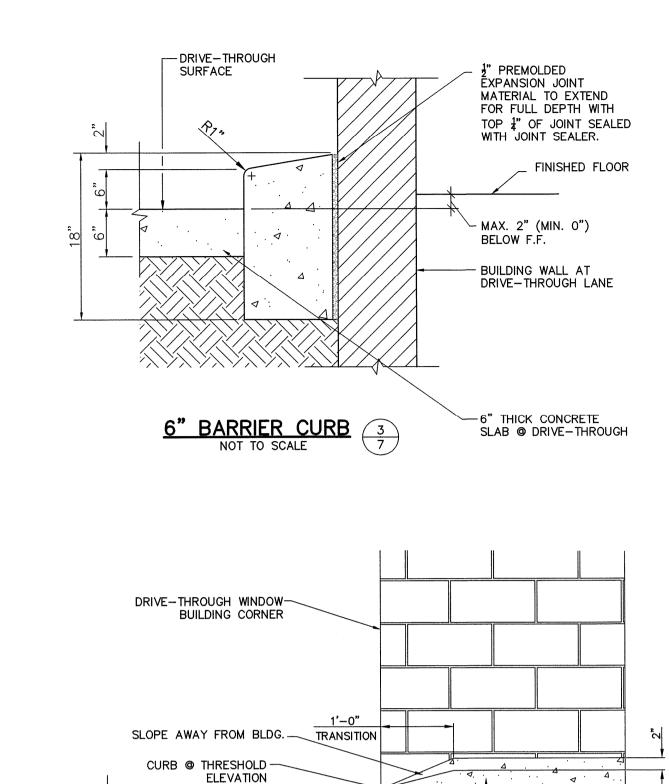
6" MDOT 22A COMPACTED
AGGREGATE BASE ON -

COMPACTED SUBGRADE



COMPACTED TO 95%

MODIFIED PROCTOR



NICHOLAS LACROIX

ENGINEER No.

- KENTWOOD,

BURGER KING

DESIGNED BY:

REVIEWED BY:

M. CURRIER

N. LaCROIX

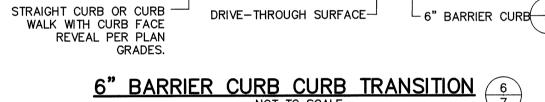
M. CURRIER

5/1/12

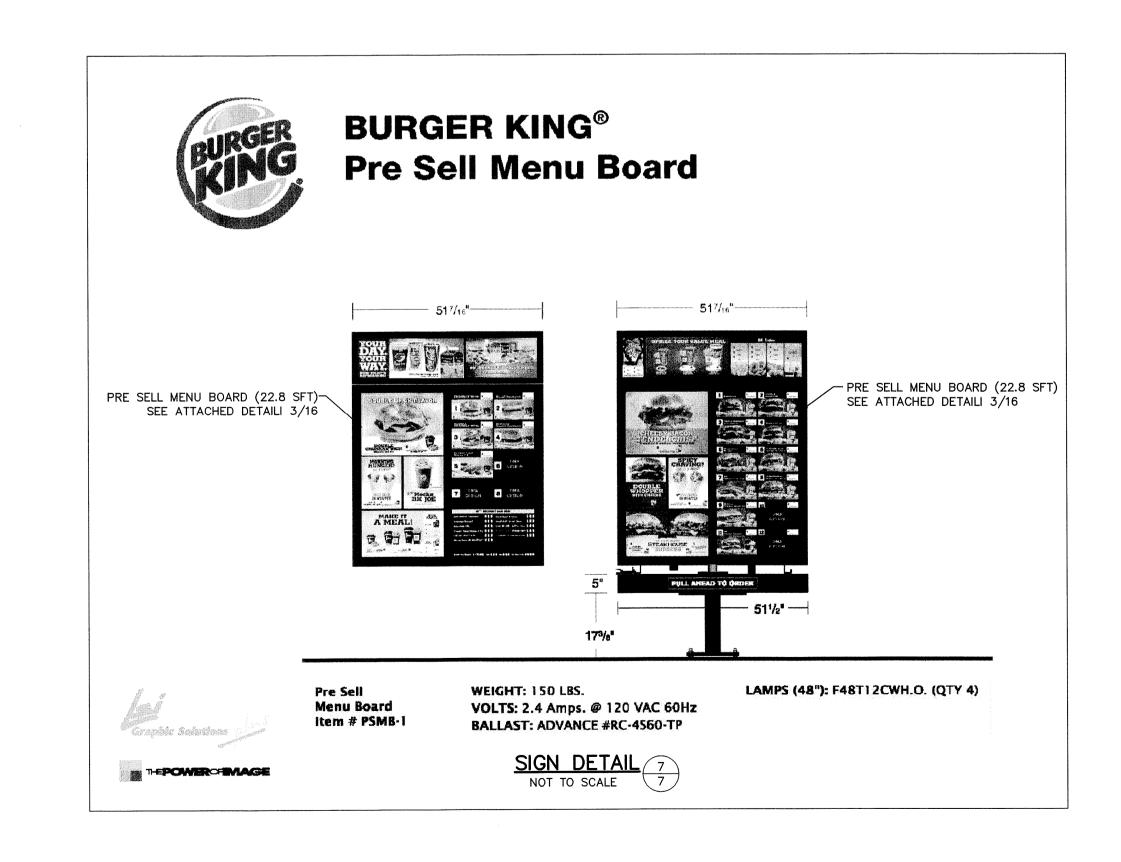
JOB NUMBER: 2010-5068

NONE

X-1713-07



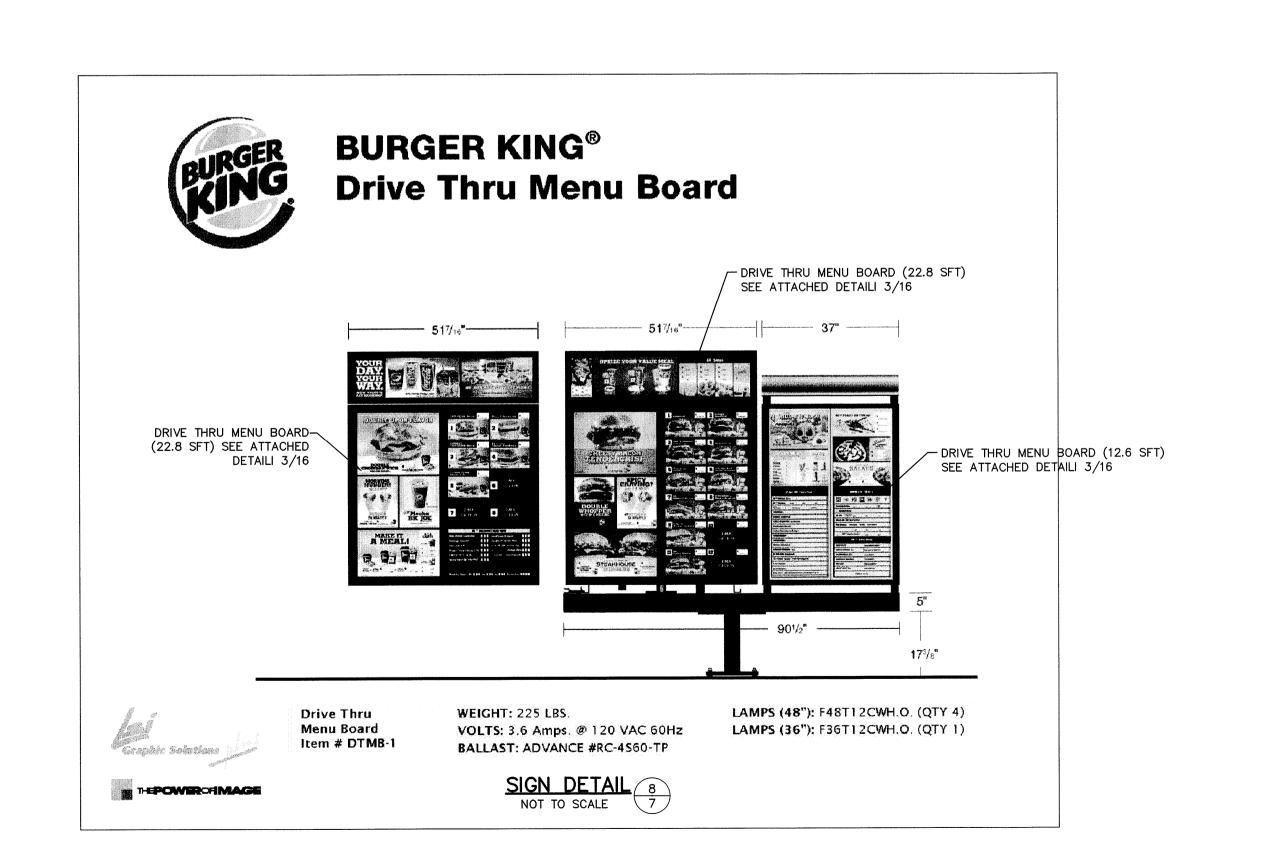
DRIVE-THROUGH SURFACE-



~3" TOPSOIL

- GRANULAR FILL

COMPACTED TO 95% MODIFIED PROCTOR



6" BARRIER CURB 3

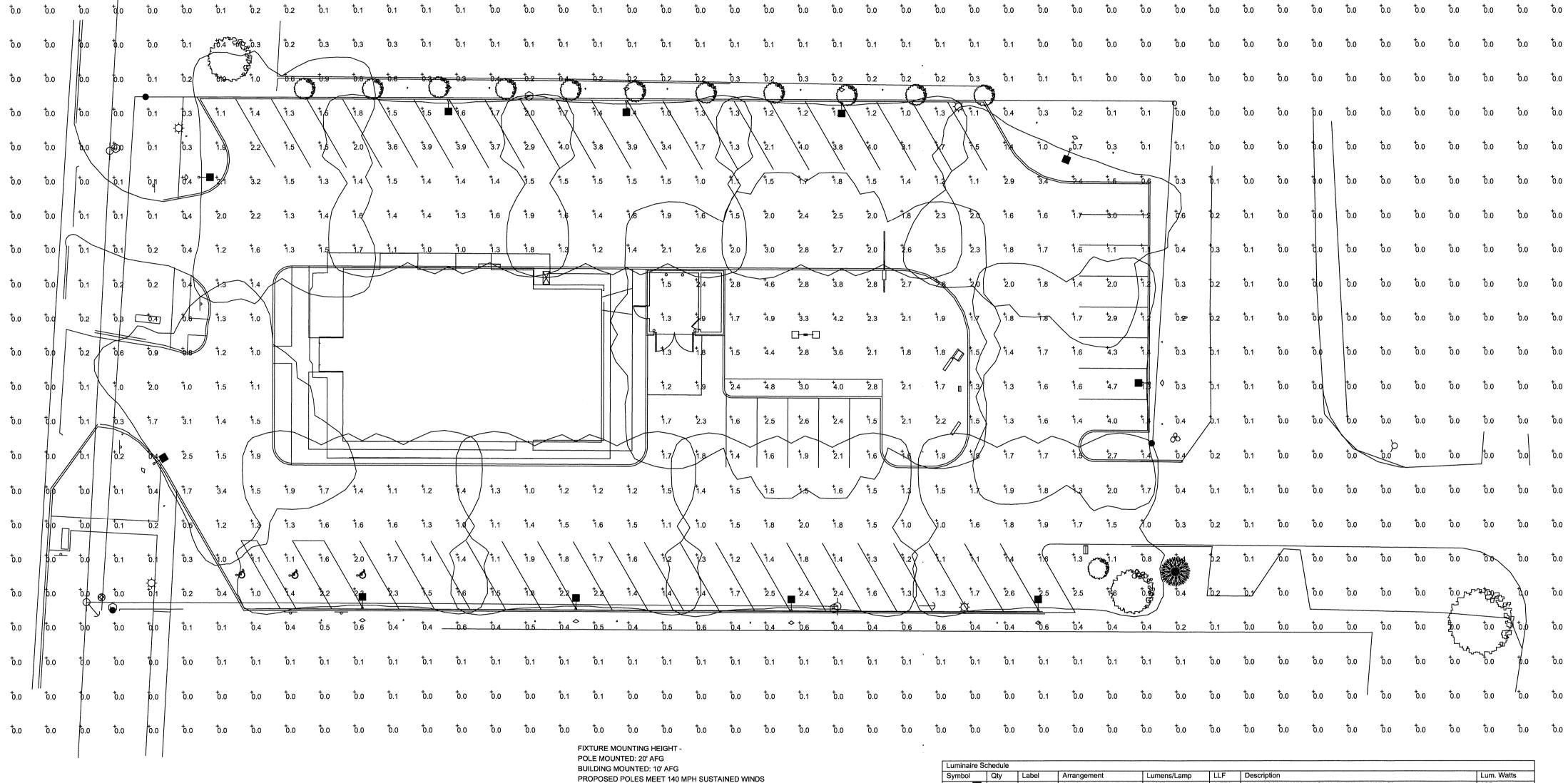
COMPACTED SUBGRADE

(2) #4 REBAR, CONT-

7 1/2"

STRAIGHT CURB & PAVEMENT SECTION 4

NOT TO SCALE



0.750 AVV40615-M (150W PSMH, TYPE IV, W/ BLS) SINGLE 14000 A-2 BACK-BACK 0.750 AVV40615-M (150W PSMH, TYPE IV) (11) - PS4S17C1BZ (17' X 4" SQUARE STEEL POLES, SINGLE MOUNT) **RUUD LIGHTING** Date:4/10/2012 Layout by: MARK JANAKY) Scale: 1"=20' (1) - PS4S17C2BZ (17' X 4" SQUARE STEEL POLES, TWIN 180° MOUNT) (11) - SBL-AVV20CBZ (BACKLIGHT SHIELDS) Project Name: BK-KENTWOOD, MI - R1 Filename: V:\Common\AppEng\NAT\BK-KWMI1MDJR1.AGI Footcandles calculated at grade using mean lumen values 9201 Washington Ave Racine, WI 53406 Illumination results shown on this lighting design are based on project parameters provided to Ruud Lighting

PH: (800) 236-7000

FX: (800) 236-7500

www.ruudlightingdirect.com

Calculation Summary

ISOLINES AT .5 FC

ADDITIONAL REQUIRED EQUIPMENT:

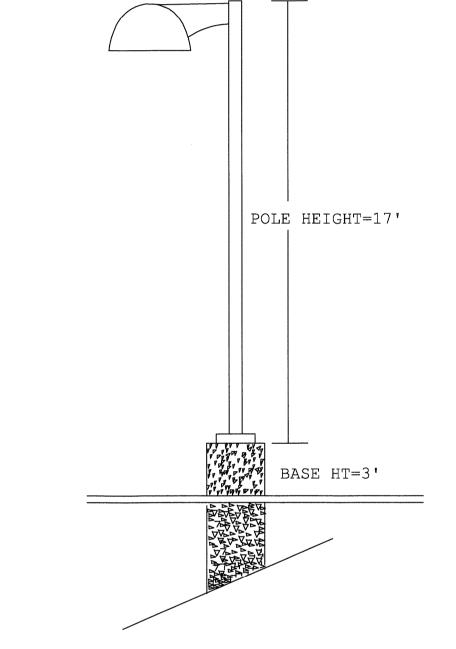
 Avg
 Max
 Min
 Avg/Min
 Max/Min

 0.73
 4.9
 0.0
 N.A.
 N.A.

 1.88
 4.9
 1.0
 1.88
 4.90

NOTES

CONTRACTOR TO ENSURE LIGHT POLES AND THEIR FOUNDATIONS ARE LOCATED WITHIN STRIPING TO NOT INHIBIT ANY PARKING SPACES. CONTRACTOR TO VERIFY AND ENSURE THERE IS NOT A CONFLICT WITH THE OVERHEAD ELECTRIC LINE AND PROPOSED LIGHTING.



2'-0" DIAMETER CONNECT TO GROUND — LUG ON POLE -FINISH AND PAINT EXPOSED PORTIONS AS DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE LEVEL POLE AND FILL GAP — WITH NON—SHRINK GROUT 5/8" CHAMFER ----ANCHOR BOLTS FOR POLE -PER POLE MANUFACTURER FINISH GRADE -CLAMP -6" LOOP ----#10 BARE COPPER GROUND ---WIRE BY ELEC CONTRACTOR 5/8" ø x 10'-0" COPPER ----GROUND ROD BY ELEC CONTRACTOR MAKE TRANSITION TO GALV. STEEL CONDUIT 10'-0" BEFORE RISER CONC BASE 3500 PSI ----8 #6 REINFORCING STEEL BARS -EVENLY SPACED VERTICAL **SECTION** w/ #3 HORIZONTAL HOOP TIES @ 12" SPACING

Customer No: #76884

used in conjunction with luminaire test procedures conducted under laboratory conditions. Actual project conditions differing from these design parameters may affect field results. The customer is responsible for

verifying compliance with any applicable electrical, lighting, or energy code.

NOTE: ALL PLAIN, GRADE 60, REINFORCING STEEL LIGHT POLE FOUNDATION 1 NOT TO SCALE

KENTWOOD, 2 GRAND, **BRAVO** BURGER

DESIGNED BY: M. CURRIER REVIEWED BY: N. LaCROIX DRAWN BY:

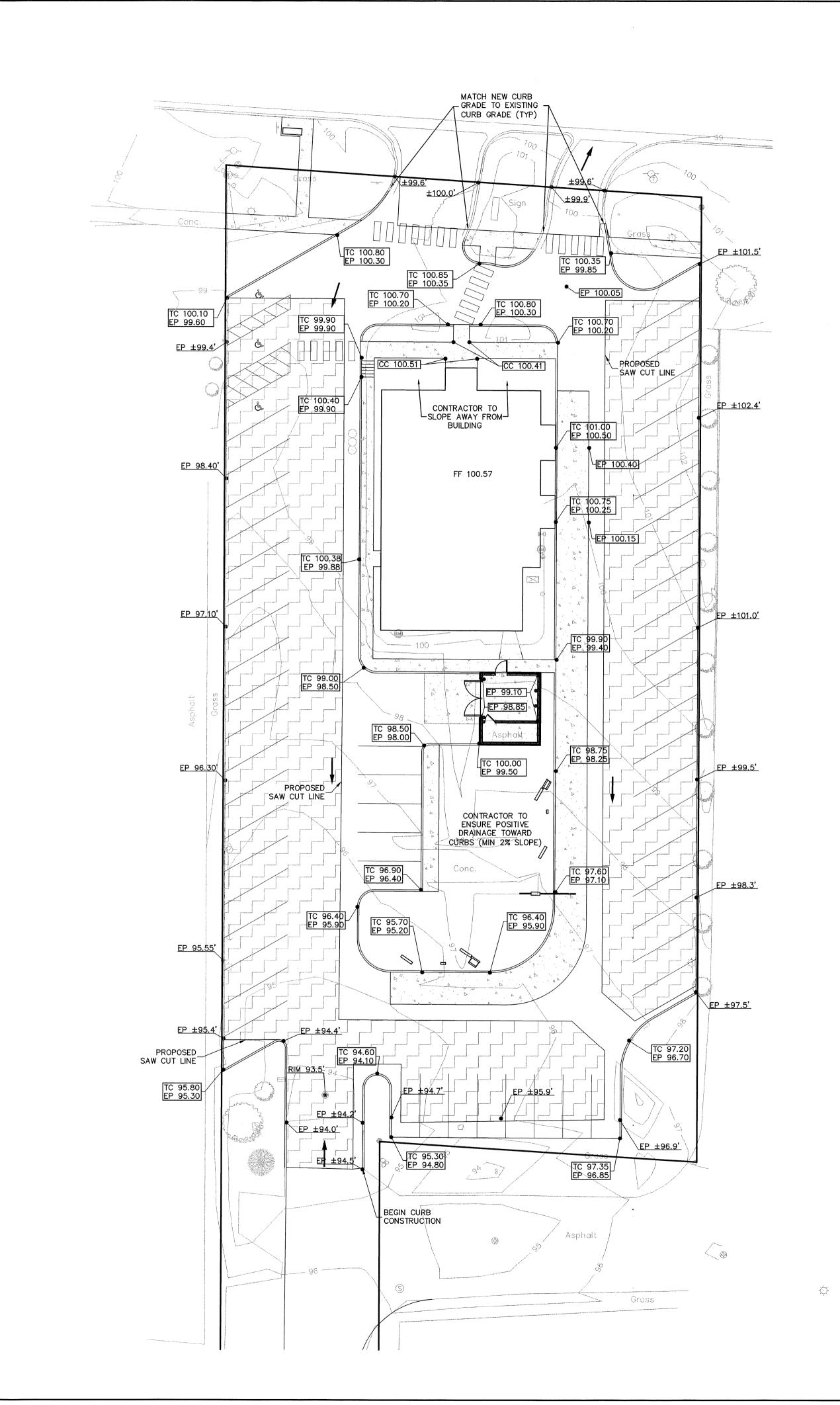
M. CURRIER

5/1/12 JOB NUMBER: 2010-5068 1"=20'

X-1713-06

(IN FEET)

1 INCH = 20 FT



LEGEND

XXX.XX

XXX.XX

EXISTING GRADE

PROPOSED GRADE PROPOSED TOP OF CURB

PROPOSED EDGE OF PAVEMENT PROPOSED CONCRETE PAVING (SEE SHEET 2)

PROPOSED MILL AND RESURFACE (1.5" MILLING/ 1.5" HMA TYPE 36A)

PROPOSED ASPHALT PAVING (SEE SHEET 2)

CONTRACTOR TO SAW-CUT EXISTING ASPHALT TO FULL DEPTH AS DEPICTED ON SHEET 2 AND MATCH EXISTING GRADE AND ENSURE POSITIVE DRAINAGE AND A CLEAN BUTT JOINT

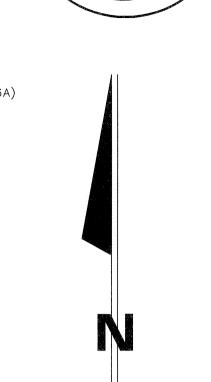
DRAINAGE & RETENTION CALCULATIONS
PROJECT SITE

NON-PERMEABLE SURFACE
BUILDINGS
PARKING & DRIVES

PERMEABLE SURFACE
OPEN AREA

RETENTION PROVIDED
UTILIZING EXISTING STRUCTURES AND DRAINAGE PATTERNS OF EXISITNG SITE.

22,859 SFT



GRAPHIC SCALE (IN FEET)

1 INCH = 20 FT

NICHOLAS OLACROIX ENGINEER No.

BURGER KING - KENTWOOD, BRAVOGRAND, INC

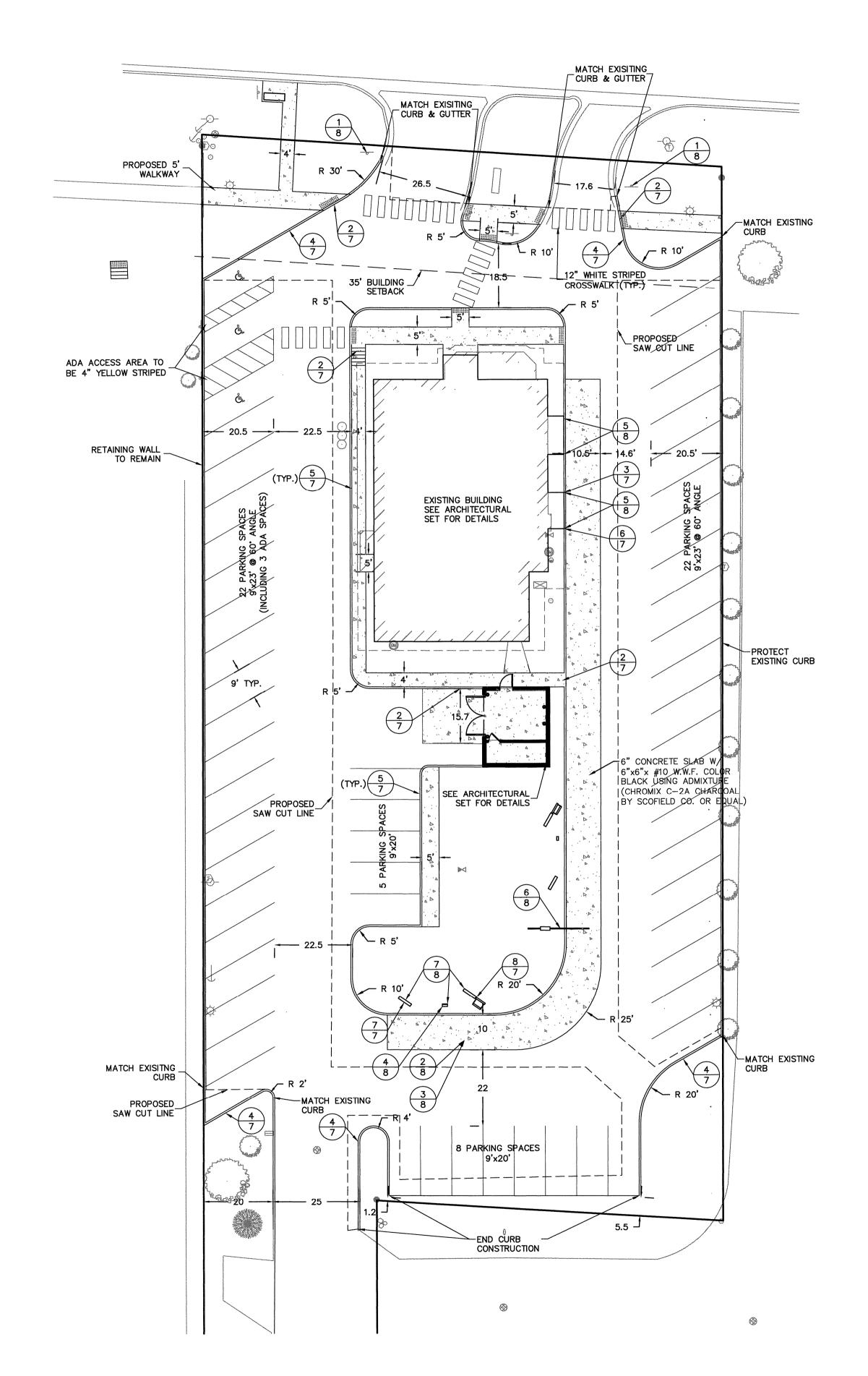
DESIGNED BY: M. CURRIER N. LaCROIX

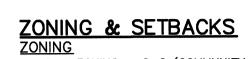
M. CURRIER 5/1/12

DRAWN BY:

JOB NUMBER: 2010-5068

1"=20'

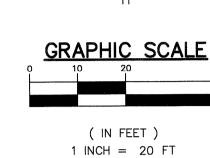




EXISTING ZONING - C-2 (COMMUNITY COMMERCIAL DISTRICT)

BUILDING SETBACKS FRONT YARD 35' FROM PROPERTY LINE SIDE YARD NONE REAR YARD 30

PARKING & DRIVE SETBACKS FRONT YARD 35' SIDE YARD NONE REAR YARD NONE



TABULATED SITE DATA

1. ACREAGE OF SITE (70,860 SF) 1.63 AC

2. PROPOSED LAND USE: A. FAST FOOD RESTAURANT

3. PARKING RATIO REQUIRED BY ORDINANCE: FAST FOOD RESTAURANT

A. 1 SPACES PER 50 SQUARE FEET OF USABLE FLOOR AREA
B. NUMBER OF SPACES REQUIRED — 28
C. NUMBER OF SPACES PROVIDED — 57
D. NUMBER OF A.D.A. SPACES REQUIRED — 3
E. NUMBER OF A.D.A. SPACES PROVIDED — 3

SQUARE FOOTAGE % OF SITE 5.54% 4. PROPOSED LAND COVERAGE: A. BUILDING(S) B. PARKING AND DRIVES 62.20% 32.26% 100.00% C. OPEN SPACE

5. SURFACE RUN-OFF AND DRAINAGE TO BE COLLECTED ON-SITE AND DISCHARGED TO EXISTING STORM SEWER SYSTEM.

6. EXISTING BUILDING IS SINGLE STORY.

7. BUILDINGS WILL BE CONNECTED TO THE CITY OF GRAND RAPIDS WATER SYSTEM & CITY OF KENTWOOD SANITARY SEWER.

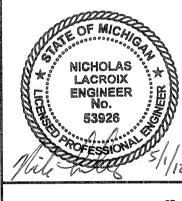
8. PARKING SPACES MEET THE CITY OF KENTWOOD STANDARDS.

9. ACCESS WILL BE BY EXISTING ACCESSES TO 28TH AND 29TH STREETS.

10. LOADING ZONE REQUIREMENTS:

BENCH INFORMATION

LANDSCAPE FORMS - SCARBOROUGH BACKLESS BENCH, STRAP METAL SEAT, SURFACE MOUNT WITH ANCHOR TABS. STANDARD BLACK POWDER COAT FINISH. 431 LAWNDALE AVE. KALAMAZOO, MI 49048 (800) 430-6209 OR APPROVED EQUAL.



KENTWOOD,

8

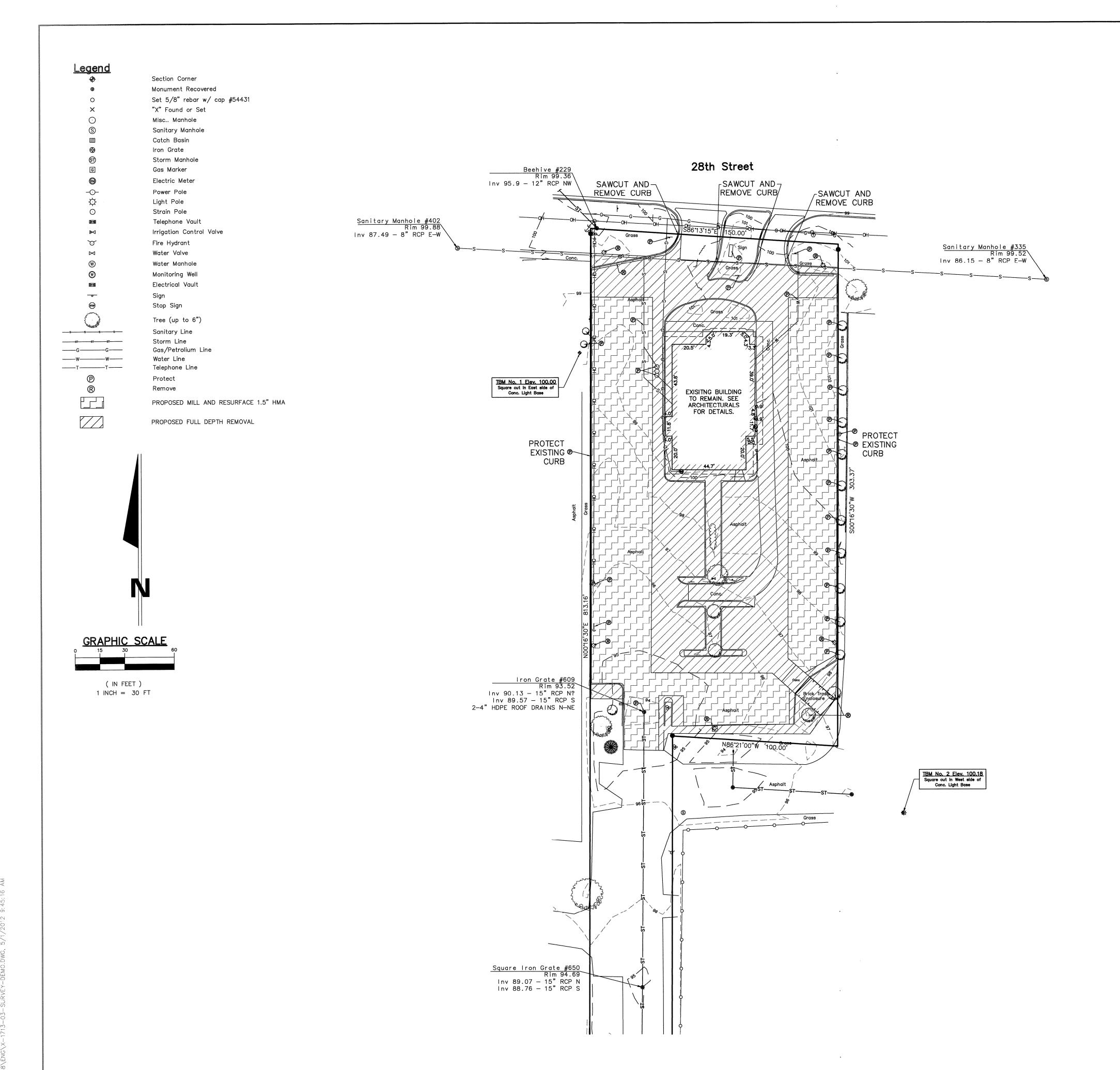
BURGER KING DESIGNED BY: M. CURRIER

REVIEWED BY: N. LaCROIX

DRAWN BY: M. CURRIER

5/1/12

JOB NUMBER: 2010-5068 SCALE: 1"=20'





Legal Description per DEL-TEC ALTA Survey

Part of the West half of the Northeast Quarter of Section 15, Township 6 North, Range 11 West, City of Kentwood, Kent County, Michigan, described as:

Beginning at a point on the south boundary of 100 feet wide 28th Street S.E., said point being South 86°13'15" East along the north line of said Section 15 a distance of 500.00 feet and South 0°16'30" West 50.09 feet from the North Quarter corner of said Section 15; thence South 0°16'30" East 813.16 feet to the north boundary of 60 feet wide 29th Street; thence along said north boundary South 86°25'30" East 16.55 feet; thence continuing said north boundary on a curve to the left (radius=1607.03 feet, chord bearing South 87°01'00" East 33.45 feet) a distance of 33.45 feet; thence North 0°16'30" East 509.01 feet; thence South 86°21'00" East 100.00 feet; thence North 0°16'30" East 303.37 feet; thence North 86°13'15" West along said south boundary 150.00 feet to the point of beginning and containing 1.63 acres.

TOPOGRAPHIC SURVEY NOTES

This topographic survey was performed for:
Bravokilo, Inc.
4220 Edison Lakes Parkway
Miskawaka, Indiana 46545,
Phone (574) 271—4612,
in November 11, 2010, and is for their use only.

This is not a boundary survey. An ALTA/ACSM Land Title Survey for this parcel was prepared by DEL—TEC Surveying & Engineers on 10/3/01, job #6897. All right—of—way and property lines shown based upon the resolution from the above mentioned ALTA Survey.

Basis of Elevation is an assumed elevation on a square cut set in a light pole base near the west property line as depicted.

The site shown hereon does lie within a special flood hazard zone according to 260107 0010 B of the flood insurance rate map of City of Kentwood dated November 18, 1981 and noted as Zone C (area of minimal flooding) to the best of my knowledge and belief.

UTILITY NOTES

Locations of existing underground utilities shown on this drawing are based on evidence of above ground features, locations marked in the field by others or based on record information provided by the utility company. No excavation should occur without notification of appropriate agencies and utility companies. For locates call 1—800—482—7171.

Comments from "UTILITY COMPANY" have not been received.

"MISS DIG" ticket number B03090644 called in November 5, 2010 at 1 pm.

SANITARY SEWER: City of Kentwood

STORM SEWER: City of Kentwood WATER: City of Grand Rapids

GAS: Michcon Gas

PHONE: AT&T

ELECTRIC: Consumers Power — Electric

CABLE: Comcast

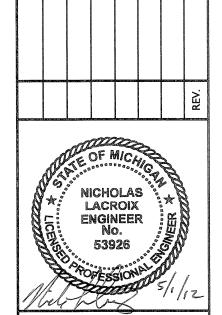
TRAFFIC AND LIGHTING: City of Grand Rapids

Zoning Information

This property is located entirely within a C-2 (Community Commercial district) Zone, per Zoning Ordinanace, City of Kentwood, Michigan

Front Yard Setback: 35 feet Side Yard Setback: No requirement Rear Yard Setback: 30 feet.

Maximum height permitted for buildings: 35 feet



WIGHTMANTETRIE

USULTING ENGINEERS & LAND SURVEYO

1) South Bend, IN 46601 p. 574.232.4388 f. 57

OGRAND, INC.

KENTWOOD,

GER KING

BUR

BR 20 EDISON LAKES PA TOF

DESIGNED BY:
M. CURRIER

REVIEWED BY: N. LaCROIX

M. CURRIER

5/1/12 JOB NUMBER: 2010-5068

> E: | "=30'

GENERAL NOTES

1. A PRE-CONSTRUCTION MEETING BETWEEN THE DEVELOPER, THE DEVELOPER'S CONTRACTOR, AND THE APPROPRIATE COUNTY AND/OR CITY PERSONNEL MUST BE SCHEDULED PRIOR TO ANY WORK BEING PERFORMED ON THE SITE.

2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.

3. CONTRACTOR SHALL RETAIN A LICENSED LAND SURVEYOR TO ESTABLISH GRADES AND LOCATE BUILDINGS.

4. FOR PROTECTION OF UNDERGROUND UTILITIES THE CONTRACTOR SHALL CALL "MISS DIG". AT 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" SYSTEM. THE CONTRACTOR SHALL CONDUCT OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

5. THE CONTRACTOR SHALL INSTALL A TEMPORARY PEDESTRIAN SECURITY FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS

6. ALL CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH STATE AND LOCAL ORDINANCES. REGULATORY SIGNAGE AS NECESSARY FOR MAINTAINING SAFE TRAFFIC ON ADJACENT ROADWAYS SHALL BE PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT). THE CONTRACTOR IS RESPONSIBLE FOR PROPER TRAFFIC CONTROL AND WARNING SIGNING AND DEVICES FOR THE DURATION OF CONSTRUCTION ON ANY PUBLIC STREET. FAILURE TO DO SO WILL RESULT IN THE CITY PROVIDING THE NECESSARY EQUIPMENT AND CHARGING THE CONTRACTOR

7. WHEN WORKING WITHIN PUBLIC RIGHTS-OF-WAY, THE CONTRACTOR SHALL MAINTAIN FLASHING WARNING LIGHTS ON CONSTRUCTION SIGNS AND BARRICADES ON A MINIMUM WEEKLY BASIS, AND SHALL PROMPTLY RESPOND TO PROBLEMS WITH THESE AS DIRECTED, (I.E. FALLEN SIGNS, ADDITIONAL SIGNS, ETC.)

8. ALL SITE IMPROVEMENTS ON-SITE OR OFF ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR MUST OBTAIN ALL PERMITS TO WORK IN RIGHTS-OF-WAY UNLESS OTHERWISE NOTED.

9. THE CONTRACTOR SHALL PROMPTLY RE-GRADE AND RE-VEGETATE ERODED AREAS, AND CLEAN UP SEDIMENTATION RESULTING FROM CONSTRUCTION.

10. THE CONTRACTOR SHALL UTILIZE AND MAINTAIN (AT ALL TIMES) TEMPORARY EROSION AND SEDIMENTATION CONTROL FEATURES SO AS TO PREVENT ERODED SOILS FROM ENTERING STORM WATER STRUCTURES, PIPES, AND RETENTION PONDS. SEDIMENTATION SHALL BE REMOVED FROM THESE AREAS PRIOR TO PROJECT COMPLETION.

11. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.

12. DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.

13. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.

14. THERE ARE NO SIGNIFICANT IMPACTS TO OFFSITE WATER SHED PATTERNS.

15. THE ENTERING AND EXITING OF EQUIPMENT AND HAULING TRAFFIC FROM THE WORK SITE SHALL BE DONE IN A SAFE MANNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EQUIPMENT OPERATORS AND HAUL TRUCK DRIVERS, ETC., USE CAUTION AND ACCEPTABLE SPEEDS DURING WORK.

PAVING AND GRADING NOTES

1. CURB TO BE PROVIDED WHERE SHOWN AND INTEGRAL WITH SIDEWALK AT PAVING EDGE.

2. ALL ELEVATIONS SHOWN ARE TO FINISHED PAVEMENT UNLESS OTHERWISE NOTED ON PLANS.

3. SLOPE GRADES UNIFORMLY BETWEEN ELEVATIONS SHOWN. SLOPE SIDEWALKS AWAY FROM BUILDING AT 1/4" PER FOOT ON ENTRY WALK.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE THROUGHOUT THE PROJECT. FINISHED PAVEMENT ELEVATION SHALL BE MARKED ON CURBING AS NEEDED. THE CONTRACTOR SHALL AVOID PONDING AT INVERTED CROWNED PAVEMENT.

5. EXPANSION JOINTS IN CONCRETE PAVEMENT AND SIDEWALKS SHALL BE 1/2" ASPHALT IMPREGNATED FULL DEPTH 40' O.C. MAXIMUM AND AT SIDEWALK INTERSECTIONS. CRACK CONTROL SCORING REQUIRED AT SIDEWALK WIDTH DIMENSION. EXTERIOR CONCRETE SHALL BE 3500 PSI, 4-6% AIR ENTRAINED, LIMESTONE AGGREGATE, WITH A BROOM FINISH AND CURING SEAL.

6. STANDARD BITUMINOUS PAVEMENT SHALL BE:

1-1/2" (165#/SYD) BITUMINOUS SURFACE TYPE 36A ON TACK COAT OVER 3" (330#/SYD) BITUMINOUS BASE TYPE 13A OVER

3" (330#/SYD) BITUMINOUS BASE TYPE 13A 6" COMPACTED AGGREGATE TYPE 22A OVER

6" COMPACTED SUBGRADE

RECYCLED BITUMINOUS PAVEMENT (RAP) SHALL BE ALLOWED IN BITUMINOUS PAVEMENT ACCORDING TO CURRENT MDOT SPECIFICATIONS.

7. CONCRETE PAVEMENT REQUIREMENTS:

6" CONCRETE SLAB W/ 6"x6"x #10 W.W.F. COLOR BLACK USING ADMIXTURE (CHROMIX C-2A CHARCOAL BY SCOFIELD CO. OR EQUAL)
6" COMPACTED AGGREGATE OVER
COMPACTED SUBGRADE

CONCRETE TO BE CAPABLE OF REACHING 3000 PSI IN 28 DAYS. SUBBASE TO BE ADEQUATELY DRAINED.

8. THE OWNER OR OWNER'S REPRESENTATIVE SHALL APPROVE EACH BITUMINOUS MIXTURE LIFT PRIOR TO THE PLACEMENT OF THE FOLLOWING

9. THE COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE MATERIAL IN 8" LOOSE LIFTS AND MECHANICALLY COMPACTING EACH LIFT TO THE SPECIFIED DENSITY OR AS DIRECTED BY THE SOILS ENGINEER. FIELD DENSITY TESTS SHALL BE PERFORMED ON EACH LIFT AS NECESSARY TO INSURE THAT ADEQUATE MOISTURE CONDITIONS AND COMPACTION ARE BEING ACHIEVED. ANY FAILED DENSITY TESTS SHALL BE RETAKEN AT THE SAME LOCATION, AFTER CORRECTIVE MEASURES, UNTIL PASSING RESULTS ARE OBTAINED.

10. SOILS EXPOSED IN THE BASE OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGES IN CONDITION SUCH AS FROM DISTURBANCE, RAIN AND FREEZING. SURFACE RUN-OFF WATER SHALL BE DRAINED AWAY FROM THE EXCAVATION AND NOT ALLOWED TO POND. IF POSSIBLE, ALL FOOTING CONCRETE SHOULD BE POURED THE SAME DAY THE EXCAVATION IS MADE. IF THIS IS NOT PRACTICAL, THE FOOTING EXCAVATIONS SHOULD BE ADEQUATELY PROTECTED.

11. REMOVE AND REPLACE WITH CONTROLLED FILL ANY AREAS THAT HAVE BEEN SOFTENED BY RAINS, FREEZING, CONSTRUCTION EQUIPMENT,

12. OVERLOT GRADING OR MASS FILLING SHALL BE DONE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS PERTAINING TO THE SITE. BACKFILL OR MASS FILL WITHIN BUILDING PAD AREAS SHALL BE IN ACCORDANCE WITH THE ARCHITECT'S REQUIREMENTS OR AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.

13. ALL FILL FOR THIS PROJECT MUST BE OBTAINED AND PLACED BY THE EXCAVATION CONTRACTOR. ALL REQUIRED FILL SHALL BE SELECTED EXCAVATED MATERIAL FROM THE SITE APPROVED BY THE ENGINEER, OR INDOT STRUCTURAL BACKFILL MATERIAL. EXCESS FILL SHALL BE REMOVED FROM SITE BY THE EXCAVATION CONTRACTOR AS DIRECTED BY THE OWNER AFTER SUBSTANTIAL COMPLETION. NOTE: NO BORROW OR SOIL REMOVAL ARRANGEMENTS HAVE BEEN PREARRANGED BY THE OWNER, AND IT SHALL BE THE RESPONSIBILITY OF THE EXCAVATION CONTRACTOR TO COORDINATE WITH THE OWNER. ENCOUNTERED TOPSOIL MATERIALS SHALL BE STOCKPILED SEPARATELY FOR REUSE AT AREAS TO SUPPORT VEGETATION. NO EARTH MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO RECEIVING PERMISSION FROM THE OWNER/ENGINEER.

14. ALL GRANULAR FILL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR (ASTM D1557) DENSITY. ALL SUBGRADE AND SUBBASE MATERIALS SHALL BE COMPACTED TO 98% MODIFIED PROCTOR (ASTM D1557) DENSITY BEFORE PARKING LOT AND DRIVEWAY ASPHALT PLACEMENT.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCTOR TESTING AND IN-PLACE DENSITY TESTING OF COMPACTED AGGREGATE SUBBASE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER. NO PAVEMENT MATERIAL SHALL BE PLACED ON COMPACTED AGGREGATE PRIOR TO THE GEOTECHNICAL ENGINEER'S APPROVAL OF SUBBASE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK REQUIRED TO REACH AN ACCEPTABLE MOISTURE CONTENT AT ANY TIME PRIOR TO PAVING (I.E. WETTING OR AERATING OF SUBBASE) AS PER INDOT SPECIFICATIONS. THIS SHALL ALSO APPLY TO THE CONTROL OF MOISTURE CONTENT ON SUBGRADE AND COMPACTED FILL.

16. ALL TOPSOIL AND OTHER UNSUITABLE MATERIAL LOCATED BENEATH THE PROPOSED PAVEMENT AND BUILDING AREA SHALL BE REMOVED. ALL TOPSOIL REMOVED MAY BE STOCKPILED AND REUSED AS TOPSOIL SURFACE — 6". THE SURFACE SOIL MATERIALS IN THE FLOOR SLAB AND PAVEMENT AREAS OF THE SITE SHALL BE STRIPPED AND REMOVED FROM THE CONSTRUCTION AREAS. THE EXPOSED SUBGRADE SHALL BE VISUALLY EXAMINED AND PROOF ROLLED WITH A MEDIUM WEIGHT VIBRATORY ROLLER. ANY UNSUITABLE MATERIALS (I.E., ACCUMULATIONS OF FROZEN SOIL, TOPSOIL, NON—SOIL FILL, SOFT OR LOOSE MATERIALS, ETC.) THUS EXPOSED SHOULD BE REMOVED AND REPLACED WITH A WELL COMPACTED, STRUCTURAL BACKFILL AS DEFINED BY INDOT.

17. SUBGRADE FOR ALL PAVEMENT SHALL BE PROOF—ROLLED PRIOR TO PAVING. ANY ENCOUNTERED "PUMPING" AREAS SHALL BE UNDERCUT AND BACKFILLED WITH STRUCTURAL BACKFILL AT THE NEAT LINE LIMITS AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING PONDING OF STORM WATER ON SUBGRADE AND SUBBASE.

18. CONCRETE TESTING — CONTRACTOR SHALL EMPLOY AN INDEPENDENT TESTING ENGINEER TO VERIFY THAT THE SLUMP & AIR ENTRAINMENT MEET CURRENT & APPLICABLE INDOT STANDARDS. CONTRACTOR TO PROVIDE (3) CYLINDER SAMPLES FROM EACH DAYS' POUR, OR FOR EACH 50 C.Y. OF CONCRETE POURED.

SITE PLAN NOTES

1. ALL SITE IMPROVEMENTS ARE DIMENSIONED TO THE BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. RADII ARE MEASURED TO THE BACK OF CURB UNLESS OTHERWISE NOTED.

2. HEIGHT, STYLE AND DESIGN OF BUILDING FACADE AND ELEVATIONS WILL BE AS PER THE ARCHITECTURAL PLANS.

3. TEMPORARY PROJECT IDENTIFICATION SIGNS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.

4. ALL SITE SIGNAGE SHALL BE AS SHOWN, OR AT THE OWNER'S DIRECTION.

5. INTERIOR TRAFFIC CIRCULATION SIGNS SHOWN FOR LOCATION ONLY - OWNER TO SELECT MATERIAL AND DESIGN.

6. PAVEMENT MARKINGS FOR PARKING AND RESTRICTING AREAS SHALL BE A 30 MIL APPLICATION OF CHLORINATED RUBBER TRAFFIC MARKING PAINT, AND OF SUFFICIENT APPEARANCE AS APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE. INSUFFICIENT PAVEMENT MARKINGS SHALL BE REDONE AS DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE. ALL LINES SHALL BE 4" WIDE, STRAIGHT, EVENLY SPACED, AND UNIFORM IN LENGTH.

7. ALL HANDICAPPED SIGNAGE SHALL COMPLY WITH THE STATE OF MICHIGAN'S BARRIER FREE DESIGN REQUIREMENTS AND THE AMERICANS WITH DISABILITIES ACT.

8. IN ADDITION TO PAVEMENT MARKINGS FOR PARKING SPACES, LANE ARROW AND "ONLY" MARKINGS FOR "RIGHT-IN, RIGHT-OUT" AND INTERIOR TRAFFIC FLOW, ETC. SHALL BE INCIDENTAL TO THE PROJECT AND SHALL BE PLACED IN ACCORDANCE WITH MOOT STANDARD SPECIFICATIONS.

DEMOLITION NOTES

1. ALL LANDSCAPE SHRUBS AND TREES SHALL BE REMOVED UNLESS OTHERWISE NOTED ON THE PLAN, OR AS DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE.

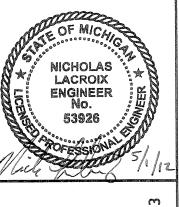
2. REMOVE EXISTING CURB, CONCRETE PAVEMENT, ASPHALT PAVEMENT, EXISTING UTILITIES, STRUCTURES, ETC. AS REQUIRED, AS SHOWN ON PLANS, OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.

3. REMOVE THE EXISTING GRAVEL BASE BELOW PAVED SURFACES AS REQUIRED FOR NEW CONSTRUCTION TO OBTAIN PROPOSED FINISHED GRADES AND TO ACCOMMODATE THE PROPOSED PAVEMENT SECTION.

4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND SMOOTH TRANSITION FROM MILLED AREAS TO PROPOSED IMPROVEMENTS.



- - DESCRIPTION BY



WIGHTMAN PETRIE
CONSULTING ENGINEERS & LAND SURVEYC

2 South Lafayette Blvd. South Bend, IN 46601 p: 574.232.4388 f: 5

BRAVOGRAND, INC.

MISHAWAKA, INDIANA

GENERAL NOTES

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じ Z Y

M. CURRIER

REVIEWED BY:

N. LaCROIX

DRAWN BY: M. CURRIER

5/1/12 JOB NUMBER: 2010-5068

DATE:

10110 X 02200 X 02200 X 10110 X 10200 X

NONE

UTILITIES

ELECTRIC CONSUMERS ENERGY - ELECTRIC

4000 CLAY AVE SW GRAND RAPIDS, MI 49508 STEVE COLLINS (616) 530-4244

MICHCON GAS

444 WEALTHY STREET GRAND RAPIDS, MI 49503 ANDRE DIAZ

(616) 632-2631 TELEPHONE AT & T

955 36TH STREET SE ROOM 5 GRAND RAPIDS, MI 49508

CHARLES GUY (616) 246-7233

TELEVISION

COMCAST 3500 PATTERSON AVE. JIM ZAWACKI

(616) 977-2229 HIGHWAY KENT CO. ROAD COMMISSION

DEPARTMENT 1500 SCRIBNER AVE. NW GRAND RAPIDS, MI 49504

> ENGINEERING (616) 242-6910

TRAFFIC 509 WEALTHY SW

CITY OF GRAND RAPIDS -TRAFFIC & LIGHTING

DEPARTMENT

(616) 456-3065

DEPARTMENT

CITY OF GRAND RAPIDS -WATER 1900 OAK INDUSTRIAL DR NE

KENTWOOD ENGINEERING DEPARTMENT

GRAND RAPIDS, MI 49505

GRAND RAPIDS, MI 49503

WAYNE JERNBERG (616) 456-4055

SANITARY

CITY OF GRAND RAPIDS - SEWER DEPARTMENT

1900 OAK INDUSTRIAL DR NE GRAND RAPIDS, MI 49505

CHARLES SCHROEDER

(616) 456-3138

LOCATE

KENTWOOD CITY HALL 4900 BRETON RD. SE P.O. BOX 8848

KENTWOOD, MICHIGAN 49518 STEVE KEPLEY

(616) 698-9610 "MISS DIG" UTILITY Dial 811

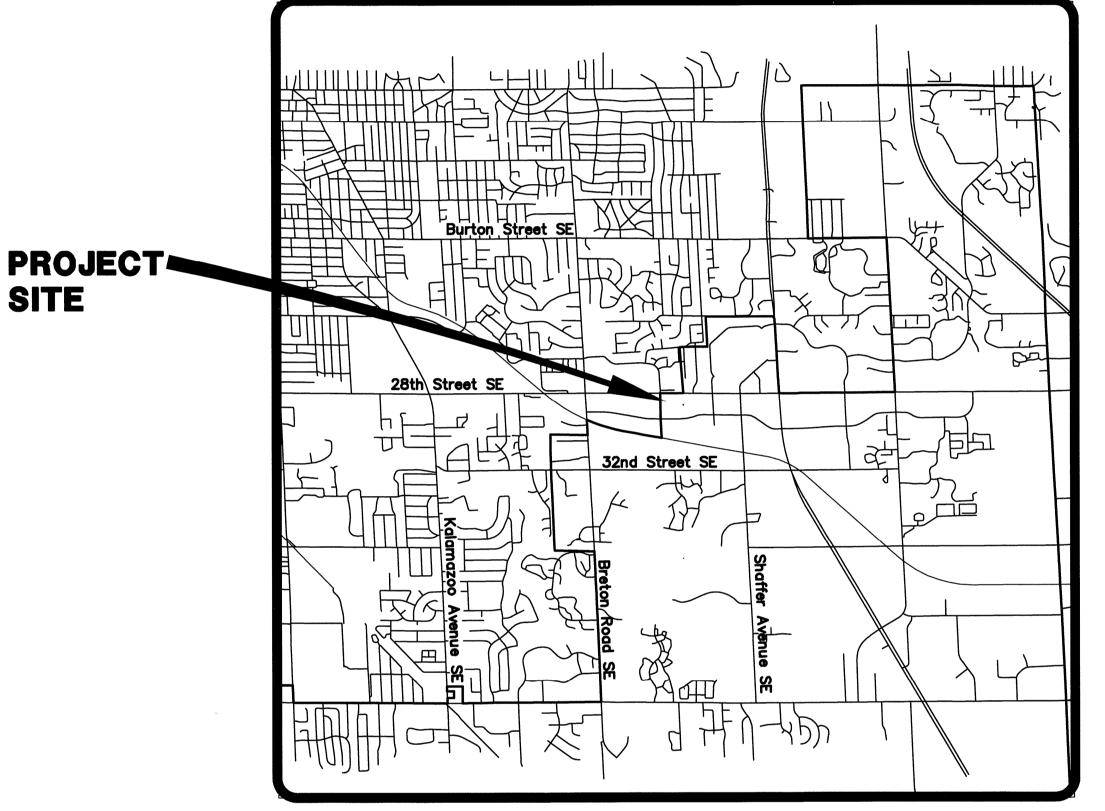
KENTWOOD BURGER KING

Store #1340

PROJECT DESCRIPTION

Site plan improvements for a fast food restaurant.

CITY OF KENTWOOD



LOCATION MAP

1" = 1000'PART OF KENTWOOD, MICHIGAN SECTION 15, TOWNSHIP 06 NORTH, RANGE 11 WEST, CITY OF KENTWOOD, KENT COUNTY

THE PROPOSED IMPROVEMENTS ARE DEPICTED IN ZONE C ON FEMA MAP 260107-0010B DATED 11/18/1981

INDEX OF REVISIONS

REV.	DESCRIPTION	BY	DATE	SHEET NO.(S)

INDEX OF PLANS

COVER SHEET X-1713-01

TOPOGRAPHIC SURVEY/DEMO SHEET

GENERAL NOTES

SITE DIMENSIONAL PLAN SITE GRADING PLAN LIGHTING PLAN SHEET

MISC. DETAIL SHEET BURGER KING STANDARD DETAILS SHEET

SIGN, DRIVE THRU DETAILS

ALTERNATE - RE-SURFACE SOUTH ACCESS DRIVE

X-1713-11 LANSCAPE PLAN SHEET

EROSION CONTROL PLAN SHEET X-1713-12

OWNER/DEVELOPER

4220 Edison Lakes Parkway Mishawaka, IN 46545

SURVEYOR/ENGINEER

WIGHTMAN PETRIE 412 S Lafayettte Blvd. South Bend, IN 46601

IMPORTANT UNDERGROUND UTILITY NOTES

EXISTING UNDERGROUND UTILITIES SHOWN IN THESE PLANS ARE BASED ON EVIDENCE OF ABOVE GROUND FEATURES, ON LOCATIONS MARKED IN THE FIELD BY OTHERS, OR ON RECORD INFORMATION PROVIDED BY UTILITY COMPANIES. PIPE INVERT ELEVATIONS WERE MEASURED WITHOUT ENTERING CONFINED SPACES. NO EXCAVATION SHOULD OCCUR WITHOUT NOTIFICATION OF APPROPRIATE AGENCIES AND UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF PIPE INVERT ELEVATIONS AND UTILITY LOCATIONS, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS ARE DISCOVERED.

GENERAL NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES, CONTRACTOR SHALL CALL 1-800-482-7171 OR "811" A MINIMUM OF THREE WORKING DAYS PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM.

IF ANY ERRORS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN

THE CONTRACTOR SHALL CONFORM TO THE CURRENT STANDARDS AND

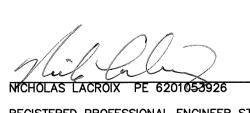
SPECIFICATIONS OF THE LOCAL GOVERNMENT, MICHIGAN DEPARTMENT OF

ENVIRONMENTAL QUALITY, AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

THE CONTRACTORS SHALL MAKE WHATEVER SOIL BORINGS NECESSARY TO FULLY ACQUAINT THEMSELVES WITH CONDITIONS AS THEY EXIST SO THAT THEY MAY FULLY UNDERSTAND THE CONDITIONS WHICH MAY AFFECT THE COST OF THE WORK. FAILURE TO MAKE SUCH BORINGS OR ANY BORINGS MADE WHICH DO NOT PROVIDE A COMPLETE UNDERSTANDING OF THE CONDITIONS ENCOUNTERED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR CARRYING OUT ALL THE WORK TO COMPLETION AS SHOWN ON THE PLANS, OR AS SPECIFIED, AT THE PRICE SPECIFIED TO BE PAID FOR THE WORK. WHERE THE RESULTS OF ANY TEST BORINGS ARE SHOWN ON THE PLANS, THE INFORMATION IS NOT GUARANTEED AND THE CONTRACTOR MUST SATISFY HIMSELF AS TO THE CHARACTER OF MATERIALS THAT MAY BE ENCOUNTERED.

THE CONTRACTOR SHALL FOLLOW THE OSHA REGULATIONS 29 C.F.R. 1926 SUBPART P, FOR TRENCH SAFETY SYSTEMS. THE COST FOR TRENCH SAFETY SYSTEMS SHALL BE MERGED INTO THE PAY ITEM OF THE PRINCIPAL WORK WITH WHICH THE SAFETY SYSTEMS ARE ASSOCIATED. THE CONTRACTOR SHALL OTHERWISE BE RESPONSIBLE FOR SAFETY IN REGARD TO THE PROJECT'S





REGISTERED PROFESSIONAL ENGINEER STATE OF MICHIGAN

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DESIGNED BY:

REVIEWED BY:

M. CURRIER

N. LaCROIX

M. CURRIER

5/1/12

JOB NUMBER: 2010-5068

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