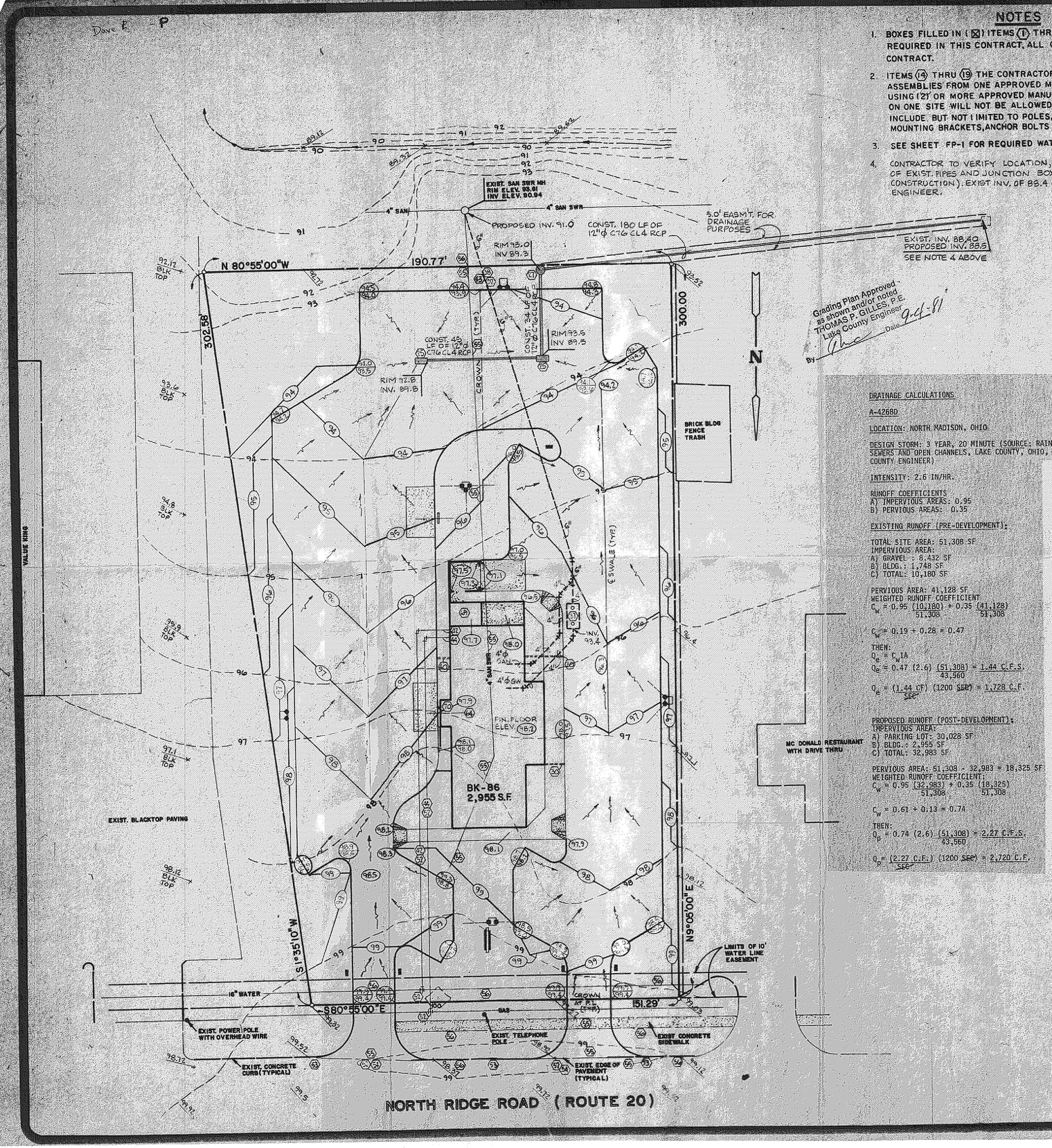


## NOTES

1. BOXES FILLED IN (☒) ITEMS (1) THRU (70) INDICATE ITEMS REQUIRED IN THIS CONTRACT, ALL OTHERS NOT IN THIS CONTRACT.
2. ITEMS (14) THRU (19) THE CONTRACTOR IS TO FURNISH LIGHTING ASSEMBLIES FROM ONE APPROVED MANUFACTURER ONLY. USING (2) OR MORE APPROVED MANUFACTURER'S ASSEMBLIES ON ONE SITE WILL NOT BE ALLOWED FIXTURES ASSEMBLIES INCLUDE BUT NOT LIMITED TO POLES, LIGHT FIXTURES, MOUNTING BRACKETS, ANCHOR BOLTS AND HARDWARE.
3. SEE SHEET FP-1 FOR REQUIRED WATER SERVICE SIZE.
4. CONTRACTOR TO VERIFY LOCATION, MATERIAL, INVERTS, SIZES OF EXIST. PIPES AND JUNCTION BOX, (PRIOR TO CONSTRUCTION). EXIST INV. OF 88.4 GIVEN BY CITY ENGINEER.

DRAINAGE CALCULATIONS

A-4268D

LOCATION: NORTH MADISON, OHIO

DESIGN STORM: 3 YEAR, 20 MINUTE (SOURCE: RAINFALL INTENSITY CURVES FOR STORM SEWERS AND OPEN CHANNELS, LAKE COUNTY, OHIO, SUPPLIED BY TOM M. COFFMAN, LAKE COUNTY ENGINEER)

INTENSITY: 2.6 IN/HR.

RUNOFF COEFFICIENTS
A) IMPERVIOUS AREAS: 0.95
B) PERVIOUS AREAS: 0.35

EXISTING RUNOFF (PRE-DEVELOPMENT):

TOTAL SITE AREA: 51,308 SF
IMPERVIOUS AREA:
A) GRAVEL : 8,432 SF
B) BLDG.: 1,748 SF
C) TOTAL: 10,180 SF

PERVIOUS AREA: 41,128 SF
WEIGHTED RUNOFF COEFFICIENT

$$C_w = 0.95\ \frac{(10,180)}{51,308} + 0.35\ \frac{(41,128)}{51,308}$$

$$C_w = 0.19 + 0.28 = 0.47$$

THEN:

$$Q_e = C_w IA$$

$$Q_e = 0.47\ (2.6)\ \frac{(51,308)}{43,560} = 1.44\ \text{C.F.S.}$$

$$Q_e = (1.44\ \text{CF})\ \frac{(1200\ \text{SEC})}{\text{SEC}} = 1,728\ \text{C.F.}$$

PROPOSED RUNOFF (POST-DEVELOPMENT):
IMPERVIOUS AREA:
A) PARKING LOT: 30,028 SF
B) BLDG.: 2,955 SF
C) TOTAL: 32,983 SF

PERVIOUS AREA: 51,308 - 32,983 = 18,325 SF
WEIGHTED RUNOFF COEFFICIENT:

$$C_w = 0.95\ \frac{(32,983)}{51,308} + 0.35\ \frac{(18,325)}{51,308}$$

$$C_w = 0.61 + 0.13 = 0.74$$

THEN:

$$Q_p = 0.74\ (2.6)\ \frac{(51,308)}{43,560} = 2.27\ \text{C.F.S.}$$

$$Q_p = (2.27\ \text{C.F.})\ \frac{(1200\ \text{SEC})}{\text{SEC}} = 2,720\ \text{C.F.}$$

## SITE REFERENCE NOTES

- ☐ (1) 6" CONCRETE CURB.
- ☐ (2) 2'-0" CONCRETE CURB & GUTTER.
- ☐ (3) STANDARD CURB NOSING.
- ☐ (4) 9" BARRIER CURB.
- ☐ (5) 6" TO 9" CURB TRANSITION.
- ☐ (6) PRECAST CONCRETE WHEELSTOP.
- ☐ (7) BRICK WALK DETAILS.
- ☐ (8) ALTERNATE WALK DETAILS.
- ☐ (9) CONCRETE RAMP EXTERNAL.
- ☐ (10) CONCRETE RAMP INTERNAL.
- ☐ (11) HANDICAP PARKING STALL.
- ☐ (12) TYPICAL CURBED PARKING STALL.
- ☐ (13) BRICK TRASH ENCLOSURE.
- ☐ (14) SINGLE FIXTURE ASSEMBLY.
- ☐ (15) DOUBLE - 90° FIXTURE ASSEMBLY.
- ☐ (16) DOUBLE - 0° FIXTURE ASSEMBLY.
- ☐ (17) TRIPLE - 90° FIXTURE ASSEMBLY.
- ☐ (18) QUAD - 90° FIXTURE ASSEMBLY.
- ☐ (19) DOUBLE - 180° FIXTURE ASSEMBLY.
- ☐ (20) PAINTED TRAFFIC ARROWS.
- ☐ (21) RETAINING WALL, TYPE A.
- ☐ (22) RETAINING WALL, TYPE B.
- ☐ (23) RETAINING WALL, TYPE C.
- ☐ (24) TYPICAL GUARD POST.
- ☒ (25) CATCH BASIN & ALTERNATE.
- ☐ (26) TRENCH DRAIN
- ☒ (27) MANHOLE, PRECAST.
- ☐ (28) SOAKAGE PIT.
- ☐ (29) ROOF DRAIN BUBBLER.
- ☒ (30) ROOF DRAIN FLUME.
- ☐ (31) DECORATIVE MASONRY WALL
- ☐ (32) HANDRAIL DETAIL.
- ☐ (33) TRASH ENCLOSURE DRAIN DETAIL.
- ☐ (34) PLANTER DETAIL (POOR SOILS).
- ☐ (35) SEPTIC TANK DETAIL.
- ☐ (36) SEPTIC / DOSING TANK DETAIL
- ☐ (37) GREASE INTERCEPTOR DETAIL.
- ☐ (38) SANITARY CLEAN-OUT.
- ☐ (39) DRAINFIELD DETAIL.
- ☒ (40) ROOF DRAIN LEADERS EXTENDED THRU CURB.
- ☐ (41) 1 1/2" P.V.C. IRRIGATION SYSTEM STUB-OUT WITH VALVE & VALVE BOX.
- ☒ (42) WATER SERVICE WITH 2" METER MIN. (SEE NOTE 3).
- ☒ (43) SEWER SERVICE.
- ☒ (44) GAS SERVICE.
- ☐ (45) 4" WIDE PAINTED STRIPES.
- ☐ (46) 4" WIDE PAINTED STRIPES 1.5' O.C. AT 45°.
- ☐ (47) 8" WIDE PAINTED STRIPES.
- ☐ (48) FRONT ENTRY WITH FRONT DOOR.
- ☐ (49) FRONT ENTRY WITH SIDE DOOR.
- ☐ (50) SIDE VESTIBULE WITH FRONT DOOR.
- ☐ (51) SIDE VESTIBULE WITH BACK DOOR.
- ☒ (52) TO BE CONSTRUCTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND LOCAL STANDARDS.
- ☒ (53) REPLACE OR RESTORE CURBING TO MATCH EXISTING CURBING AS REQUIRED
- ☒ (54) NEW PAVING TO BE COMPATIBLE WITH EXISTING GRADES.
- ☒ (55) EXISTING TO BE REMOVED AND/OR RELOCATED.
- ☒ (56) EXISTING TO REMAIN.
- ☐ (57) 1/2" G.I.P. WATER CONNECTION FROM MAIN WATER SERVICE TO HOSE BIBB AT TRASH ENCLOSURE. SYSTEM TO BE INSULATED AND FROST PROOF THRU-OUT WHERE REQUIRED
- ☐ (58) EDGE OF PAVEMENT, NO CURB.
- ☐ (59) STANDARD TRAFFIC STOP SIGN WITH 18" STOP BAR ON PAVEMENT.
- ☐ (60) 4" PVC (SCHEDULE 40 MAT'L) SLEEVE (UNDER PAVEMENT W/REMOVABLE CAPS.)
- ☐ (61) TRANSFORMER PAD AS REQUIRED BY POWER COMPANY.
- ☐ (62) DRIVE-THRU CANOPY.
- ☐ (63) ORDER STATION CANOPY (ILLUMINATED)
- ☒ (64) CENTERLINE OF DRIVE-THRU WINDOW
- ☐ (65) CONCRETE DRIVE-THRU APRON SEE GENERAL CONST. NOTE 13 (ON INDEX SHT. C-1)
- ☐ (66) 6' HIGH REDWOOD STOCKADE FENCE.
- ☐ (67) LANDSCAPE AREA.
- ☐ (68) CONTRACTOR TO CONNECT TO EXISTING UTILITIES
- ☒ (69) W.I.B. SEE ARCH PLANS.
- ☒ (70) GUARD POST AT D/T WINDOW.

## LEGEND

- (1) SITE REFERENCE NOTES
- [4] LANDSCAPE REFERENCE NOTES
- (384) PROPOSED ELEVATION CONTOUR
- 100 EXISTING CONTOUR
- 100.0 EXISTING SPOT ELEVATION
- PROPOSED YARD LIGHT
- PROPOSED CONCRETE CURB
- EXISTING CURB
- BUILDING TIE LOCATION
- SPRINKLER SYSTEM SLEEVE
- 30 EXISTING STORM SEWER & SIZE
- 12" CMP PROPOSED STORM SEWER
- SS EXISTING SANITARY SEWER & SIZE
- M PROPOSED SANITARY SEWER
- W EXISTING WATER MAIN & SIZE
- W PROPOSED WATER CONNECTION
- G EXISTING GAS LINE & SIZE
- G PROPOSED GAS CONNECTION

## ON SITE SIGNS

- ☐ (A) BURGER KING LOGO (ILLUMINATED)
- ☐ (B) CAUTION CLEARANCE 8'-6" (NON-ILLUMINATED).
- ☐ (C) ORDER STATION (ILLUMINATED)
- ☐ (D) SIGN CABINET (ILLUMINATED)
- ☐ D-1 BURGER KING LOGO
- ☐ D-2 DRIVE THRU
- ☐ D-3 DIRECTIONAL ARROW
- ☐ D-4 THANK YOU
- ☐ D-5 ENTER ONLY
- ☐ D-6 EXIT ONLY
- ☐ D-7 NO EXIT
- ☐ D-8 ONE WAY
- ☐ D-9 RIGHT TURN ONLY
- ☐ D-10 DO NOT ENTER
- ☐ D-11 MESSAGE/SYMBOL BOTH SIDES

GRAPHIC SCALE
20 10 0 20 40
1 IN = 20 FT.

| NO. | DATE | REVISIONS | DRAWN BY | CHECKED BY | APPROVED |
|---|---|---|---|---|---|
| 1 | 8/18/81 | RE-SCALED & REF. OF LOT ADDED & SIGN, STEPS, ETC. | | | |
| 2 | | ADD EXIST. JUNCTION BOX, REMOVED LOTS, & METER | | | |
| | | ADDED NOTE 4 | | | |

THIS DRAWING IS THE PROPERTY OF THE ENGINEER. REPRODUCED COPIES OR USES IN ANY MANNER WITHOUT WRITTEN PERMISSION, PROHIBITED.

RESTAURANT FOR:
BURGER KING CORPORATION

JACK LEE MEYER
PROFESSIONAL ENGINEER
P.O. BOX 520783
GENERAL MAIL FACILITY
MIAMI, FL. 33152
PHONE 305 596 7978

SCALE: 1" = 20'

56 CAR PARKING

A-4268D

CIVIL ENGINEERING PLANS
NORTH MADISON, OHIO
RIDGE ROAD AND HUBBARD

GRADING PLAN

C-4