PLANNING COMMISSION AGENDA

Planning Commission Meeting
6:00 PM Tuesday, April 21, 2020

South Lebanon Municipal Building
10 N. High Street
South Lebanon, Ohio 45065

	Agenda Item
1.	**Call to Order**
2.	**Pledge of Allegiance**
3.	**Roll Call**
4.	**Open Forum**
5.	**Review and Approval of Minutes** A. None
6.	**Public Hearing –** None
7.	**Old Business** A. None
8.	**New Business** A. Case -20-07P: Acceptance and Dedication of Public Improvements for Riverside Phase Three Subdivision B. Case 20-08P – Application for Site Plan-for McDonalds at Rivers Crossing West Section 2
9.	**Communications**
10.	**Adjournment**

Members of the public may address the Planning Commission during the Open Forum segment of the agenda and shall be limited to five minutes each. After the speaker concludes remarks, the Planning Commission may comment or ask questions at that time. The Chairperson may at his or her discretion restrict duplicate testimony on a particular subject.

VILLAGE OF SOUTH LEBANON
MEMORANDUM

TO: Planning Commission

FROM: Jerry Haddix, Village Administrator

RE: Case 20-07P, Acceptance and Dedication of Public Improvements for Riverside Phase Three Subdivision

DATE: April 16, 2020

One of the items on the agenda for the August 21st meeting is a request of the Planning Commission to find that the public improvements for the Riverside Phase Three subdivision conform to South Lebanon's standards for construction of public improvements.

Background

On January 15t, 2019, the Record Plat for Riverside Phase Three subdivision was recorded in the Warren County's Recorder's Office. This plat included thirty -four (34) single family lots in which all have been or in the process of houses constructed on them.

Code Analysis

Pursuant to Sec 15.20.7(6) Requirements for the Construction of Improvements, the Village, through formal action by the Village Council, shall accept public improvements made by a developer which meet the following conditions:

a. Said public improvements have been made in accordance with the requirements of these Regulations; and
b. The design standards of these Regulations have been adhered to; and
c. Installation of said public improvements has been completed according to the requirements of the Village of South Lebanon; and
d. All final inspections required by these Regulations have been carried out by the Village and said public improvements were found to be acceptable by the Village Administrator upon the advice (if needed and requested) by an engineer acting in the service of the Village; and
e. Accurate "as built" construction plans have been submitted by the subdivider to the Village and release from the posted Performance Bond has been granted; and
f. The Planning Commission has found the subdivider to be in conformance with these Regulations.

Zoning Process

Before Council may accept public improvements for a subdivision, the Planning Commission shall issue a finding that the developer is in conformance with the aforementioned regulations a – e.

Staff Review
Choice One Engineering, the Project Engineer, has inspected the public improvements by Lebanon Mason LLC ("Developer"). The Developer has completed all of the public improvements satisfactorily per the attached letter from Choice One Engineering.

Recommendation
Staff recommends that the Planning Commission issue a finding to Council that they have found the public improvements in Riverside Phase Three Subdivision, as attached, be in conformance with the regulations listed in Sec 15.20.7(6) items a – e.

Attachments
Choice One Inspection Letter
Copy of Riverside Phase Three recorded plat

Choice One Engineering

Date
February 13, 2020

Attention
Jerry Haddix
Village Administrator

Address
99 N. High Street
South Lebanon, OH 45065

Subject
Riverside Subdivision Phase 3
Acceptance Letter
Village of South Lebanon, OH

Dear Mr. Haddix:

After a final punch list walkthrough on February 13, 2020, the public infrastructure and rights-of-way for the Riverside Phase 3 Subdivision have been deemed acceptable for dedication.

- The contractor has satisfactorily completed all punch list items pursuant to Sect. 15.20.7(6)(a-d).
- The acceptance and dedication of the public improvements created by this subdivision include the following streets. See attached plat for exact locations:
    - Kelly Court and a portion of Trovillo Drive.

If you have any questions, please contact our office.

Sincerely,

Nicholas J. Selhorst

Nicholas J. Selhorst, P.E.
Choice One Engineering

West Central Ohio
440 E. Hoewisher Rd.
Sidney, OH 45365
937.497.0200 Phone

S. Ohio/N. Kentucky
203 W. Loveland Ave.
Loveland, OH 45140
513.239.8554 Phone

Eastern Indiana
607 N. Meridian St.
Portland, IN 47371
260.766.2500 Phone

WWW.CHOICEONEENGINEERING.COM

RIVERSIDE PHASE THREE

SECTION 1 & 7, TOWN 4, RANGE 3
BETWEEN THE MIAMIS, UNION TOWNSHIP
VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO
DECEMBER, 2018

DEED REFERENCE

SITUATED IN SECTION 1 & 7, TOWN 4, RANGE 3, UNION TOWNSHIP, VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OHIO AND BEING A SUBDIVISION CONTAINING 18.2368 ACRES, (OF WHICH 6.3640 ACRES ARE IN SECTION 7 AND 11.8728 ACRES ARE IN SECTION 1) AND BEING 17.2386 ACRES OF 47.972 (DEED) ACRES AS CONVEYED TO LEBANON MASON RESIDENTIAL, LLC AS RECORDED IN DOCUMENT NO. 2016-033236, WARREN COUNTY, OHIO AND 0.9982 ACRES OF 22.971 (DEED - TRACT 2) ACRES AS CONVEYED TO LEBANON MASON, LLC AS RECORDED IN OFFICIAL RECORD 5856, PAGE 129, WARREN COUNTY, OHIO.

HOA REFERENCE

THE WITHIN SUBDIVISION IS SUBJECT TO THE DECLARATIONS OF COVENANTS, CONDITIONS, AND RESTRICTIONS AND RESERVATION OF EASEMENTS FOR RIVERSIDE SUBDIVISION WHICH IS RECORDED IN THE DEED OF RECORDS OF WARREN COUNTY, OHIO COMMENCING WITH DOCUMENT NUMBER 2018-006004, AND THE ARTICLES OF INCORPORATION AND CODE OF REGULATIONS FOR THE ASSOCIATION. SAID DECLARATION MAY BE AMENDED, SAID AMENDMENT(S) RECORDED IN THE DEED RECORDS OF WARREN COUNTY, OHIO.

DEDICATION

WE, THE UNDERSIGNED, BEING ALL THE OWNERS OF THE LANDS HEREIN PLATTED, DO HEREBY VOLUNTARILY CONSENT TO THE EXECUTION OF THE SAID PLAT AND DO DEDICATE THE STREETS, PARKS OR PUBLIC GROUNDS AS SHOWN HEREON TO THE PUBLIC USE FOREVER.

ANY "PUBLIC UTILITY EASEMENTS" AS SHOWN ON THIS PLAT ARE FOR THE PLACEMENT OF SIDEWALKS AND AND PUBLIC UTILITIES FOR THE MAINTENANCE AND REPAIR OF SAID UTILITIES. THIS EASEMENT AND ALL OTHER EASEMENTS SHOWN ON THIS PLAT, UNLESS DESIGNATED FOR A SPECIFIC PURPOSE, ARE FOR THE CONSTRUCTION, OPERATION, MAINTENANCE, REPAIR, REPLACEMENT OR REMOVAL OF WATER, SEWER, GAS, ELECTRIC, TELEPHONE, CABLE TELEVISION, OR OTHER UTILITY LINES OR SERVICES, STORMWATER DISPOSAL AND FOR THE EXPRESS PRIVILEGE OF CUTTING, TRIMMING OR REMOVING ANY AND ALL TREES OR OTHER OBSTRUCTIONS WITHIN SAID EASEMENT, OR IMMEDIATELY ADJACENT THERETO, TO THE FREE USE OF SAID EASEMENTS OR ADJACENT STREETS AND FOR PROVIDING INGRESS AND EGRESS TO THE PROPERTY FOR SAID PURPOSES AND ARE TO BE MAINTAINED AS SUCH FOREVER. NO BUILDINGS OR OTHER STRUCTURES MAY BE BUILT WITHIN SAID EASEMENTS, NOR MAY THE EASEMENT AREA BE PHYSICALLY ALTERED SO AS TO (1) REDUCE CLEARANCES OF EITHER OVERHEAD OR UNDERGROUND FACILITIES; (2) IMPAIR THE LAND SUPPORT OF SAID FACILITIES; (3) IMPAIR ABILITY TO MAINTAIN THE FACILITIES OR (4) CREATE A HAZARD.

THE ABOVE PUBLIC UTILITY EASEMENTS ARE FOR THE BENEFIT OF ALL PUBLIC UTILITY PROVIDERS INCLUDING, BUT NOT LIMITED TO DUKE ENERGY, AT&T, CHARTER COMMUNICATIONS, THE VILLAGE OF SOUTH LEBANON AND WARREN COUNTY.

ALL PERSONS INTERESTED IN THIS PLAT AS OWNERS HAVE UNITED IN ITS EXECUTION, SIGNED AND ACKNOWLEDGED IN THE PRESENCE OF:

OWNER: LEBANON MASON RESIDENTIAL LLC (47.972 ACRES)

_____
NAME:
_____
PRINTED NAME

STATE OF OHIO
COUNTY OF _____

BE REMEMBERED THAT ON THIS ____ DAY OF _____, 2018, BEFORE ME A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE PERSONALLY CAME LEBANON MASON RESIDENTIAL LLC, AS REPRESENTED BY _____, ACKNOWLEDGED THE SIGNING AND EXECUTION OF THE FOREGOING INSTRUMENT TO BE HIS VOLUNTARY ACT AND DEED. IN TESTIMONY WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL ON THE DAY AND YEAR AS WRITTEN ABOVE.

NOTARY PUBLIC: _____

MY COMMISSION EXPIRES: _____

OWNER: LEBANON MASON LLC (22.971 ACRES)

_____
NAME:
_____
PRINTED NAME

STATE OF OHIO
COUNTY OF _____

BE REMEMBERED THAT ON THIS ____ DAY OF _____, 2018, BEFORE ME A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE PERSONALLY CAME LEBANON MASON LLC, AS REPRESENTED BY _____, ACKNOWLEDGED THE SIGNING AND EXECUTION OF THE FOREGOING INSTRUMENT TO BE HIS VOLUNTARY ACT AND DEED. IN TESTIMONY WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL ON THE DAY AND YEAR AS WRITTEN ABOVE.

NOTARY PUBLIC: _____

MY COMMISSION EXPIRES: _____

LIEN HOLDER: WES BANCO BANK, INC.

_____
NAME:
_____
PRINTED NAME

STATE OF OHIO
COUNTY OF _____

BE REMEMBERED THAT ON THIS ____ DAY OF _____, 2018, BEFORE ME A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE PERSONALLY CAME WES BANCO BANK, INC., AS REPRESENTED BY _____, ACKNOWLEDGED THE SIGNING AND EXECUTION OF THE FOREGOING INSTRUMENT TO BE HIS VOLUNTARY ACT AND DEED. IN TESTIMONY WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARIAL SEAL ON THE DAY AND YEAR AS WRITTEN ABOVE.

NOTARY PUBLIC: _____

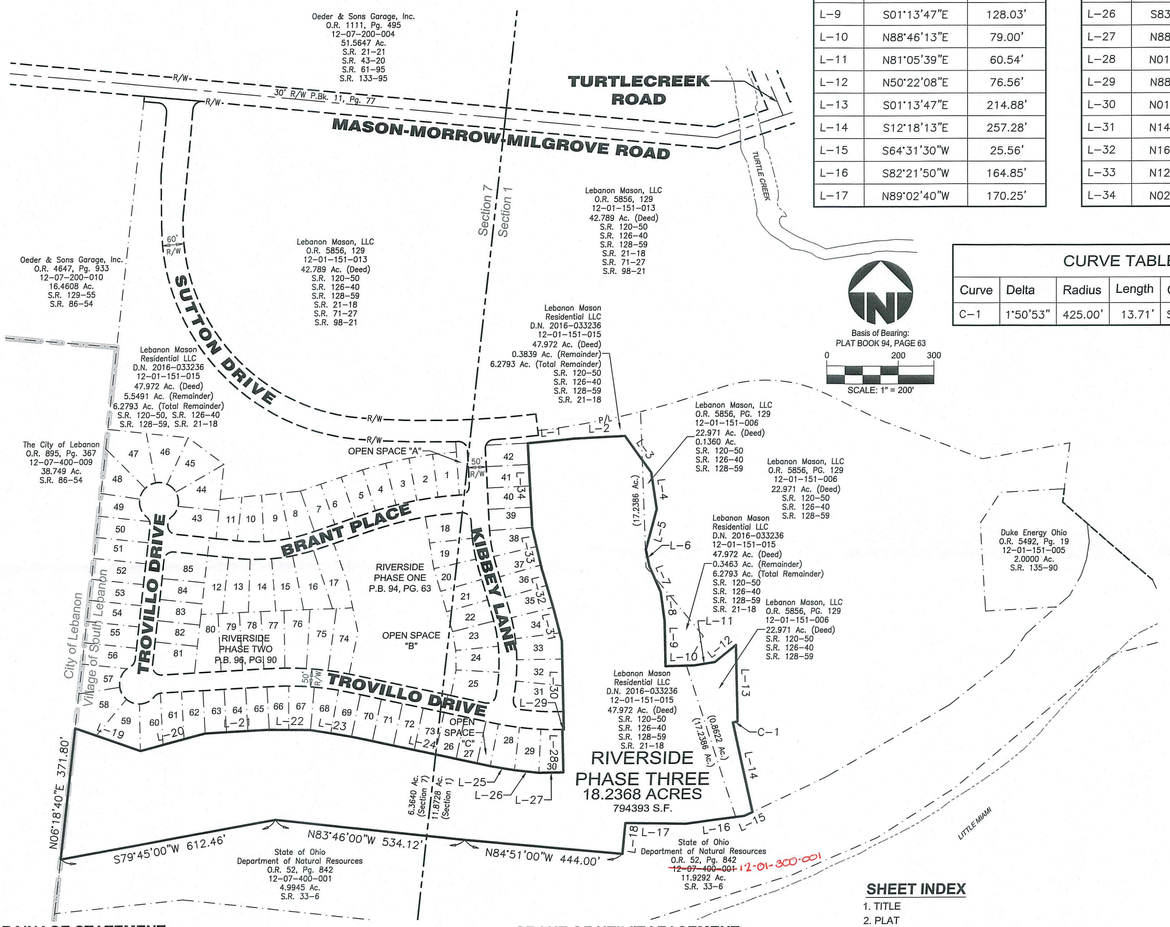
MY COMMISSION EXPIRES: _____

SURVEYORS CERTIFICATION

I HEREBY CERTIFY THAT THIS MAP IS A TRUE AND COMPLETE SURVEY MADE UNDER MY DIRECT SUPERVISION AND THAT ALL MONUMENTS AND LOT CORNER PINS ARE SET AS SHOWN.

_____ DATE
BRIAN R. JOHNSON, P.S.
PROFESSIONAL SURVEYOR #8484
IN THE STATE OF OHIO

STATE OF OHIO · BRIAN R. JOHNSON · S-8484 · REGISTERED · PROFESSIONAL SURVEYOR



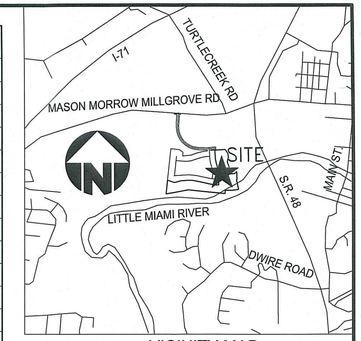
BOUNDARY LINE TABLE		
Line	Direction	Distance
L-1	N84°31'35"E	131.38'
L-2	N87°04'38"E	142.86'
L-3	S35°35'27"E	125.92'
L-4	S08°19'54"E	104.40'
L-5	S15°02'19"W	117.77'
L-6	S11°48'16"E	48.88'
L-7	S23°27'37"E	78.93'
L-8	S07°29'59"E	82.69'
L-9	S01°13'47"E	128.03'
L-10	N88°46'13"E	79.00'
L-11	N81°05'39"E	60.54'
L-12	N50°22'08"E	76.56'
L-13	S01°13'47"E	214.88'
L-14	S12°18'13"E	257.28'
L-15	S64°31'30"W	25.56'
L-16	S82°21'50"W	164.85'
L-17	N89°02'40"W	170.25'

BOUNDARY LINE TABLE		
Line	Direction	Distance
L-18	S05°49'00"W	87.60'
L-19	S70°29'29"E	194.06'
L-20	N75°10'36"E	188.70'
L-21	N86°53'54"E	180.00'
L-22	S89°37'24"E	115.52'
L-23	S80°10'37"E	116.32'
L-24	S77°53'43"E	398.02'
L-25	S80°33'22"E	68.75'
L-26	S83°52'46"E	68.84'
L-27	N88°46'13"E	68.43'
L-28	N01°13'47"W	120.00'
L-29	N88°46'13"E	3.94'
L-30	N01°13'47"W	249.00'
L-31	N14°33'36"W	96.96'
L-32	N16°16'26"W	115.56'
L-33	N12°38'53"W	118.46'
L-34	N02°53'29"W	237.04'

CURVE TABLE				
Curve	Delta	Radius	Length	Chord
C-1	1°50'53"	425.00'	13.71'	S76°46'21"W 13.71'

Basis of Bearing:
PLAT BOOK 94, PAGE 63

0 200 300
SCALE: 1" = 200'



VICINITY MAP
n.t.s.

SURVEYOR

BAYER BECKER
6900 TYLERSVILLE ROAD
MASON, OH, 45040
513-336-6600

OWNER

LEBANON MASON LLC
4020 KINROSS LAKES, SUITE 200
RICHFIELD, OH 44286
513-404-6401

OWNER

LEBANON MASON RESIDENTIAL, LLC
4020 KINROSS LAKES, SUITE 200
RICHFIELD, OH 44286
513-404-6401

NOTES

1. PRIOR DEED REFERENCE: DOCUMENT NUMBER 2016-033236. OFFICIAL RECORD 5856, PAGE 129
2. BASIS OF BEARING: PLAT BOOK 94, PAGE 63.
3. 5/8" IRON PINS ARE SET ON ALL LOT CORNERS UPON COMPLETION OF CONSTRUCTION, UNLESS OTHERWISE NOTED.
4. OCCUPATION IN GENERAL MATCHES SURVEY, UNLESS OTHERWISE NOTED.
5. ALL EXISTING MONUMENTS ARE IN GOOD CONDITION UNLESS OTHERWISE SHOWN.
6. MINIMUM PERMISSIBLE LOW FLOOR ELEVATION (INCLUDING BASEMENT). IF A FLOOR IS DESIRED BELOW THE M.O.E. ELEVATION SHOWN, THEN NO GRAVITY FLOW STORM DRAIN WILL BE PERMITTED FROM ANY DRIVEWAY, WINDOW WELL, STAIRWELL, FOUNDATION, BASEMENT, PATIO OR OTHER SOURCE TO BE DIRECTLY CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR EXISTING OR PROPOSED WATERCOURSE BELOW THE M.O.E. ELEVATION SHOWN. SUMP PUMPS WELLS AND SUMP PUMPS SHALL BE INSTALLED FOR BASEMENTS OF HOMES IF THE BASEMENT ELEVATION IS BELOW THE M.O.E. ELEVATION SHOWN.

SHEET INDEX

DRAINAGE STATEMENT

UNLESS OTHERWISE DESIGNATED ON THIS PLAT, A FIFTEEN (15) FOOT WIDE DRAINAGE EASEMENT SHALL EXIST ALONG ALL REAR LOT LINES AND A TEN (10) FOOT WIDE DRAINAGE EASEMENT SHALL EXIST ALONG ALL SIDE LOT LINES, WITH THE LINE BEING THE CENTERLINE OF SAID EASEMENT.

THE EASEMENT AREAS SHALL BE MAINTAINED CONTINUOUSLY BY THE LOT OWNER(S). WITHIN THE EASEMENTS, NO STRUCTURE, PLANTING, FENCING, CULVERT, OR OTHER MATERIAL SHALL BE PLACED OR PERMITTED TO REMAIN WHICH MAY OBSTRUCT, RETARD, OR DIVERT THE FLOW THROUGH THE WATERCOURSE.

THE VILLAGE OF SOUTH LEBANON ASSUMES NO LEGAL OBLIGATION TO MAINTAIN OR REPAIR ANY OPEN DRAIN, DITCHES OR WATERCOURSE WITHIN THE EASEMENT AREA UNLESS NOTED OTHERWISE ON THIS PLAT. HOWEVER, WHEN THE PLATTED RIGHT-OF-WAY AREA HAS BEEN PREVIOUSLY ACCEPTED FOR PUBLIC MAINTENANCE BY RESOLUTION OF THE VILLAGE OF SOUTH LEBANON OR THEIR REPRESENTATIVES MAY ENTER UPON AND INSPECT THE EASEMENT AREAS AND, IN ACCORDANCE WITH SECTION 5589.06 OF THE OHIO REVISED CODE, MAY REMOVE OR CAUSE THE REMOVAL OF AN OBSTRUCTION ADVERSELY IMPACTING AN AREA WITHIN THE PUBLIC RIGHT-OF-WAY.

UNTIL THE EXPIRATION OF THE PUBLIC IMPROVEMENT MAINTENANCE BONDING PERIOD, THE DEVELOPER (OR THEIR AGENTS) RESERVES THE RIGHT TO ENTER UPON ALL LOTS TO ESTABLISH OR RE-ESTABLISH DRAINAGE SWALES WITHIN ALL DRAINAGE EASEMENTS FOR THE PURPOSE OF CONTROLLING AND DIRECTING STORMWATER TO COLLECTION FACILITIES OR DRAINAGE CHANNELS.

THE PUBLICLY-MAINTAINED PORTION OF THE STORM SEWER SYSTEM WILL INCLUDE STORM DRAINS, CULVERTS, AND/OR DITCHES LOCATED WITHIN EITHER THE PUBLIC RIGHT-OF-WAY OR THE PUBLIC UTILITY EASEMENT AREA ADJACENT TO THE ROAD RIGHT-OF-WAY WITH THE EXCEPTION OF SUMP MAINS AND CULVERTS FOR PRIVATE DRIVEWAYS. WHERE, IN LIEU OF AN OPEN DITCH, A DEVELOPER, BUILDER OR LOT OWNER INSTALLS A STORM DRAIN ON PRIVATE PROPERTY, THE STORM DRAIN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER TO ENSURE THAT NEITHER THIS PROPERTY OR ADJACENT PROPERTIES ARE NEGATIVELY IMPACTED, AND THE LOT OWNER(S) MUST NOTE THAT THEY ARE RESPONSIBLE FOR MAINTAINING THE STORM DRAIN UNLESS NOTED OTHERWISE ON THE PLAT.

THE HOME OWNER'S ASSOCIATION IS RESPONSIBLE FOR MAINTAINING ALL STORM WATER FACILITIES LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY INCLUDING SEWER, STRUCTURES, DETENTION/RETENTION BASINS, AND SUMP MAINS.

GRANT OF UTILITY EASEMENT

FOR VALUABLE CONSIDERATION, WE, THE UNDERSIGNED ("GRANTOR") DO HEREBY PERMANENTLY GRANT TO DUKE ENERGY OHIO/KENTUCKY, INC. AND THEIR PARENT ENTITY (OR ENTITY CONTROLLING BOTH ENTITIES), THEIR RESPECTIVE SUBSIDIARIES OR AFFILIATE ENTITIES, AND ANY OTHER PROVIDER OF UTILITY SERVICES ("GRANTEE") THEIR SUCCESSORS AND ASSIGNS, FOREVER, NON-EXCLUSIVE EASEMENTS, AS SHOWN ON THE WITHIN PLAT AND DESIGNATED AS "UTILITY EASEMENTS" FOR THE CONSTRUCTION, OPERATION, MAINTENANCE, REPAIR, OR REPLACEMENT OF ANY AND ALL NECESSARY FIXTURES FOR THE OVERHEAD OR UNDERGROUND DISTRIBUTION OF GAS, ELECTRIC, TELEPHONE, TELECOMMUNICATIONS OR OTHER UTILITIES ("GRANTEE FACILITIES" OR "FACILITIES"), THE GRANTEE SHALL HAVE THE RIGHT OF INGRESS AND EGRESS AND ALSO THE RIGHT TO CUT, TRIM, OR REMOVE ANY TREES, UNDERGROWTH, OR OVERHANGING BRANCHES WITHIN THE UTILITY EASEMENTS OR IMMEDIATELY ADJACENT THERETO. NO BUILDINGS OR OTHER STRUCTURES MAY BE BUILT WITHIN THE UTILITY EASEMENTS AREA, NOR MAY THE UTILITY EASEMENTS AREA BE PHYSICALLY ALTERED TO (1) REDUCE THE CLEARANCES OF EITHER OVERHEAD OR UNDERGROUND FACILITIES; (2) IMPAIR THE LAND SUPPORT OF GRANTEE FACILITIES; (3) IMPAIR THE ABILITY TO MAINTAIN THE FACILITIES OR; (4) CREATE A HAZARD. TO HAVE AND TO HOLD THE EASEMENT FOREVER. WE ACKNOWLEDGE HAVING THE FULL POWER TO CONVEY THIS UTILITY EASEMENT AND WILL DEFEND THE SAME AGAINST ALL CLAIMS.

ALSO HEREBY GRANTED TO DUKE ENERGY OHIO/KENTUCKY, INC. AND ITS SUBSIDIARIES, SUCCESSORS, AND ASSIGNS IS THE RIGHT TO LATERALLY EXTEND, REPAIR, AND MAINTAIN NATURAL GAS SERVICES TO SERVE INDIVIDUAL LOTS AS CONSTRUCTED BY THE ORIGINAL BUILDER ALLOWING DISTURBANCE ONLY OVER EXISTING SERVICES TO SERVICE INDIVIDUAL LOTS AS CONSTRUCTED BY THE ORIGINAL BUILDER ALLOWING DISTURBANCE ONLY OVER EXISTING SERVICE LINES NECESSARY FOR THE REPAIR ONLY ON THE LOT ON WHICH THE SERVICE IS LOCATED. RECONSTRUCTION OR RELOCATION IS PERMISSIBLE ONLY WITH THE WRITTEN PERMISSION OF THE PARCEL OWNER AND SAID UTILITY PROVIDER TO A MUTUALLY AGREEABLE LOCATION. NO PART OF THE UTILITY EASEMENTS SHALL ENCUMBER EXISTING BUILDINGS OR ADJOINING LOTS.

VILLAGE OF SOUTH LEBANON PLANNING COMMISSION

THIS PLAT WAS APPROVED BY THE VILLAGE OF SOUTH LEBANON PLANNING COMMISSION ON THIS_____ DAY OF _____, 2018.

_____
CHAIRMAN

VILLAGE OF SOUTH LEBANON

I HEREBY CERTIFY THAT ON THE _____ DAY OF _____, 2018, THIS PLAT WAS APPROVED AND ACCEPTED BY RESOLUTION NO. _____ ADOPTED BY THE COUNCIL OF THE VILLAGE OF SOUTH LEBANON, OHIO.

_____ ATTEST: _____
JAMES D. SMITH, MAYOR NICOLE ARMSTRONG, FISCAL OFFICER

RECEIVED
12-6-18

COUNTY AUDITOR

TRANSFERRED ON THIS ____ DAY OF _____, 2018, AT _____M.

_____ _____
COUNTY AUDITOR DEPUTY

_____
PRINTED NAME:

COUNTY RECORDER

FILE NO. _____

RECEIVED ON THIS ____ DAY OF _____, 2018, AT _____M.

RECORDED ON THIS ____ DAY OF _____, 2018, AT _____M.

RECORDED IN PLAT BOOK NO. _____ PAGE NO. _____.

FEE: _____

_____ _____
COUNTY RECORDER DEPUTY

_____
PRINTED NAME:

Item	Date	Revision Description
1	12-05-18	REVISED PER WARREN COUNTY MAP ROOM COMMENTS

Drwn: PAH
Chk: BRJ

RIVERSIDE PHASE THREE
SECTION 1 & 7, TOWN 4, RANGE 3
BETWEEN THE MIAMIS, UNION TOWNSHIP
VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO
RECORD PLAT

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

Drawing: 13R050-000 RP3 TITLE
Drawn by: PAH
Checked By: BRJ
Issue Date: 11-09-18
Sheet: 1/2

Plot time: Dec 06, 2018 - 11:24am
Drawing name: J:\2013\13R050-000\SV\DWG\13R050-000 RP3 TITLE.dwg - Layout Tab: PG1

CURVE TABLE

Curve	Delta	Radius	Length	Chord
C-1	1°50'53"	425.00'	13.71'	N76°46'21"E 13.71'

LOT CURVE TABLE

Curve	Delta	Radius	Length	Chord
C-2	90°00'00"	25.00'	39.27'	S43°46'13"W 35.36'
C-3	12°13'54"	275.00'	58.71'	S07°20'44"E 58.60'
C-4	11°53'49"	275.00'	57.10'	S19°24'36"E 57.00'
C-5	1°35'22"	325.00'	9.02'	S24°33'49"E 9.02'
C-6	10°30'38"	325.00'	59.62'	S18°30'49"E 59.54'
C-7	10°34'44"	325.00'	60.00'	S07°58'08"E 59.92'
C-8	5°12'33"	325.00'	29.55'	S00°04'29"E 29.54'
C-9	51°19'04"	25.00'	22.39'	S23°07'45"E 21.65'
C-10	30°27'24"	55.00'	29.24'	S33°33'34"E 28.89'
C-11	47°48'07"	55.00'	45.89'	S05°34'11"W 44.57'
C-12	40°15'24"	55.00'	38.64'	S49°35'56"W 37.85'
C-13	43°09'35"	55.00'	41.43'	N88°41'34"W 40.46'
C-14	41°06'44"	55.00'	39.46'	N46°33'25"W 38.62'
C-15	47°00'09"	55.00'	45.12'	N02°29'59"W 43.86'
C-16	32°50'46"	55.00'	31.53'	N37°25'29"E 31.10'
C-17	51°19'04"	25.00'	22.39'	N28°11'20"E 21.65'
C-18	8°30'01"	275.00'	40.80'	N01°43'13"W 40.76'
C-19	18°25'19"	275.00'	88.42'	N15°10'53"W 88.04'
C-20	0°57'57"	275.00'	4.63'	N24°52'32"W 4.64'
C-21	9°45'38"	325.00'	55.36'	N20°28'41"W 55.30'
C-22	10°34'40"	325.00'	60.00'	N10°18'32"W 59.91'
C-23	3°47'25"	325.00'	21.50'	N03°07'30"W 21.50'
C-24	90°00'00"	25.00'	39.27'	N46°13'47"W 35.36'
C-25	5°21'41"	375.00'	35.09'	S86°05'22"W 35.08'
C-26	9°19'11"	375.00'	61.00'	S78°44'56"W 60.93'
C-27	8°05'20"	425.00'	60.00'	N81°44'27"E 59.95'
C-28	2°59'05"	425.00'	22.14'	N87°16'40"E 22.14'

CENTERLINE CURVE TABLE

Curve	Delta	Radius	Length	Chord
CC-29	13°44'41"	400.00'	95.96'	N81°53'52"E 95.73'
CC-30	24°07'43"	300.00'	126.34'	N13°17'39"W 125.41'
CC-31	27°53'18"	300.00'	146.02'	N11°24'51"W 144.59'

EASEMENT CURVE TABLE

Curve	Delta	Radius	Length	Chord
EC-32	5°57'17"	340.00'	35.34'	S17°29'58"E 35.32'
EC-33	8°25'07"	70.00'	10.29'	N71°21'23"W 10.28'
EC-34	8°00'29"	70.00'	9.78'	N63°08'35"W 9.78'
EC-35	4°58'20"	440.00'	38.18'	N80°10'58"E 38.17'

Parcel Table

Parcel #	Acres	S.Ft.
86	0.2146	9346
87	0.1653	7200
88	0.1653	7200
89	0.1869	8142
90	0.1823	7941
91	0.1733	7547
92	0.2043	8898
93	0.2098	9137
94	0.1940	8451
95	0.2361	10285
96	0.3553	15478
97	0.2450	10673
98	0.2510	10934
99	0.1998	8701
100	0.1861	8105
101	0.1925	8385
102	0.1948	8487
103	0.1942	8457
104	0.1991	8672
105	0.1766	7692
106	0.1653	7200
107	0.2146	9346
108	0.1653	7200
109	0.1653	7200
110	0.1704	7423
111	0.2008	8746
112	0.1968	8572
113	0.1742	7587
114	0.1653	7200
115	0.1653	7200
116	0.1653	7200
117	0.1653	7200
118	0.1653	7200
119	0.1653	7200
"E"*	10.2496	446472

*OPEN SPACE

TOTAL R/W CURVE TABLE

Curve	Delta	Radius	Length	Chord
C-36	24°07'43"	275.00'	115.81'	S13°17'39"E 114.95'
C-37	27°53'18"	325.00'	158.19'	S11°24'51"E 156.63'
C-38	282°38'08"	55.00'	271.31'	N87°28'13"W 68.75'
C-39	27°53'18"	275.00'	133.85'	N11°24'51"W 132.54'
C-40	24°07'43"	325.00'	136.86'	N13°17'39"W 135.86'
C-41	14°40'52"	375.00'	96.09'	S81°25'47"W 95.82'
C-42	12°55'19"	425.00'	95.85'	N82°18'33"E 95.65'

SIDWELLS

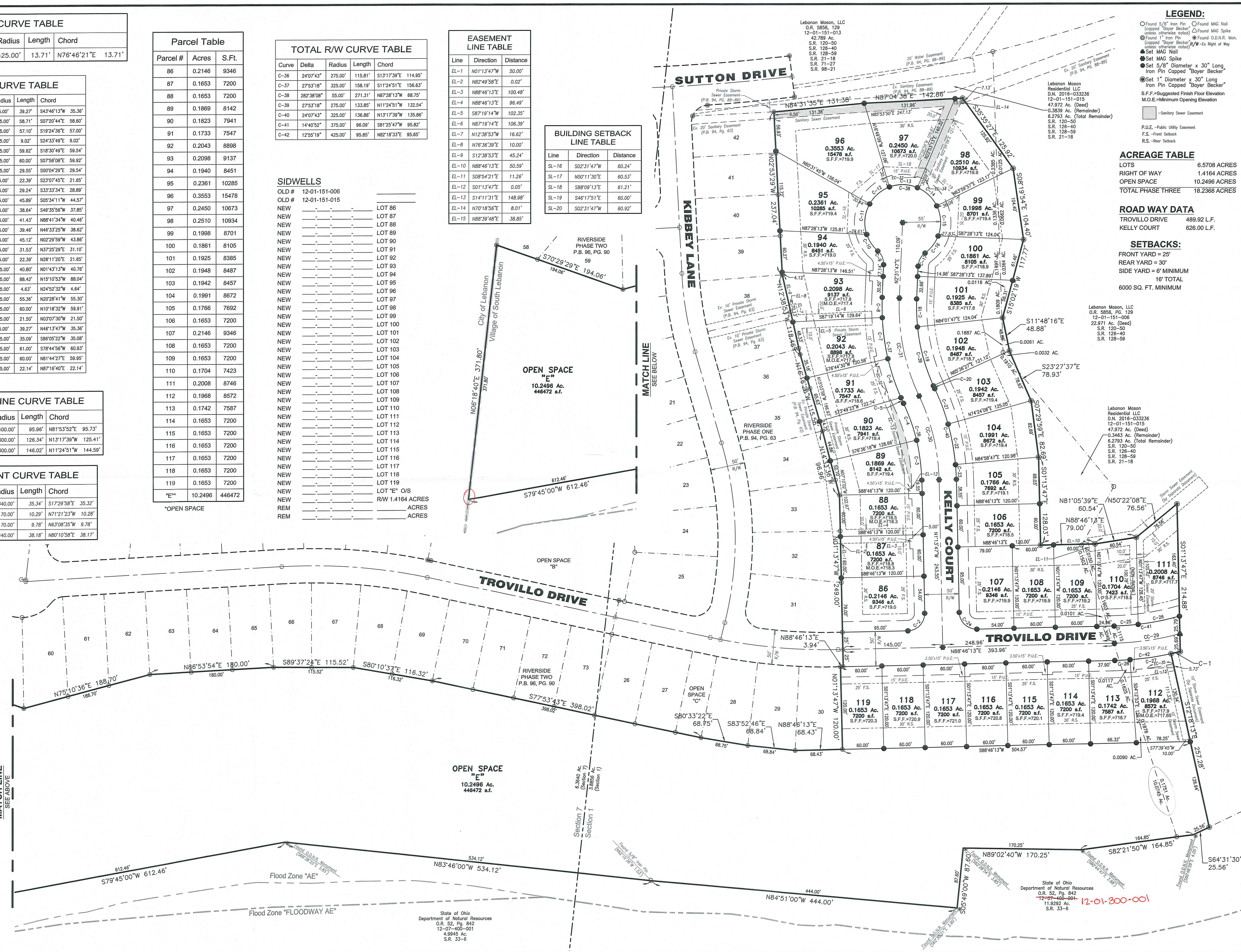
OLD # 12-01-151-006 ______
OLD # 12-01-151-015 ______
NEW ___-___-___-___ LOT 86
NEW ___-___-___-___ LOT 87
NEW ___-___-___-___ LOT 88
NEW ___-___-___-___ LOT 89
NEW ___-___-___-___ LOT 90
NEW ___-___-___-___ LOT 91
NEW ___-___-___-___ LOT 92
NEW ___-___-___-___ LOT 93
NEW ___-___-___-___ LOT 94
NEW ___-___-___-___ LOT 95
NEW ___-___-___-___ LOT 96
NEW ___-___-___-___ LOT 97
NEW ___-___-___-___ LOT 98
NEW ___-___-___-___ LOT 99
NEW ___-___-___-___ LOT 100
NEW ___-___-___-___ LOT 101
NEW ___-___-___-___ LOT 102
NEW ___-___-___-___ LOT 103
NEW ___-___-___-___ LOT 104
NEW ___-___-___-___ LOT 105
NEW ___-___-___-___ LOT 106
NEW ___-___-___-___ LOT 107
NEW ___-___-___-___ LOT 108
NEW ___-___-___-___ LOT 109
NEW ___-___-___-___ LOT 110
NEW ___-___-___-___ LOT 111
NEW ___-___-___-___ LOT 112
NEW ___-___-___-___ LOT 113
NEW ___-___-___-___ LOT 114
NEW ___-___-___-___ LOT 115
NEW ___-___-___-___ LOT 116
NEW ___-___-___-___ LOT 117
NEW ___-___-___-___ LOT 118
NEW ___-___-___-___ LOT 119
NEW ___-___-___-___ LOT "E" O/S
NEW ___-___-___-___ R/W 1.4164 ACRES
REM ___-___-___-___ ______ ACRES
REM ___-___-___-___ ______ ACRES

EASEMENT LINE TABLE

Line	Direction	Distance
EL-1	N01°13'47"W	50.00'
EL-2	N82°49'58"E	0.02'
EL-3	N88°46'13"E	100.48'
EL-4	N88°46'13"E	96.49'
EL-5	S87°19'14"W	102.35'
EL-6	N87°19'14"E	106.39'
EL-7	N12°38'53"W	16.62'
EL-8	N76°36'39"E	10.00'
EL-9	S12°38'53"E	45.24'
EL-10	N88°46'13"E	50.59'
EL-11	S08°54'21"E	11.26'
EL-12	S01°13'47"E	0.05'
EL-13	S14°11'31"E	148.98'
EL-14	N70°18'56"E	8.01'
EL-15	N88°39'48"E	38.85'

BUILDING SETBACK LINE TABLE

Line	Direction	Distance
SL-16	S02°31'47"W	60.24'
SL-17	N50°11'30"E	60.53'
SL-18	S88°09'13"E	61.21'
SL-19	S46°17'51"E	60.00'
SL-20	S02°31'47"W	60.92'



LEGEND:

- Found 5/8" Iron Pin (capped "Bayer Becker" unless otherwise noted)
- Found 1" Iron Pin (capped "Bayer Becker" unless otherwise noted)
- Found MAG Nail
- Found MAG Spike
- Found O.D.N.R. Mon.
- R/W - Ex Right of Way
- Set MAG Nail
- Set MAG Spike
- Set 5/8" Diameter x 30" Long Iron Pin Capped "Bayer Becker"
- Set 1" Diameter x 30" Long Iron Pin Capped "Bayer Becker"

S.F.F.=Suggested Finish Floor Elevation
M.O.E.=Minimum Opening Elevation

-Sanitary Sewer Easement

P.U.E. -Public Utility Easement
F.S. -Front Setback
R.S. -Rear Setback

ACREAGE TABLE

LOTS	6.5708 ACRES
RIGHT OF WAY	1.4164 ACRES
OPEN SPACE	10.2496 ACRES
TOTAL PHASE THREE	18.2368 ACRES

ROAD WAY DATA

TROVILLO DRIVE	489.92 L.F.
KELLY COURT	626.00 L.F.

SETBACKS:

FRONT YARD = 25'
REAR YARD = 30'
SIDE YARD = 6' MINIMUM
16' TOTAL
6000 SQ. FT. MINIMUM

Basis of Bearing: PLAT BOOK 94, PAGE 63
0 60 90
SCALE: 1" = 60'

Item	Revision Description	Date	Drwn:	Chk:
1	REVISED PER WARREN COUNTY MAP ROOM COMMENTS	12-05-18	PAH	BRJ

RIVERSIDE PHASE THREE

SECTION 1 & 7, TOWN 4, RANGE 3
BETWEEN THE MIAMIS, UNION TOWNSHIP
VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO

RECORD PLAT

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

Drawing: 13R050-000 RP3
Drawn by: PAH
Checked By: BRJ
Issue Date: 11-09-18
Sheet: 2/2

VILLAGE OF SOUTH LEBANON
MEMORANDUM

TO: Planning Commission

FROM: Jerry Haddix, Village Administrator

RE: Case 20-08P, Site Plan Review for McDonald's

DATE: April 17, 2020

On the agenda for the April 21st meeting is an application for approval of the site plan, landscape design and signage for the McDonald's restaurant to be located at Corwin Nixon Boulevard on 1.4581 acres on Lot 5 of the Rivers Crossing West Section 2 Subdivision (the "Project") submitted by Permit Solution (the "Applicant") on behalf of McDonald's.

Background
The Project that is the subject of the application is located on 1.4581 acres along the west side of State Route 48. The property is owned by Rivers Crossing Power LLC. The present zoning classification is B-2 General Business District. The proposed Project consists of a 4,073 s.f. restaurant with a drive-thru with access provided by a private access easement from Corwin Nixon Boulevard north of the existing Speedway site.

The site plan has been distributed to various agencies and, to date, we have received comments from Kim Lapensee, our Planning Consultant, and the Choice One Engineering. The Union Township relayed that he had no comments on the site plan.

Zoning Code Analysis
Upon review of the plans, it has been determined that the drawings generally satisfy the Zoning Regulations and Design Guidelines and Standards with the exceptions listed in the attached letter and accompanying site plan approval checklist.

Zoning Process
Pursuant to Article 18 of the Village Zoning Regulations, the development of any new use or construction of any new structures shall require site plan approval prior to construction and/or occupancy. At the first regular meeting at which a site plan proposal is considered, the Commission shall first determine whether to accept the plan for processing. If accepted for processing, the Commission shall review the site plan in relation to applicable standards and regulations, and in relation to the intent and purpose of the Village Zoning Regulations and Design Guidelines and Standards. The Commission shall consider the comments and recommendations from the Village Administrator, the Village Engineer, public safety officials and other reviewing agencies.

If the Commission determines that revisions are necessary to bring the site plan into compliance with applicable standards and regulations, the applicant shall be given the opportunity to submit a revised

site plan. The Commission shall review the revised site plan and application materials within 30 days after the Village received a complete revised site plan application.

The Commission shall make a determination on a site plan based on the requirements and standards in the Zoning Regulations and Design Guidelines and Standards. The Commission is authorized to grant approval, grant approval subject to conditions, or reject a site plan. If the Commission chooses to grant approval subject to conditions, the Commission may waive its right to review the revised plan, and instead authorize the Zoning Administrator, or his designee, to review and recommend approval of the resubmitted plans if all required conditions have been addressed.

If construction is not started within 18 months of final approval of the site plan, the site plan approval becomes null and void and a new application for site plan review shall be required.

Recommendation
Given the width of the lot, the parking spaces and building, the 10 foot landscape buffer is not feasible for this site. With the adjoining commercial uses, a 6-foot buffer as shown on the plans would be adequate. Also, operationally, McDonald's doesn't require a designated loading space as part of their business. Therefore, waiving of this requirement would not be detrimental to the development.

Staff recommends that the Planning Commission grant its approval of the site plan and landscape plan for McDonald's with the following conditions:

Prior to issuance of a zoning permit, the applicant must resubmit the site plan and provide the following information to the Zoning Administrator:

1. Addressing the comments of the Village Engineer and Planning Consultant to the satisfaction of the Village Administrator;
2. Provide the Storm Water Pollution Prevention Plan (SWPPP) and address any review comments from the Warren County Soil & Water Conservation District relative to the SWPPP.

Attachments
Planning Commission Application
Site Plan and Landscape Plan
Plan Review – Kim Lapensee
Choice One Engineering Review Letter

VILLAGE OF SOUTH LEBANON
PLANNING COMMISSION APPLICATION

1. Application Type: (check the appropriate box) (all plans must be folded when submitted)

	Draft Plan-Discussion Only		Preliminary PUD
X	Site Plan		Final PUD
X	Landscape Plan		Rezoning
X	Construction Drawings. (Please complete Fee Schedule form on Page 2)		Lot Split
	Preliminary Plat (Please compete Fee Schedule form on Page 2)		Conditional Use
	Final Plat or Replat		Special Meeting
	Right-of-Way Dedication Plat		Other:

(See Page 3 for complete Fee Schedule and Submittal Requirement Information)

2. Development Information:

Development/Business Name: McDonald's Corporation	
Type of Business/Project Description: New Drive-Thru Restaurant	
Location: Rivers Crossing West Rt 48 and 71 South Lebanon,	Size of Building: 4073
Current Zoning: B-2 General Business District	Rezone to: N/A
Total Acreage: 1.4581	Acres to be Rezoned: N/A
Number of Employees: 10-15	Number of Fleet Vehicles: N/A
Current Owner of the Property	**Project Contact (Architect, Engineer, Planner)**
Name: Rivers Crossing Power LLC	Name: Bayer Becker - Enginner
Address: 738 Corwin Nixon Blvd.	Address: 6900 Tylersville Rd
City: South Lebanon State: Ohio Zip: 45065	City: Mason State: Ohio Zip:
Telephone: Fax:	Telephone: 513-492-9835 Fax:
Applicant(s): Permit Solutions - Vanessa Stickel - Main Contact	
Address: 5195 Hampstead Village Center Way	
City: New Albay State: Ohio Zip: 43054	
Telephone: 330-571-3315 Fax: n/a	
Please Print Applicant's Name Here: Vanessa Stickel	
* **Applicant's Signature:** *Vanessa Stickel*	

* Applicant is responsible for payment of all fees (See Fee Schedule and Footnotes on Pages 3 and 4 respectively.)

TO BE COMPLETED BY THE VILLAGE OF SOUTH LEBANON

Application Number: _____ Date of Planning Commission Meeting: _____

Fee Paid: _____ Drawn: _____ Check #: _____ Date: _____ Initial: _____

Legal Notices Advertised: _____ Mailed to Surrounding Property Owners: _____

3. Rezoning and Preliminary PUD Plan Requests

Surrounding Property Owners: Please list the names and addresses of all **Owners of Real Property** within 300 feet of any part of the property as such names and addresses appear on the most recent tax duplicate on 2 sets of mailing labels. (See submittal requirements on page 3).

4. Signatures Required

By signing this application, I attest under penalty of law that all the information given above is correct to the best of my knowledge.

Please Print Applicant's Name: Vanessa Stickel - Permit Solutions

Applicant's Signature: *Vanessa Stickel* **Date:** *March 3, 2020*

Property Owner's Signature: **Date:** 3/4/20

5. Fee Determination for Construction Drawings and Preliminary Plat Submittals

Please create a detailed breakdown of the estimated infrastructure breakdown cost for the project and attach it to this application. For Construction Drawings complete Item 1 and for Preliminary Plats complete Item 2.

Total Infrastructure Cost	$ 690,279	(A)
1 – Construction Drawing Fee Breakdown		
1.25% of Total Infrastructure Cost* (Line A x 0.0125)	$ 8,628.49	(B)
1.50% of Total Infrastructure Cost** (Line A x 0.015)	+ $ 10,354.19	(C)
Application Fee	+ $ 150.00	(D)
Total Construction Drawing Fee (Line B + C + D)	**$ 19,132.68**	**(E)**
2 – Preliminary Plat Fee Breakdown:		
0.25% of Total Infrastructure Cost* (Line A x 0.0025)	$	(F)
Application Fee	+ $ 150.00	(G)
Total Preliminary Plat Fee (Line F + G)	**$**	**(H)**
Total Paid with Application/Submittals (Line E+H)	**$**	

* Due upon submittal
** Due prior to construction

6. Fee Schedule and Submittal Requirements

Article/Ord. Reference	Item	Fees[3][4]	Submittal Requirements
Article 20 Article 14	Preliminary Plats Final PUDs	$150 + 0.25% of estimated infrastructure construction costs[1]	12 Copies[5] + 1 Copy (Ledger Paper)
Article 20	Construction Drawings	$150 + 2.75% of estimated infrastructure construction costs[1] (Include estimate with application) (1.25% due at time of submittal and 1.5% due before construction begins)[2]	4 Copies[5] 2 Drainage Calculations 2 Detailed Spreadsheet of the Estimated Infrastructure Costs
Article 20	Final / Dedication Plats	$350	10 Copies[5] + 1 Copy (Ledger Paper)
Article 20	Lot Split / Minor Subdivision / Replats	$75 per lot	3 Survey Plats[5] & Legal Descriptions 1 New Deed + 1 Original Deed
Article 18	Site Plans	$400 + $5 per unit Multi-family $400 + $20 per acre Commercial/ Office/Industrial/Institutional	12 Copies[5] + 1 Copy (Ledger Paper)
Article 17	Landscape Plans	$150 + $10 per acre	12 Copies[5] + 1 Copy (Ledger Paper)
Article 7	Zoning District Map Change Zoning Text Change	$400 + $10 per acre	20 Copies[5] + 1 Copy (Ledger Paper) 1 List of Surrounding Property Owners + 2 Sets of Mailing Labels
Article 5	Variances / Appeals	$400	8 Copies + 1 Copy (Ledger Paper) 1 List of Surrounding Property Owners + 1 Set of Mailing Labels
Article 14	Preliminary PUD Plans	$2,500 + $20 per acre	12 Copies[5] + 1 Copy (Ledger Paper) 1 List of Surrounding Property Owners + 2 Sets of Mailing Labels
Article 14	Final PUD Plans	Site Plan Review Fees Apply	Site Plan Review Submittal Requirements Apply
Article 6	Conditional Use / Similar Use	$250 + applicable site plan fee	15 Copies + 1 Copy Ledger Paper[5]
Article 3	Zoning Permit	$250 + $0.03 per square foot of building area (Village water tap and inspection fee required if utilizing Village Water [proof of payment of County tap fee if utilizing County Water]; Village sewer tap and inspection fee also required)	5 Copies
Article 3	Temporary Use Permit	$50	5 Copies
Article 3	Certificate of Occupancy	$50	3 Copies
Ord. No: 2008-14; Permit App.	Flood Hazard Area Development Permit	$50	3 Copies of Permit Application w/ applicable submittal requirements (stated on Page 2 of 2 of Permit Application + Engineering "No Rise" Certification (if applicable)
	Special Meeting	$500 + Application Fee, if any[6]	Depends Upon Type of Application or Meeting Requested

FOOTNOTES TO FEE SCHEDULE

(1) Infrastructure construction costs include all infrastructure costs associated with a development including, but not limited to, drainage facilities, sanitary sewers, waterlines, grading, excavation, and street improvements.

(2) Any inspection conducted outside the normal eight-hour workday of Monday through Friday, excluding holidays, 8:00 a.m. until 4:30 p.m., shall be charged at one and a half (1.5) times the standard rate. The Village reserves the right to charge fees in addition to the fees specified in the table above if, due to the applicant's responsibility, excessive review and/or field inspections are necessary, and as determined by the Village Engineer. Such fees for review and field inspection by Village staff shall be charged at the standard rate of forty dollars ($40) per hour, plus a three-fourths (.75) hour charge for travel time. Any review and inspection completed by consultants on behalf of the Village shall be charged to the applicant at the same rate charged by the consultants. Performance and maintenance bonds will not be released until payment of all fees is received.

(3) Any review and inspection completed by consultants on behalf of the Village shall be charged to the applicant at the same rate charged by the consultants. The applicant shall pay the difference when consultant fees charged to the Village are in excess of the established Fee Schedule base amounts. Final approvals will be held until all fees charged by consultants are paid-in-full by the applicant.

(4) The fee for review of a revised application shall be sixty (60) percent of the fee specified for the initial or first review of such application.

(5) All plans must be folded to fit a legal sized file folder with the title showing in the lower right-hand corner.

(6) Special meetings that require one or more of the Village's consultants to attend shall require payment of the special meeting fee before the meeting is scheduled. Examples of special meetings include staff meetings and non-scheduled Planning Commission meetings requested by an applicant and/or developer.

1. Complete applications submitted by the deadlines posted above will be processed and placed on the next regularly scheduled Planning Commission meeting.
2. Incomplete applications or applications that do not comply with the minimum Village Zoning Ordinance and/or Subdivision Regulations or applications that are not submitted by the above posted deadlines will not be placed on the next regularly scheduled Planning Commission meeting agenda.
3. The applicant will be notified if his or her application is not accepted for processing. The Village Administrator and/or Zoning Administrator will discuss the reasons why the application was not accepted and the necessary steps required to meet the next meeting deadline.
4. Applicants may request a special Planning Commission meeting. Requests should be made with the Village Administrator at least two weeks in advance of the requested special meeting date. The meeting will be set if approved by the Planning Commission chairperson and if a quorum can be present. A $500 fee plus applicable application fee must be paid in advance of the meeting (See Fee Schedule and Footnotes to Fee Schedule).
5. Meeting dates are subject to change due to unforeseen scheduling conflicts and holidays. Applicants should call the Village to check meeting dates in advance of the application deadlines.

Location: McDonald’s New Build - Rivers Crossing West Rt 48 and 71 South Lebanon

Infrastructure Cost Breakdown

Div 22 Plumbing Site	$9,450
Div 26 Electrical	$53,387
Div 31 Earthwork	$15,750
Div 32 Exterior Improvements	$297,982
Div 33 Utilities	$313,710
Total	**$690,279**

Staff Report for McDonalds Site Plan

Project Description

McDonalds has submitted a site plan for the property located on Corwin Nixon Blvd, South Lebanon, Ohio. Lot 5 is 1.458 acres in size. They are proposing to build a McDonalds that will be 3,960 sf in size (90 X 44). The restaurant will have two drive-thru stack lanes (as you wrap around the building) on the north side of the building and three drive-up windows on the south side of the building.

Parcel Description

The parcel number is 12023350040 and is located in the Kings School District. This is an existing vacant parcel that was split into 4 lots – this being lot 5 of the River Crossing West Section 2 Subdivision. This parcel is located along the west side of State Route 48 just south of the I-71 ramp.

Zoning

The parcel is zoned B-2 General Business District which allows for general business uses such as the following:

- Animal Hospitals/Kennels;
- Automotive, mobile home, farm implement, sales, service, rental or lease establishments;
- Building and related trades, including sales areas;
- Business or professional offices;
- Car washes;
- Churches and similar places of worship;
- Financial institutions;
- Home furnishings sales/rental/repair;
- Medical clinics;
- Motels and hotels;
- Motion picture theaters, indoor or outdoor printing, copying and publishing establishments;
- Restaurants;
- Retail stores including those which sell petroleum products and may do on-site servicing or repair work;
- Service businesses which may do on-site installation or repair work;
- Studios, salons and health clubs;

Existing Requirements B-2 District

- Max height – 35'-0". ***Height shown on the plans – 19'-0".***
- Front Yard – 20'-0"; ***Front yard 205'-0".***
- Side Yard – 10'-0"; ***Side yard 54'-0" on the south, 60'-0" north side.***
- Rear Yard – 20'-0"; ***Rear yard 105'-0".***
- Min Lot Size – 8,000 sf; ***The lot is 1.458 acres in size (63,515 sf).***
- Frontage – 60'-0". ***The lot has 160 feet of frontage on SR48 and 160 feet on the private drive.***

Parking Requirements

- All parking spaces must be at least 162 sf in size. ***The spaces measure 9 X 20 = 180 sf.***
- Parking lots can be no closer than 3 feet to the property line. ***The parking areas are setback 5'-0" on both sides of the lot and 30'-0" to the east facing SR48.***
- Parking lots can be located in required yards with property screening. ***There is screening provided down both sides of the parking lot and along the frontage of SR48.***
- Parking lots must be a hard surface, graded and drained with parking barriers.
- If more than 20 spaces, they must be marked.
- Circulation signage is permitted.
- If the parking lot is lighted, it must be illuminated away from any residential districts. ***There are 8 proposed lights surrounding the perimeter of the paved area.***
- 15.12.5; Off-Street Storage Area for Drive-In Services – restaurants with drive-up windows that can serve customers in 3 minutes of less shall provide no less than 3 storage space per window. ***There are 15 spaces required. There are one/two areas that can hold approximately 16 cars as it wraps around the building with 3 additional spaces after the drive-up windows.***
- 15.12.7; Required parking spaces – 1 for each 200 sf and 1 for each 2 employees. ***51 parking spaces are shown on the plan. The building is 3,960 sf and 20 spaces would be required + parking for employees.***
- 15.12.8; Handicapped parking spaces – 1 space per 25 spaces. ***2 spaces are required and there are 3 shown on the plan.***
- 15.12.10; Off-street loading – 1 space is required if the building is over 3,000 sf. plus one additional if over 10,000. ***There is one loading space required. Loading space must be 12 wide, 65 feet in length and have a vertical clearance of 14 feet. There is none shown on the plans; however, one could be accommodated between the drive-up***

stack area and the last window near the handicapped parking area.

Signage

- Signs can be illuminated. ***There is one monument sign along SR48 shown on the site plan.***
- No flashing lights are permitted.
- Signs must be setback at least 10'-0" from the ROW. ***Signs are located outside the ROW and setback 30'-0" from SR48 and 10'-0" from the side yard on the south side of the building.***
- Building signs must be within the wall space.
- Free-standing signs cannot exceed 28'-0" in height in the business district. ***There are no free-standing signs.***
- Ground signs cannot exceed 8'-0" in height. ***Monument sign proposed will be 11'-7" X 5 and will be an electronic message board. The base cannot exceed 3'-0" in height.***
- Businesses and other permitted uses having street frontage of 100 linear feet or more shall not exceed 150 square feet of sign surface area***. The surface area of the monument sign totals 58 sf. The directional signage totals 12 sf. It is unclear how many feet the ordering boards (4) will be in size around the drive-thru area.***
- Businesses and other permissible uses may include variable message centers on the freestanding sign, provided that running copy is not displayed and maximum flash rate shall not exceed one (1) line in four (4) seconds, or two (2) lines in seven (7) seconds, or three (3) or more lines in ten (10) seconds. ***There are 2 electronic message boards shown on the site plan that will be located in the drive-thru areas along with 2 additional menu signs.***
- Building signs: Any business or other permissible uses shall be permitted 1.5 square foot of building sign surface area for each foot or building frontage as measured along the length of the building façade that fronts the principal dedicated street, or the façade that contains the main entrance to the building. For other building frontage, signs may not exceed 75 square feet of sign surface area. ***There are 5 building signs shown on these plans that total 108 sf. Total building frontage is 160 lf X 1.5 = 240 sf permitted wall signs.***

Landscaping

- All unpaved areas must be planted with grass, ground cover, trees or shrubs. 5% of the lot must be landscaped – 3,175 sf. ***7,010 sf of area will be landscaped with trees and bushes and the remaining areas outside of the parking areas will be lawn.***

- 15.17.5; All parking lots must be screened and the screen must be 10'-0" wide with a 30" continuous screen planting or decorative wall. There must be 1 deciduous tree per 30 lineal feet. There is 230 linear feet by 6'-0" area along the parking lot side of the lot (south) shown on the plans for landscaping. ***8 trees are needed with a continuous screen – 8 trees (Sweet Gum and Honey Locust) and 38 shrubs that are shown along the south side of the parking lot. There are 15 total trees and 40 shrubs shown on the north side with roughly the same length of parking lot. The width of the screening is 4'-0" less than required.***
- 15.17.8; Commercial landscaping adjacent to the ROW. Arterials "A" – 20'-0" width, 30" high – must contain 1 tree and 6 shrubs for every 30 lineal feet of frontage. ***6 trees and 36 shrubs are required along State Route 48 – 8 trees are shown with 33 bushes across State Route 48 but they are located along the sides of the parking areas and not along the entire frontage.***
- Dumpsters must be screened and must be located in the side or rear yard with 6'-0" tall screen. ***Site plan indicates that the dumpster is located in the front yard and is screened on all 3 sides with a gate.***
- 1 deciduous shade tree is required for every 300 sf of required interior parking lot landscaping area. 1 tree shall be planted and included in each landscaping island and 1 shrub shall be provided for every 250 sf of required interior landscaping area. ***There are 3 trees and 23 shrubs shown next to the building. The island between the stack lane/order areas is planted with 9 bushes.***

Items to Consider

- Sidewalks along State Route 48 for pedestrian safety and a crosswalk at the light.
- Cross access easements for access on the private drive and a maintenance document that determines who pays for maintenance.
- It is recommended that all lots share one large sign for the lots being developed or have the same size signage along State Route 48 for uniformity.
- It is recommended that all lots (businesses) along SR48 have similar landscaping features so that it draws your eye to the buildings and there is a uniformity along SR48 that is unique to South Lebanon.

Choice One Engineering

Date
March 23, 2020

Attention
Jerry Haddix
Village Administrator

Address
Village of South Lebanon
99 High Street
South Lebanon, OH 45065

Subject
Summary of Review #1 Rivers Crossing West – McDonald's
South Lebanon, Ohio

Dear Mr. Haddix:

Enclosed is a summary of our review of the McDonald's Site Plan.

Site Plan

1. Loading space will subtract 8 parking spaces. Clarify when loading space will be in use.

Utility Plan

1. It appears there is a typo on the proposed 4" sanitary sewer lateral. 695.50 would put it 26' above the building elevation.
2. Show 100-year overland flood routing on this sheet or on grading plan.

SWPPP

1. Site disturbance is over 1 acre. Provide Village copy of approved NOI.
2. Standalone SWPPP is required. Erosion control notes/details on site plan/grading plan are not acceptable.

Lighting Plan

1. Foot-candles at adjacent property lines exceed allowable limits. Per Section 15.18.21.14 of Village zoning code, exterior lighting shall be decided so that it is deflected away from adjoining properties.

Storm Sewer

1. Storm pipes are to have a minimum inside diameter of 12" (not including downspout lines). Pipes from structure 5 and 7 need upsized from 8" to 12"
2. UG Detention callout lists 100-yr elevation at 662.06, where it should be 666.06.
3. Has an MR505 been obtained from ODOT for the outlet of the storm system into SR 48 R/W and the grading modifications?

Thank you for the opportunity to review the plans and suggest our comments.

Sincerely,

Nicholas J. Selhorst, P.E.

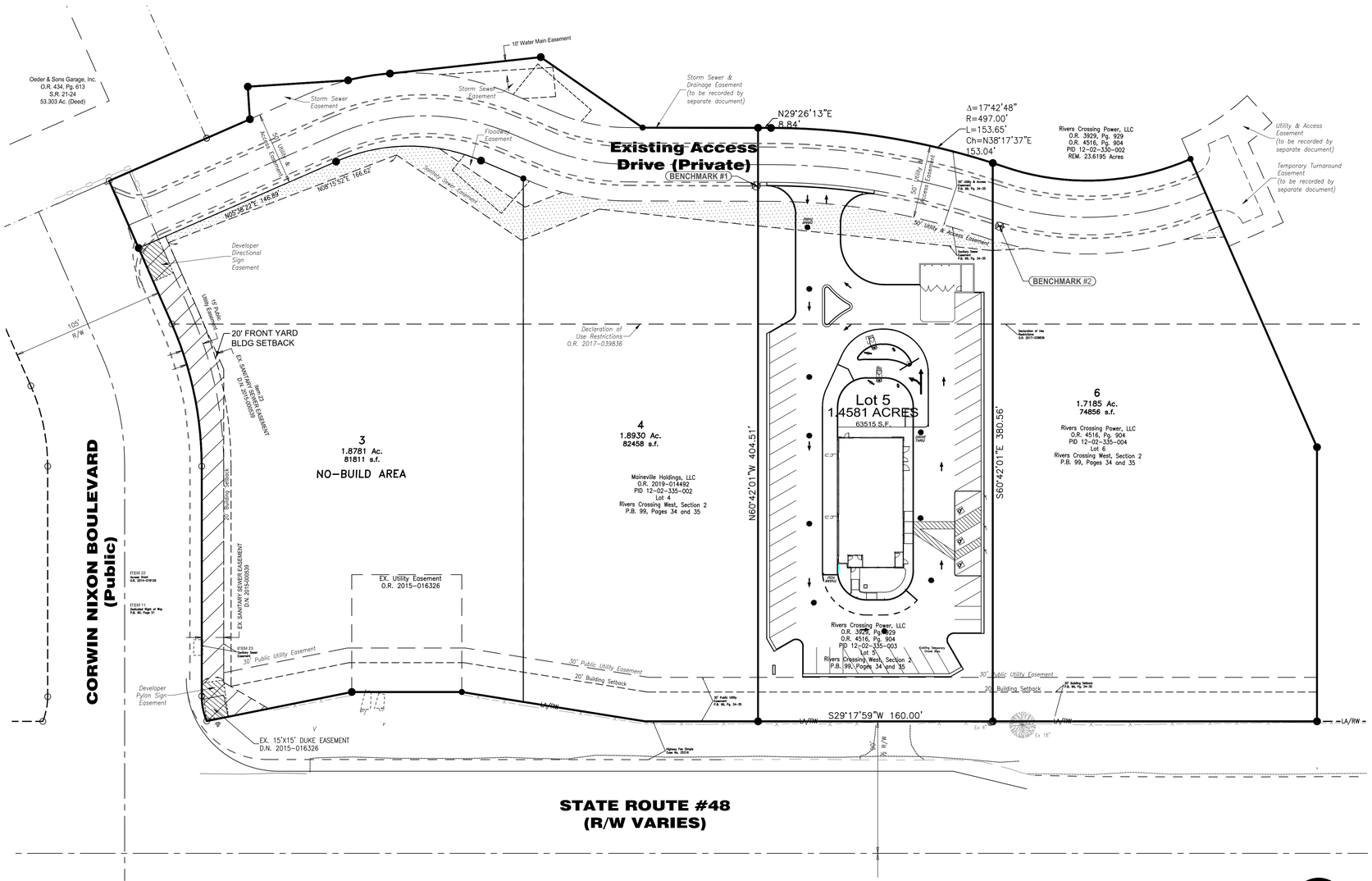
West Central Ohio
440 E. Hoewisher Rd.
Sidney, OH 45365
937.497.0200 Phone

S. Ohio/N. Kentucky
203 W. Loveland Ave.
Loveland, OH 45140
513.239.8554 Phone

Eastern Indiana
607 N. Meridian St.
Portland, IN 47371
260.766.2500 Phone

WWW.CHOICEONEENGINEERING.COM

McDONALD'S USA, LLC
L/C# 34-2068
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON
WARREN COUNTY, OHIO



VICINITY MAP - NTS

SITE SUMMARY

BOUNDARY AND TOPOGRAPHIC INFORMATION ARE BASED ON FIELD SURVEY PERFORMED BY BAYER BECKER 9-16-19.

LOT ACREAGE: 43720 SF (1.0037 ACRES)

EXISTING ZONING: "B-2" (General Business)
MINIMUM LOT AREA: 8,000 S.F.
MINIMUM LOT FRONTAGE: 60'
MINIMUM FRONT YARD DEPTH: 20'
SIDE YARD DEPTH: 10'
MINIMUM REAR YARD DEPTH: 20'
MAXIMUM BUILDING HEIGHT: 35'
PRIVATE ACCESS DRIVE TO BE BUILT AT 29' WIDE B/C TO B/C

LANDSCAPE AREA REQUIRED: 5% OF TOTAL LOT AREA = 2,186 SF
1 TREE PER 400 SF OF REQUIRED
1 SHRUB PER 250 SF OF REQUIRED
LANDSCAPING ADJACENT TO SR 48 RIGHT OF WAY MAY REQUIRE A 30' WIDE SCREEN BUFFER, 3' HIGH, WITH 1 TREE AND 6 SHRUBS EVERY 30' ALONG FRONTAGE.

PROPOSED USE: FAST FOOD RESTAURANT WITH DRIVE THRU

PROPOSED SITE:
GROSS FLOOR AREA: 4073 SQUARE FEET

PARKING CALCULATIONS:

PARKING SETBACKS:
FRONT: 3' REAR: 3'
LEFT: 0' RIGHT: 0'

PROVIDED PARKING = 51 SPACES (INCLUDING 3 ACCESSIBLE)

REQUIRED ACCESSIBLE SPACES FOR 51 TO 75 TOTAL SPACES = 3 SPACES

UTILITY COMPANIES

Gas
Duke Energy
Contact: Tony Giska
Tony.Giska@duke-energy.com
5445 Audro Drive
Cincinnati, OH 45247
513-287-4667

Sanitary Sewer
Village of South Lebanon
Contact: Jerry Haddix
10 N High Street
South Lebanon, OH 45065
513-770-4871

Water Main
Village of South Lebanon
99 High Street
South Lebanon, OH 45065
513-4942296

Storm
Village of South Lebanon
99 High Street
South Lebanon, OH 45065
513-4942296

Electric
Duke Energy
Contact: Greg Finley
Gregory.Finley@duke-energy.com
5445 Audro Drive
Cincinnati, OH 45247
513-287-1104

Telephone
AT&T
3233 Woodman Drive
Dayton, OH 45420
937-296-7066

Cable TV
Time Warner Cable
11254 Cornell Park Drive
Cincinnati, OH 45242
513-489-5957

SHEET INDEX

CIVIL ENGINEER, SURVEYOR & LANDSCAPE ARCHITECTURE
BAYER BECKER
6900 TYLERSVILLE ROAD, SUITE A
MASON, OHIO 45040
513-336-6600

OWNER
McDONALD'S CORPORATION
2 EASTON OVAL, SUITE 200
COLUMBUS, OHIO 43219

BENCHMARK #1
A cross notch located along the back of existing curb on the east side of the existing private access drive, 10.4' southwest of an existing storm manhole and 42.8' southwest of an existing water valve.
Elevation=667.81

BENCHMARK #2
A cross notch located along the back of existing curb on the east side of the existing private access drive, 2.3' north of the center of an existing catch basin and 7.3' northwest of an existing sanitary manhole.
Elevation=672.88

Basis of Bearing:
State Plane NAD83 (2011)
0 40 60
SCALE: 1" = 40'

REV	DATE	DESCRIPTION	BY
1	03-12-20	REVISE UNDERGROUND DETENTION & UTILITIES	GJK

STATE OF OHIO
GREGORY J. KOCH
69324
REGISTERED
PROFESSIONAL ENGINEER
3/12/20

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

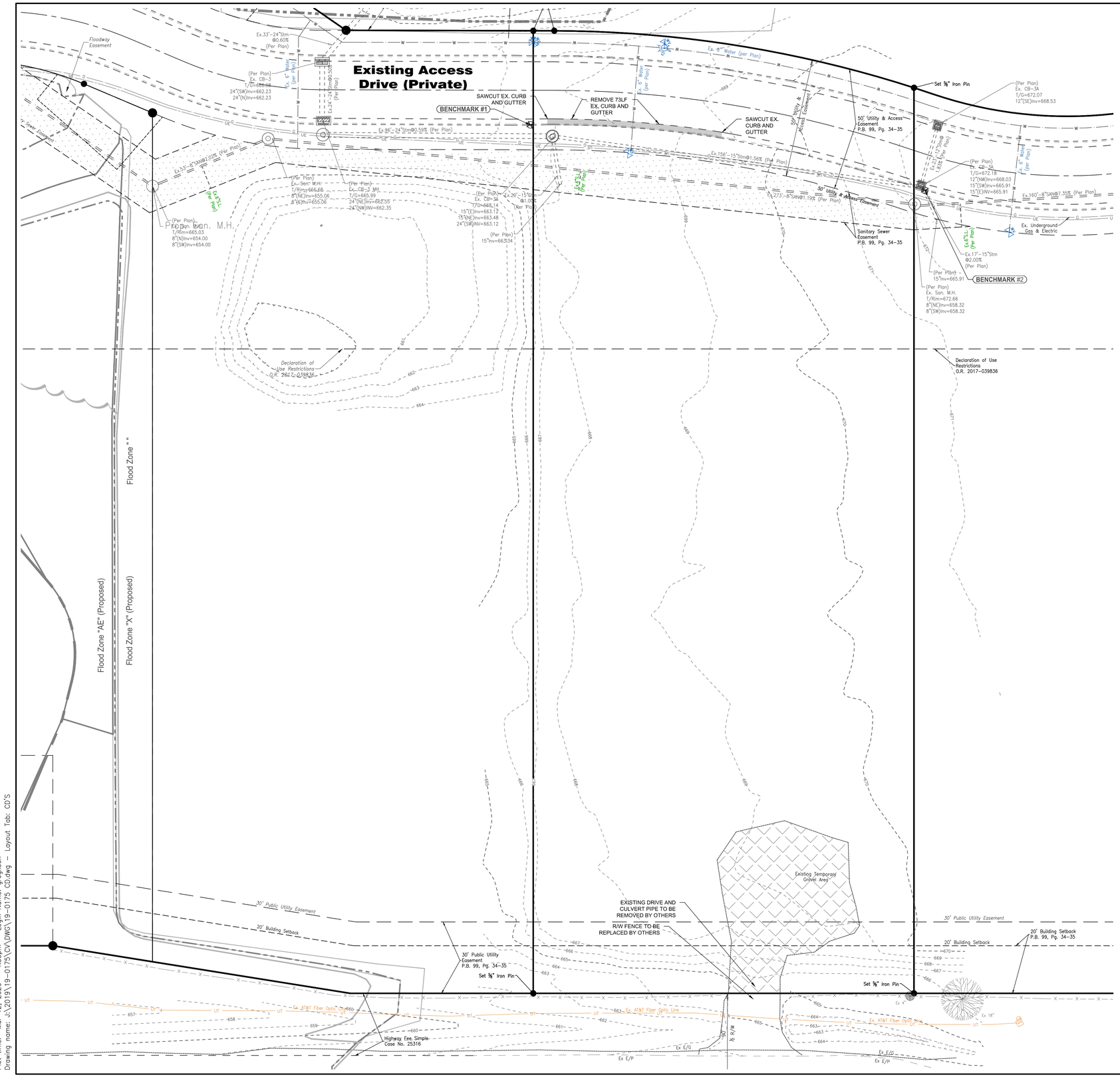
DATE: 12/5/19

SCALE: 1"=40'

TITLE SHEET

SHEET: C1.0

Plot time: Mar 12, 2020 - 4:57pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\CV\DWG\19-0175 CO.dwg - Layout Tab: CO'S



DEMOLITION LEGEND

EXISTING CONCRETE CURB, CONCRETE WALK, CONCRETE PAVEMENT, AND ASPHALT PAVEMENT TO BE REMOVED

EXISTING GRAVEL TO BE REMOVED BY OTHERS

LEGEND

- Ex Sanitary M.H.
- Ex Sanitary Clean Out
- Ex Storm M.H.
- Ex Storm Catch Basin
- Ex Storm Floor Drain
- Ex Storm Clean Out
- Ex Storm Down Spout
- Ex Fire Hydrant
- Ex Water Valve
- Ex Water Meter
- Ex Fire Connection
- Ex Spigot
- Ex Deciduous Tree
- Ex Evergreen Tree
- Ex Tele. Box
- Ex Gas Box
- Ex Gas Meter
- Ex Sign
- Ex Post
- Ex Bollard
- Ex Flag Pole
- Ex Signal Pole
- Ex Elec. Box
- Ex Elec. Meter
- Ex Light Pole
- Ex Utility Pole
- Ex Guy Wire
- Ex Deciduous Bush
- Found Iron Pin (size & cap as noted)
- Found Spike
- Found MAG Nail
- Found Cross Notch
- Set MAG Nail
- Set 5/8"x30" Iron Pin (Capped "Bayer Becker")
- Ex Underground Water Main
- Ex Underground Gas Main
- Ex Overhead Utilities
- Ex Underground Fiber Optic
- Ex Underground Electric
- Ex Underground Telephone
- Found Iron Pipe
- Found MAG Spike
- Found P.K. Nail
- Found Conc. Mon.
- Found Stone
- Found Mon. Box
- Found Axel
- Ex Evergreen Bush
- Set Spike
- Set Cross Notch
- Set Conc. Mon.
- Set 1" Iron Pin
- Set MAG Spike
- Set Benchmark

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL NECESSARY PERMITS/APPROVALS ARE IN PLACE BEFORE BEGINNING CONSTRUCTION.
2. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING FROM THE SITE ALL ITEMS SHOWN TO BE DEMOLISHED UNLESS OTHERWISE INDICATED OR NOTED. ALL MATERIALS SHALL BE REMOVED FROM SITE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
4. ALL EXISTING ITEMS NOT SPECIFICALLY NOTED TO BE DEMOLISHED SHALL REMAIN. CONTRACTOR IS RESPONSIBLE FOR REPLACING EXISTING ITEMS REMOVED DURING DEMOLITION THAT WERE TO REMAIN.
5. THE CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT, CURBS, AND SIDEWALKS AT NEW PAVEMENT, CURB, AND SIDEWALK JUNCTURES, NO JAGGED OR IRREGULAR CUTS WILL BE ACCEPTED.
6. ALL NECESSARY EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO CONSTRUCTION/DEMOLITION. EROSION CONTROL MEASURES ARE TO BE MAINTAINED AND IN WORKING CONDITION AT ALL TIMES.

Basis of Bearing: State Plane NAD83 (2011)

0 20 30

SCALE: 1" = 20'

Know what's **below.** **Call** before you dig.

CAUTION!!!
ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

REV	DATE	DESCRIPTION	BY
1	03-12-20	REVISE UNDERGROUND DETENTION & UTILITIES	GJK

STATE OF OHIO
GREGORY J. KOCH
69324
REGISTERED
PROFESSIONAL ENGINEER
3/12/20

bayer becker
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6900 Tylersville Road, Suite A
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L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

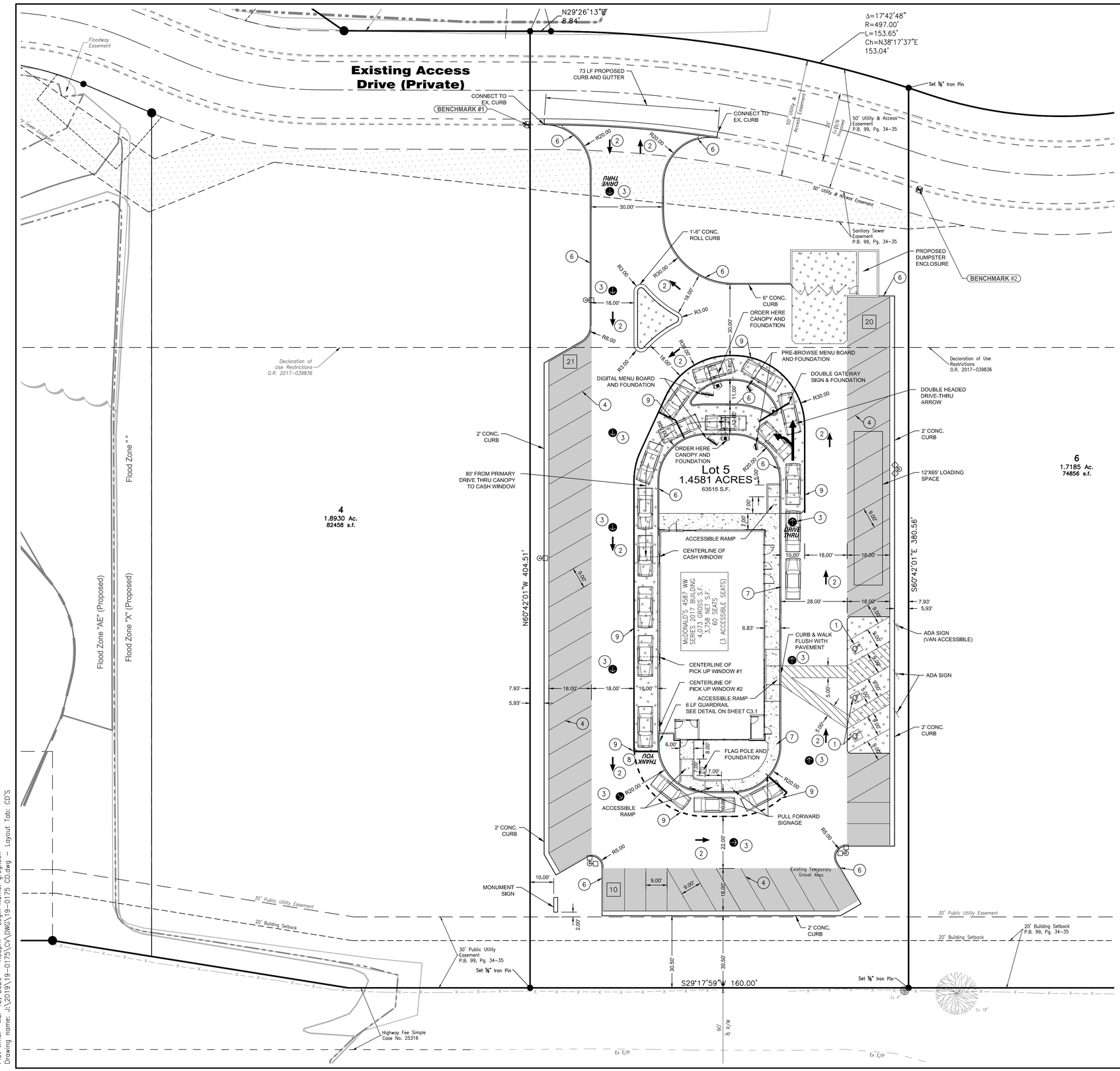
DATE: 12/5/19

SCALE: 1"=20'

DEMOLITION PLAN

SHEET: C2.0

Plot time: Mar 12, 2020 - 4:58pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\CD\DWG\19-0175 CD.dwg - Layout Tab: CD'S



LEGEND

- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- 20 — PARKING COUNT
- PROPOSED SITE LIGHTING

KEY NOTES

1. PROPOSED ADA PARKING (PAINTED HANDICAP SYMBOL)
2. DIRECTIONAL ARROW (WHITE)
3. DRIVE THRU PAVEMENT MARKINGS (YELLOW)
4. PROPOSED PARKING, 4" WIDE SOLID WHITE STRIPE, TYP.
5. 4" PAINTED WHITE STRIPE
6. PROPOSED 6" CONCRETE CURB
7. PROPOSED 6" CURB & SIDEWALK
8. "THANK YOU" (YELLOW)
9. 6" PAINTED YELLOW STRIPE
10. 12" PAINTED WHITE STRIPE

SITE LAYOUT NOTES

1. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) "CONSTRUCTION AND MATERIAL SPECIFICATIONS," AND PROJECT SPECIFICATIONS. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT STANDARD APPLIES.
3. WHERE CONNECTING TO EXISTING ASPHALT PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING EDGE OF PAVEMENT TO PROVIDE A CLEAN EDGE. ITEM 407 TACK COAT SHALL BE APPLIED TO THE ENTIRE CUT FACE OF THE EXISTING PAVEMENT PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT.
4. WHERE CONNECTING TO EXISTING CONCRETE WALK, THE CONTRACTOR SHALL SAWCUT THE EXISTING WALK (AT AN EXISTING JOINT IF POSSIBLE) TO PROVIDE A SOUND & CLEAN EDGE.
5. ADDITIONAL PAVEMENT/CURB WORK DUE TO EXTENTS OF DEMO OR REWORK SHALL BE INCLUDED AS PART OF THE CONTRACTORS SCOPE OF WORK.
6. ALL CURB RAMPS TO HAVE DETECTABLE WARNING SURFACE THAT MEETS ODOT'S APPROVED PRODUCTS LIST (APL). SURFACE APPLIED, STAMPED AND BRICK PRODUCTS ARE NOT PERMITTED.
7. ALL STOP SIGNS SHALL BE 30"X30".
8. ALL RADII ARE 3.00' UNLESS NOTED OTHERWISE ON THE PLANS.
9. SEE SHEET C3.1 FOR PAVEMENT SECTIONS.

SITE QUANTITIES

DEPRESSED CURB DRIVE APRON @ ENTRANCE	73 LF
6" CURB (ODOT TYPE 6)	776 LF
2' CONC. CURB	561 LF
1'-6" ROLL CURB	69 LF
HEAVY DUTY PAVEMENT	1891 SY
LIGHT DUTY PAVEMENT	989 SY
CONCRETE PAVEMENT (DRIVE THRU & ISLAND)	376 SY
ADA CONCRETE PAVEMENT	115 SY
TRASH ENCLOSURE PAD	109 SY
CONCRETE WALK	1252 SF

Know what's below. Call before you dig.

CAUTION!!!
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REV	DATE	DESCRIPTION	BY
1	02-14-20	REVISE PER SOUTH LEBANON COMMENTS	GJK
2	03-12-20	REVISE UNDERGROUND DETENTION & UTILITIES	GJK

STATE OF OHIO
GREGORY J. KOCH
69324
REGISTERED
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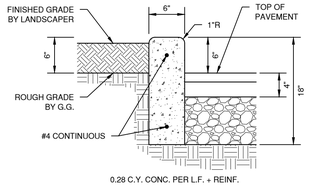
JOB NO. 19-0175
DATE: 12/5/19
SCALE: 1"=20'
SITE PLAN
SHEET: C3.0

Plot time: Mar 12, 2020 - 4:58pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\CVD\DWG\19-0175 CD.dwg - Layout Tab: CD'S

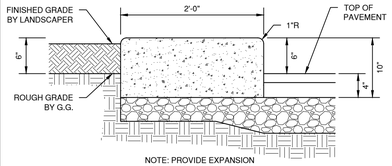


0.28 C.Y. CONC. PER L.F. + REINF.

NOTE: PROVIDE EXPANSION JOINTS @ 20'-0" O.C. (MAX)

6" CONCRETE CURB

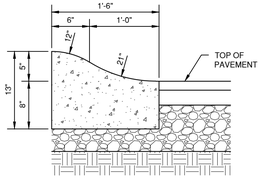
NOT TO SCALE



NOTE: PROVIDE EXPANSION JOINTS @ 20'-0" O.C. (MAX)

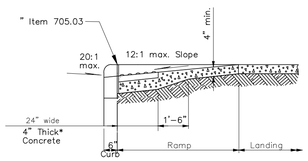
24" CONCRETE CURB

NOT TO SCALE



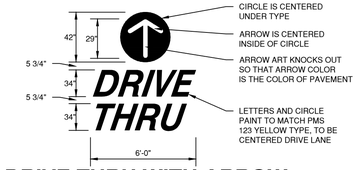
1'-6" CONCRETE ROLL CURB

NOT TO SCALE



New gutter shown.

SECTION A–A
NORMAL DETAIL

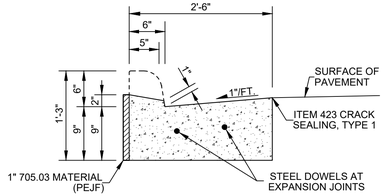


DRIVE THRU WITH ARROW

NOT TO SCALE

END OF PATH THANK YOU

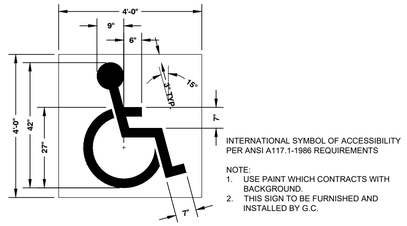
NOT TO SCALE



DEPRESSED 30" WIDE CURB DETAIL

NOT TO SCALE

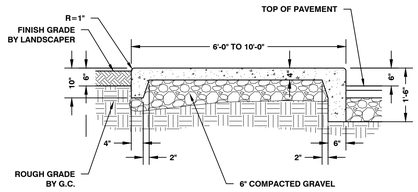
NOTE:
TRANSITION FROM STANDARD CURB SECTION TO BE MADE 18" FROM THE BEGINNING AND END OF THE DEPRESSED CURB LOCATIONS MARKED ON THE PLAN.



NOTE:
1. USE PAINT WHICH CONTRACTS WITH BACKGROUND.
2. THIS SIGN TO BE FURNISHED AND INSTALLED BY G.C.

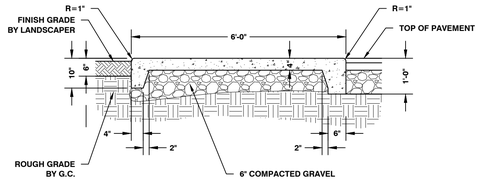
PAINTED HANDICAP PARKING SYMBOL

NOT TO SCALE



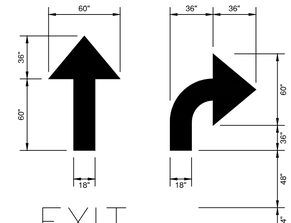
CONCRETE WALK & CURB DETAIL

NOT TO SCALE



FLUSH WALK & CURB DETAIL

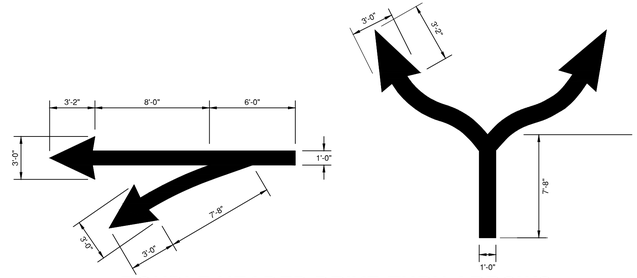
NOT TO SCALE



NOTE:
ARROWS AND WORDS CAN BE ARRANGED IN OTHER COMBINATIONS THAN THOSE ILLUSTRATED HERE TO ACHIEVE DESIRED RESULT.

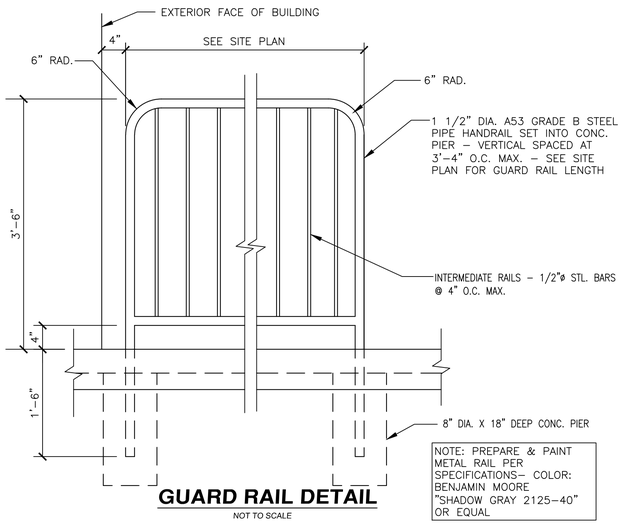
LANE ARROWS

NOT TO SCALE



DOUBLE HEADED DRIVE-THRU ARROWS

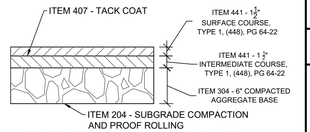
NOT TO SCALE



NOTE: PREPARE & PAINT METAL RAIL PER SPECIFICATIONS– COLOR: BENJAMIN MOORE "SHADOW GRAY 2125–40" OR EQUAL

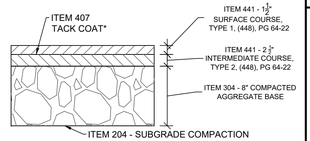
GUARD RAIL DETAIL

NOT TO SCALE



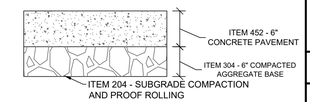
LIGHT DUTY ASPHALT

* ITEM 407 - TACK COAT TO BE PLACED BETWEEN ASPHALT LAYERS WHEN PAVEMENT HAS BEEN SUBJECTED TO TRAFFIC BEFORE UPPER LAYERS OF ASPHALT ARE PLACED. APPLICATION RATE TO BE A MINIMUM OF 0.100 GAL/SQ YD.

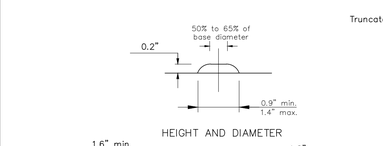


HEAVY DUTY ASPHALT

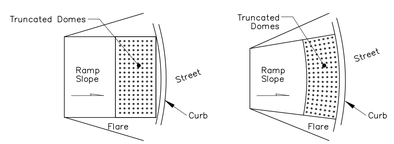
* ITEM 407- TACK COAT TO BE PLACED BETWEEN ASPHALT LAYERS WHEN PAVEMENT HAS BEEN SUBJECTED TO TRAFFIC BEFORE UPPER LAYERS OF ASPHALT ARE PLACED. APPLICATION RATE TO BE A MINIMUM OF 0.100 GAL/SQ YD.



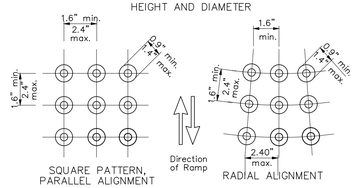
CONCRETE PAVEMENT



HEIGHT AND DIAMETER



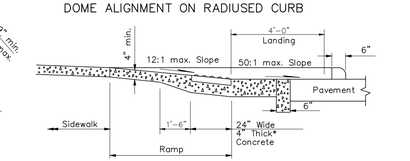
DOME ALIGNMENT ON RADIUSED CURB



SQUARE PATTERN, PARALLEL ALIGNMENT

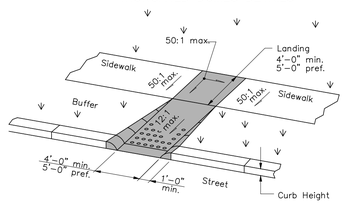
RADIAL ALIGNMENT

TRUNCATED DOMES DETAILS



SECTION D–D

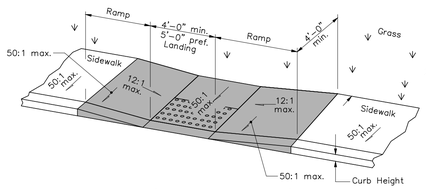
*Where possible, pour ramp area integral with the curb, otherwise use 6" thick walk.



Type A2 (Perpendicular with returned curb)

PERPENDICULAR CURB RAMP DETAILS

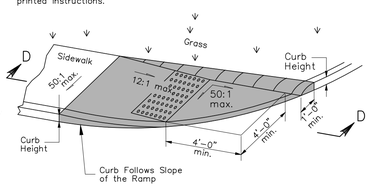
NOT TO SCALE



Type B2 (Double sided Parallel)

PARALLEL CURB RAMP DETAILS

NOT TO SCALE



Type B3 (Single sided Parallel)

PARALLEL CURB RAMP DETAILS

NOT TO SCALE

CURB RAMP NOTES

DRAINAGE: Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding 4" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed. See C7.0–C7.4 for Intersection Details.

SURFACE TEXTURE: Texture concrete surfaces by coarse brooming transverse to the ramp slopes to be rougher than the adjacent walk.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

DETECTABLE WARNINGS NOTES

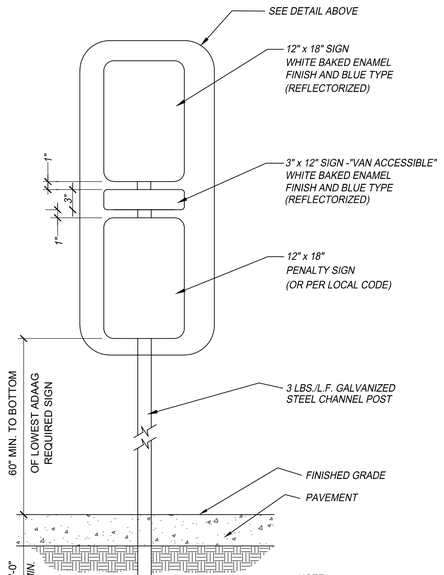
GENERAL: Detectable Warnings are a distinctive surface pattern of truncated domes which are detectable by cane or underfoot to alert people with vision impairments of their approach to streets and hazardous drop–offs.

PLACEMENT: Detectable warnings are to be installed at any location where pedestrians might cross paths with vehicular traffic lanes, such as the base of curb ramps or at blended curbs. A 24" strip of domes is to be installed for the full width of the ramp or walk. See plan locations of curb ramps.

The depth of concrete underneath detectable warning products shall be a minimum of 4". See SECTION A.

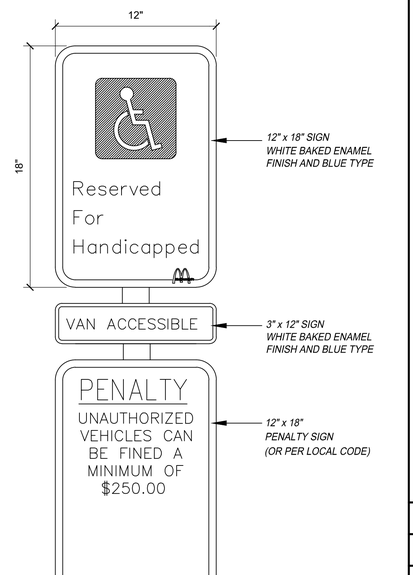
ALIGNMENT: Truncated domes should be aligned with the primary direction of the ramp as shown on the DETECTABLE WARNING ALIGNMENT Detail. Normally the detectable warnings should be flush with the back of the curb, but in skewed conditions at least one corner of the 24" strip should be adjacent to the back of curb. For non–standard layouts, detectable warning materials may have to be mitered and placed segmentally.

PRODUCTS & COLORS: Color of the detectable warnings should contrast with surrounding concrete walk and ramp. Black is not an acceptable color. Contractor to submit Armor–Tile Detectable/Tactile Warning Surface Cast in Place Tile or approved equal cut sheets for color selection approval to Owner. Install as per manufacturer's printed instructions.



ACCESSIBLE PARKING SIGN

NOT TO SCALE



ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE

BY | DESCRIPTION | DATE | REV

STATE OF OHIO
GREGORY J. KOCH
E–69324
REGISTERED PROFESSIONAL ENGINEER
2/17/20

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

L/C# 34-2068

McDonald's®
THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF MCDONALD'S CORPORATION AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION

PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

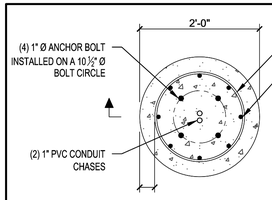
DATE: 12/5/19

SCALE: 1"= NTS

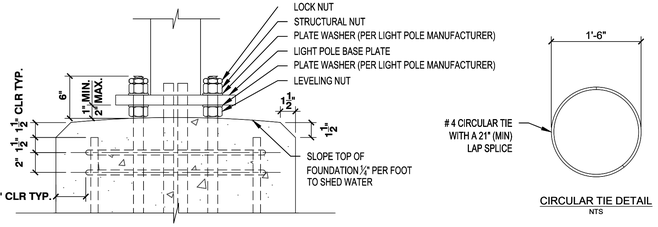
SITE DETAILS

SHEET: C3.1

Plot time: Feb 14, 2020 – 1:51pm – Login Name: gregkoch
Drawing name: J:\2019\19-0175\CWDWG\19-0175 C03.dwg – Layout Tab: C03

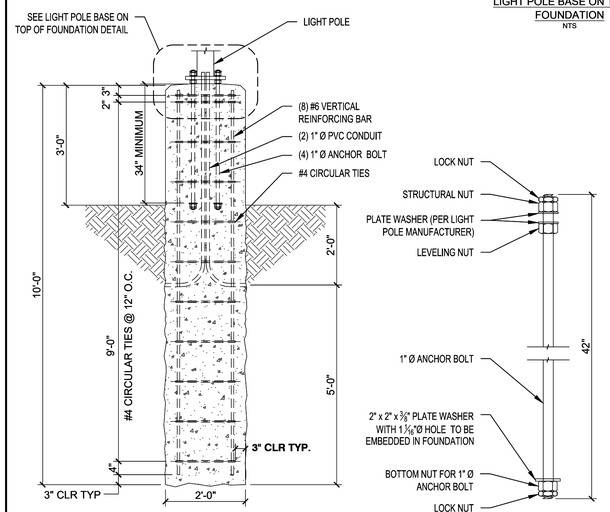


POLE BASE - PLAN VIEW
NTS



LIGHT POLE BASE ON TOP OF FOUNDATION
NTS

CIRCULAR TIE DETAIL
NTS



VIEW A-A
NTS

LIGHT POLE BASE
NTS

DESIGN CRITERIA:

AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, FIFTH EDITION, 2009

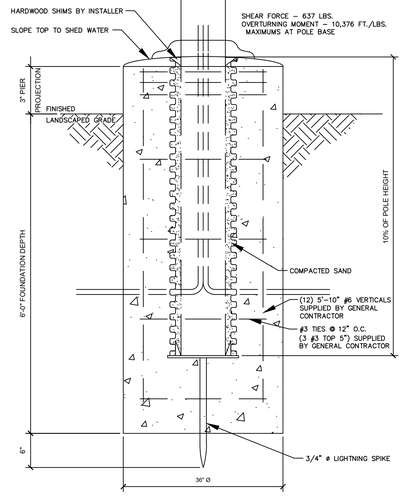
FOUNDATION DESIGN PARAMETERS:

1. MAXIMUM LIGHT POLE BASE REACTIONS:
   - BASE MOMENT = 16,845 lbs-ft
   - BASE SHEAR = 978 lbs
2. MAXIMUM WIND SPEED (3 SECOND GUST) = 120MPH
3. MINIMUM REQUIRED SOIL PARAMETERS:
   - COHESIVE SOILS:
     - SHEAR STRENGTH = 750 lbs/ft²
     - 6" MAXIMUM DEPTH OF DISTURBED SOIL OR TOP SOIL
   - COHESIONLESS SOILS:
     - ANGLE OF INTERNAL FRICTION = 27 DEGREES
     - WATER TABLE SHALL BE LOCATED BELOW THE BOTTOM OF THE FOUNDATION
     - 6" MAXIMUM DEPTH OF DISTURBED SOIL OR TOP SOIL
4. THE SOILS REPORT SHALL BE REVIEWED BY THE ENGINEER OF RECORD TO CONFIRM THAT THE MINIMUM SOIL PARAMETERS ARE MET OR EXCEEDED BEFORE THIS DESIGN IS USED. IF THE MINIMUM SOIL PARAMETERS ARE NOT MET, THIS DESIGN SHALL NOT BE USED.
5. THE ENGINEER OF RECORD SHALL REVIEW THE MAXIMUM BASE REACTIONS AND DESIGN WIND SPEED FOR THE LIGHT POLE TO BE INSTALLED TO DETERMINE IF THE FOUNDATION'S MAXIMUM DESIGN LOADS HAVE NOT BEEN EXCEEDED. THIS FOUNDATION DESIGN SHALL NOT BE USED IF THE MAXIMUM DESIGN LOADS OR WIND SPEED HAVE BEEN EXCEEDED.
6. THIS FOUNDATION DESIGN SHALL NOT BE USED IN LOCATIONS WHICH ARE CLOSER THAN 8ft FROM A RETAINING WALL.
7. THIS FOUNDATION DESIGN SHALL NOT BE USED AT LOCATIONS WHERE THE GROUND SLOPE EXCEEDS 4 inches per foot.

GENERAL NOTES:

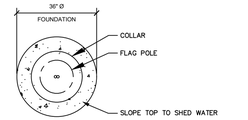
1. CONCRETE COMPRESSIVE STRENGTH (f'c) SHALL BE A MINIMUM OF 3000psi
2. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55, HOT DIP GALVANIZED PER ASTM F2329
3. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60, SUPPLIED BY GENERAL CONTRACTOR
4. NUTS SHALL BE HEAVY HEX ASTM A563 GRADE DH, HOT DIP GALVANIZED PER ASTM A153
5. PLATE SHALL BE ASTM A572 GRADE 50, HOT DIP GALVANIZED PER ASTM A153
6. LOCK NUT SHALL BE HOT DIP GALVANIZED PER ASTM A153

NOTE:
-DESIGN CODES
IBC 2009
ASCE 7-05
ACI 318-08
AISC 13th EDITION
AWS D1.1
NAAMM 1001-07
-DESIGN LOADS ARE BASED ON THE WORST CASE OF EITHER OF THE FOLLOWING CONDITIONS:
A. 90MPH 3-SEC GUST (EXPOSURE C) ACTING ON POLE AND FLAG
B. 120MPH 3-SEC GUST (EXPOSURE C) ACTING ON POLE ONLY
-DESIGN LOADS DERIVED FROM THESE CODES AND FORCES (#, #')
-SHEAR = 637 LBS.
-MOMENT = 10,376 FT./LBS.
-USE CONCRETE WITH A 3000PSI MINIMUM COMPRESSIVE STRENGTH (f'c).
-PIER DEPTHS REQUIRED ARE MINIMUMS. ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE 100 PSF/FT OF DEPTH (x2)
-TOP 6" OF SOIL NEGLECTED IN EMBEDMENT DEPTH CALCULATIONS (EMBEDMENT DEPTHS SHOWN ARE FROM GRADE).
-INSTALL SAND AND POLE PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
-SEAL SAND IN FOUNDATION WITH CAULK PER MANUFACTURERS GUIDELINES.
-ALL REINFORCING BY GENERAL CONTRACTOR.



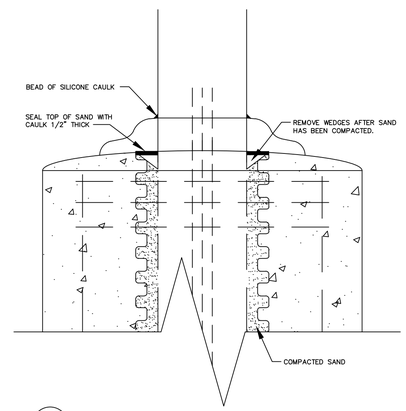
A 25' & 30' FLAG POLE FDN.
NTS

NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.



B
NTS

NOTES:
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.



C
NTS

GEN. NOTES

-THE FOLLOWING CODES WERE USED IN DESIGN:
-IBC 2009
-ASCE 7-05
-ACI 318-08
-AISC 13th EDITION
-AWS D1.1
-NAAMM 1001-07
-DESIGN LOADS ARE BASED ON THE WORST CASE OF EITHER OF THE FOLLOWING CONDITIONS:
A. 90MPH 3-SEC GUST (EXPOSURE C) ACTING ON POLE AND FLAG
B. 120MPH 3-SEC GUST (EXPOSURE C) ACTING ON POLE ONLY
-DESIGN LOADS DERIVED FROM THESE CODES AND FORCES
-SHEAR = 637 LBS.
-MOMENT = 10,376 FT./LBS.

-ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
-SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.

-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.

CONCRETE:

-ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
-ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-MINIMUM CONCRETE STRENGTH (f'c) SHOULD CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A.
-USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTION 2.6
-AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 2.6-A & 2.13-A
-WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 2.13-A
-FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 3.14
-PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
-REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
-ANCHOR BOLTS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
-DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION, SECTION 3.11-E.

-FLAG SIZES SHALL NOT EXCEED THE FOLLOWING AREA LIMITATIONS:

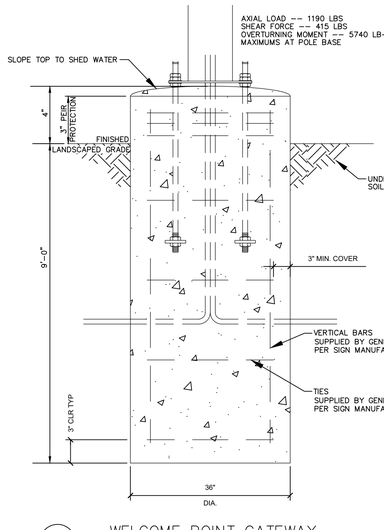
-25'-0" POLE --> 5'-0" x 8'-0" FLAG
-30'-0" POLE --> 6'-0" x 10'-0" FLAG
-40'-0" POLE --> 8'-0" x 12'-0" FLAG
-50'-0" POLE --> 10'-0" X 15'-0" FLAG

-REFER TO FLAG MANUFACTURER DRAWINGS AND INSTRUCTIONS FOR ADDITIONAL INFORMATION INCLUDING INSTALLATION INSTRUCTIONS.
-CONTRACTOR (INSTALLER) IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION IN REGARDS TO JOBSITE SAFETY.
-DETAILS AND STRUCTURAL MEMBERS NOT SHOWN DESIGNED BY OTHERS
-ANY MODIFICATIONS ARE TO BE VERIFIED BY AN ENGINEER

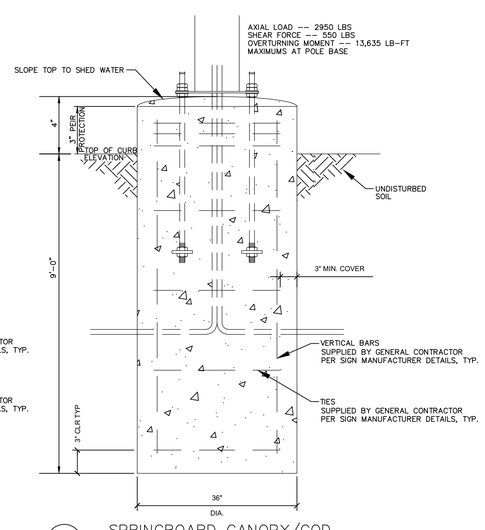
REV	DATE	DESCRIPTION	BY

STATE OF OHIO
GREGORY J. KOCH
E-69324
REGISTERED
PROFESSIONAL ENGINEER
2/17/20

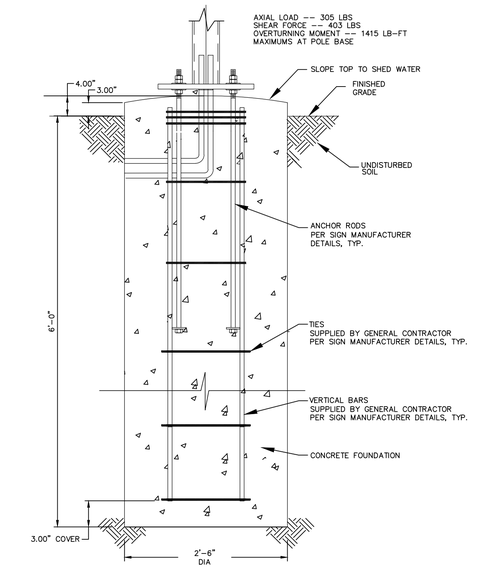
bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600



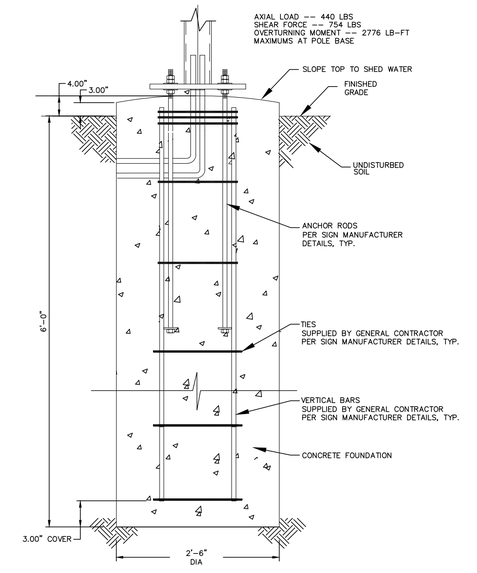
A WELCOME POINT GATEWAY
by Everbrite dated 4/11/16 NTS



A SPRINGBOARD CANOPY/COD
by Everbrite dated 4/10/16 NTS



A 55" ODMB 02 SINGLE
by Coates NTS



A 55" ODMB 02 DOUBLE
by Coates NTS

ENGINEER'S NOTE:

SEE SIGN MANUFACTURE'S PLANS FOR STRUCTURAL COMPONENTS SHOWN ON THIS PLAN. THE ENGINEER'S STAMP AFFIXED FOR CONCRETE FOUNDATION DIMENSIONS ONLY.

GENERAL NOTES

-THE FOLLOWING CODES WERE USED IN DESIGN:
-OBC 2017
-ASCE 7-05
-ACI 318-08
-AISC 13th EDITION
-AWS D1.1
-WIND SPEED 115 MPH (MPH 3-SEC GUST)
-ALL FOOTING EXCAVATIONS ARE TO BE CLEAR OF WATER AND FOREIGN MATTER BEFORE PLACING CONCRETE
-MINIMUM ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 100PSF/FT (x2)
-SITE SOIL CONDITIONS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. IF ASSUMED CLAY SOIL CONDITIONS ARE NOT PRESENT, FOUNDATION SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER TAKING INTO ACCOUNT ACTUAL SITE SOIL CONDITIONS.
-ELECTRICAL CONTRACTOR TO PROVIDE INFORMATION ON CONDUIT AND ELECTRICAL REQUIREMENTS.
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-SEE SIGN MANUFACTURER DETAILS FOR ANCHOR BOLT PATTERNS
-ALL REINFORCING STEEL TO BE PROVIDED BY GENERAL CONTRACTOR, PER SIGN MANUFACTURER DETAILS

CONCRETE:

-ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE.
-ALL PIERS TO EXTEND TO FROST DEPTH AS DETERMINED BY LOCAL JURISDICTION OR AS SHOWN WHICHEVER IS GREATER.
-TOP OF PIERS SHALL BE SLOPED SUCH THAT MOISTURE CANNOT ACCUMULATE.
-MINIMUM CONCRETE STRENGTH (f'c=3,000 PSI) SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-USE OF ADMIXTURES SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTION 2.6
-AIR ENTRAINMENT SHALL CONFORM WITH MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION SECTIONS 2.6-A & 2.13-A
-WATER CONTENT RATIO SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 2.13-A
-FOUNDATION CONCRETE TO BE TESTED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTION 3.14
-PROVIDE A MINIMUM 3" OF CONCRETE COVER OVER ALL EMBEDDED STEEL.
-REINFORCEMENT PLACEMENT SHALL CONFORM TO MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATIONS SECTIONS 3.2 & 3.5. PERFORMED BY GENERAL CONTRACTOR.
-ANCHOR RODS TO BE SET IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE
-DO NOT PLACE POLES ON CONCRETE UNTIL CONCRETE HAS CURED PER MCDONALDS CAST-IN-PLACE CONCRETE SPECIFICATION, SECTION 3.11-E.

STEEL:

-STEEL PIPE SECTION: ASTM A53 OR A252 TYPE E GRADE B (Fy=35ksi)
-HSS ROUND SECTION: ASTM A500 GRADE B (Fy=42ksi)
-HSS SQUARE/RECTANGULAR SECTIONS: ASTM A500 GRADE B (Fy=46ksi)
-HEADED ANCHOR RODS ASTM F1554 GR 55, AN ACCEPTABLE ALTERNATIVE IS ASTM F1554 GR 55, S1 WHEN THE EMBEDDED END OF THE ROD IS THREADED AND THE NUT TACK WELDED PRIOR TO GALVANIZATION.
-STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES AND PLATES: ASTM A36
-REINFORCEMENT: ASTM A615 GRADE 60 -- BY GENERAL CONTRACTOR
-NUTS: ASTM A563A, HEAVY HEX
-WASHERS: ASTM F844 A36
-USE ASTM A153 CLASS C HOT DIPPED GALVANIZED BOLTS AND FASTENERS
-ANCHOR RODS, NUTS, AND WASHERS SHALL BE SHIPPED AS AN ASSEMBLY FROM THE SIGN/LIGHTING MANUFACTURER
-NO FIELD HEATING TO BEND STEEL SHALL BE ALLOWED WITHOUT ENGINEER'S APPROVAL.
-DO NOT CUT ANCHOR RODS AFTER INSTALLATION OF POLE
-AFTER INSTALLATION, ALL EXPOSED STEEL SHALL BE PAINTED WITH AN ENAMEL PAINT TO INHIBIT CORROSION.
-ANY FIELD WELDING SHALL FIRST BE VERIFIED BY ENGINEER AND PERFORMED IN ACCORDANCE WITH AWS D1.1.
-REFER TO SIGN MANUFACTURER DRAWINGS AND INSTRUCTIONS FOR ADDITIONAL INFORMATION.
-CONTRACTOR (INSTALLER) IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION IN REGARDS TO JOBSITE SAFETY.
-DETAILS AND STRUCTURAL MEMBERS NOT SHOWN DESIGNED BY OTHERS
-ANY MODIFICATIONS ARE TO BE VERIFIED BY AN ENGINEER

PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

L/C# 34-2068

JOB NO. 19-0175

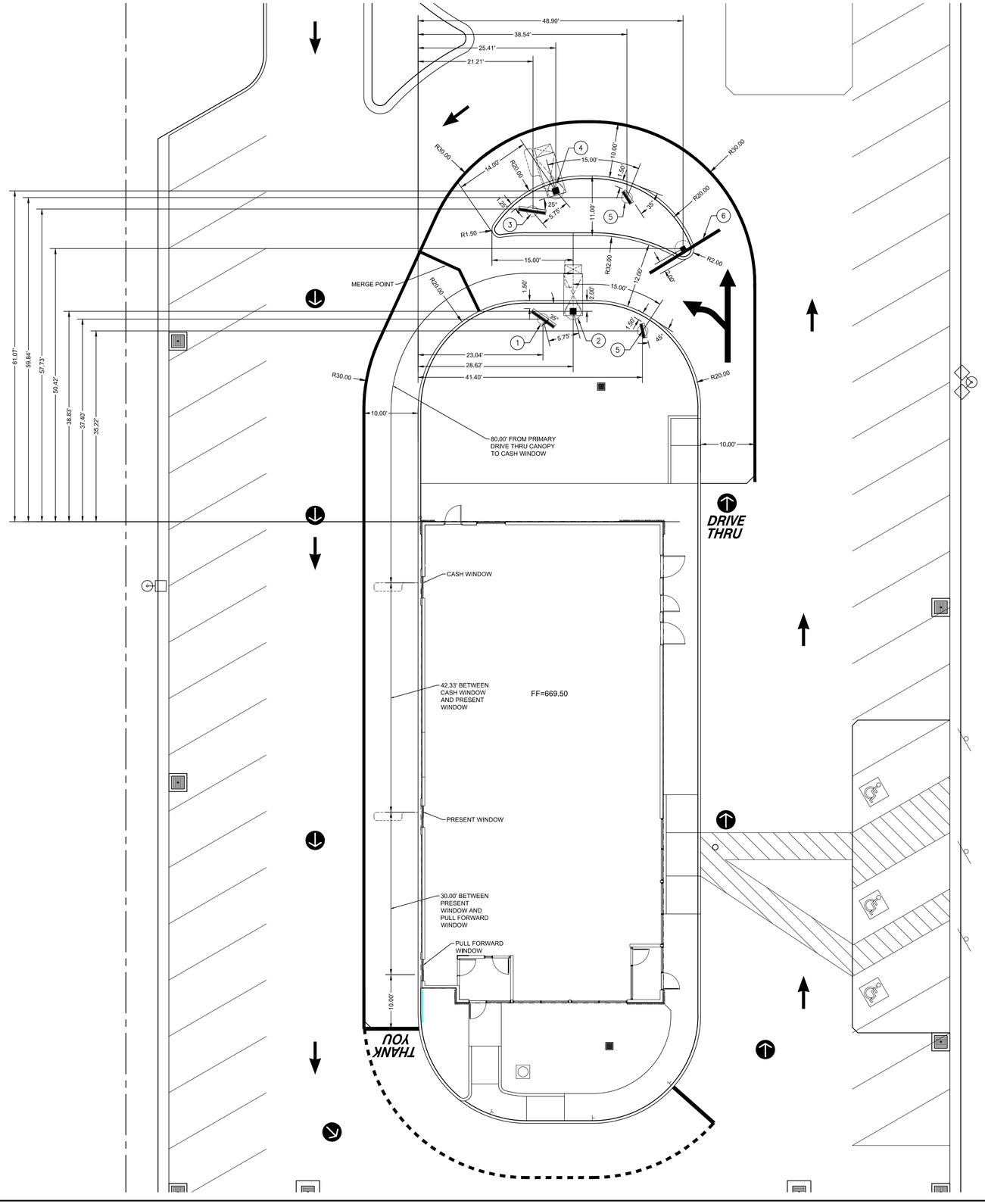
DATE: 12/5/19

SCALE: 1"= NTS

SITE DETAILS

SHEET: C3.2

Plot time: Feb 14, 2020 - 2:57pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175(C)\DWG\19-0175 CD.dwg - Layout Tab: CD'S



GENERAL NOTES

CURBING:
DRIVE-THRU LANES BOUND BY CURB ON BOTH SIDES ARE TO BE 12'-0". LANES BOUND BY CURB ON ONE SIDE AND PAINTED STRIPING ON THE OTHER SIDE ARE TO BE A MIN. OF 10'-0".

THE MIN. RADIUS FOR ALL INSIDE/DRIVER'S SIDE DRIVE-THRU CURBING IS 20'-0".

PRIMARY LANE CURBING SHOULD BE AS STRAIGHT AS POSSIBLE. (LESS CURVING, THE BETTER).

THE OVERALL LENGTH OF THE CURBED ISLAND SHOULD BE 50'-55'. THE LENGTH OF THE ISLAND FROM THE COD ALLOWS FOR TWO CARS IN THE SECONDARY LANE, TWO IN THE PRIMARY LANE AND ONE AT THE COMMITMENT POINT.

THE ISLAND WIDTH SHOULD BE 9.50' AT THE WIDEST POINT (FACE OF CURB TO FACE OF CURB).

ENTRANCE LANE ENTERING THE SIDE BY SIDE DRIVE-THRU IS TO BE 24' MIN.

PAVEMENT MARKINGS:
6" WIDE YELLOW PAINT STRIPE TO SPAN OUTER EDGE OF THE ENTIRE DRIVE-THRU LANE. LANE STARTS AT DRIVE-THRU ENTRANCE.

ARROW PAVEMENT MARKING. STANDARD STRIPING MARKINGS ARE 7' SHAFT, 7' ARROW STEM AND 3' FOR THE ARROW HEAD. TIP OF ARROW HEAD TO BE LOCATED AT CENTER OF EACH LANE.

MERGE POINT IS LOCATED WHERE TWO VEHICLES LEAVING EACH COD SIMULTANEOUSLY WOULD MEET. THE MERGE POINT STRIPING IS TO BE LOCATED BY OFFSETTING THE INNER PRIMARY LANE BACK OF CURB 9.0' AND OFFSETTING THE OUTER LANE STRIPING 8.0'. AT THE INTERSECTION OF THESE OFFSETS, A 6" YELLOW STRIPE IS TO BE MARKED PERPENDICULAR TO THE OUTER LANE AS WELL AS THE INNER PRIMARY LANE.

EQUIPMENT POSITIONING FOR PRIMARY LANE:
MIN. 60'(+/-5') LINEAR DISTANCE BETWEEN THE CENTER LINE OF THE PRIMARY COD FACE AND THE CENTER LINE OF THE OPEN CASH BOOTH WINDOW AS MEASURED ALONG THE CENTER LINE OF THE LANE. THIS MAY ONLY BE INCREASED IN 20' INCREMENTS TO A MAX. OF 100'. 100' IS OPTIMAL.

THE PRIMARY MENU BOARD SHOULD BE AT AN ANGLE BETWEEN 25° AND 35° ANGLE FROM A CAR POSITIONED AT THE COD TO MAXIMIZE SECOND CAR VIEWING.

AUGER "McDONALD'S ORDER HERE CANOPY" COD/CANOPY FOUNDATION TIGHT AGAINST BACK OF CURB. SEE MANUFACTURER/LOCAL SPECIFICATIONS FOR DETAILS.

AUGER "McDONALD'S GATEWAY" FOUNDATION TIGHT AGAINST BACK OF CURB. SEE MANUFACTURER/LOCAL SPECIFICATIONS FOR DETAILS.

THE PRIMARY LANE DETECTOR LOOP SHOULD BE PERPENDICULAR TO THE CENTER OF THE PRIMARY COD.

EQUIPMENT POSITIONING FOR SECONDARY LANE:
AUGER "McDONALD'S ORDER HERE CANOPY" COD/CANOPY FOUNDATION TIGHT AGAINST BACK OF CURB. SEE MANUFACTURER/LOCAL SPECIFICATIONS FOR DETAILS.

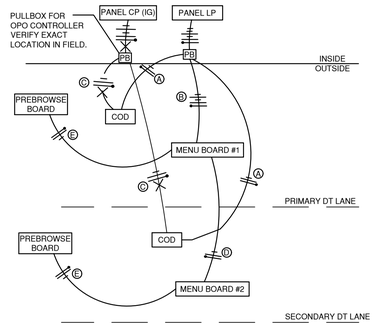
THE SECONDARY MENU BOARD SHOULD BE AT AN ANGLE OF APPROXIMATELY 25° FROM A VEHICLE POSITIONED AT THE COD AND WITH 100% VISIBILITY.

NOTES

1. THE REGIONAL CONSTRUCTION MANAGER IS TO REVIEW AND APPROVE ALL DRIVE-THRU LAYOUTS. A DRIVE-THRU IS FINAL, AND CONSIDERED "RED", ONCE APPROVED. NO CHANGES ARE TO BE MADE AFTER THIS POINT.
2. DUE TO THE EXACT GEOMETRY REQUIRED FOR THE EFFICIENT OPERATION OF THIS DRIVE-THRU LAYOUT, IT IS RECOMMENDED THAT ALL DRIVE-THRU EQUIPMENT AND PAVEMENT IMPROVEMENTS TO BE FIELD LOCATED BY A LICENSED SURVEYOR.
3. THE PLACEMENT OF THE CODs AND ANY ADDITIONAL EQUIPMENT SHOULD BE SUCH THAT IT PREVENTS, OR MINIMIZES, BLOCKING THE CUSTOMER'S VIEW OF THE MENU BOARD WHILE ORDERING.
4. ALL DRIVE THRU EQUIPMENT SUPPLIED BY MCDONALDS APPROVED SUPPLIERS.
5. SEE ADDITIONAL SHEETS FOR FOUNDATION DETAILS.
6. ALL DIMENSIONS SHOWN ARE TO THE CENTER OF THE FOUNDATION AND THE FACE OF CURB UNLESS OTHERWISE NOTED.

LEGEND

1. 2 PANEL OUTDOOR DIGITAL MENU BOARD (PRIMARY)
2. "ORDER HERE" CANOPY/ CANOPY FOUNDATION (PRIMARY)
3. 2 PANEL OUTDOOR DIGITAL MENU BOARD (SECONDARY)
4. "ORDER HERE" CANOPY/ CANOPY FOUNDATION (SECONDARY)
5. PRE-BROWSE BOARD
6. WELCOME POINT GATEWAY PYLON



(A) 2#12 & 1#12 GND. TO LP-1 FOR COD CANOPY LIGHTING.

(B) 4#12 & 1#12 GND. & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO MENUBOARDS AND MEDIA PLAYERS.

(C) 2#12 & 1#12 GND. & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO COD'S. EACH COD SHALL BE ON ITS OWN SEPARATE CIRCUIT.

(D) 2#12 & 1#12 GND. & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO MENUBOARDS AND MEDIA PLAYERS.

(E) 2#12 & 1#12 GND. & 1#12 ISOLATED GND., TO CP FOR ISOLATED GROUND POWER TO FOR PRESELL BOARDS AND MEDIA PLAYER.

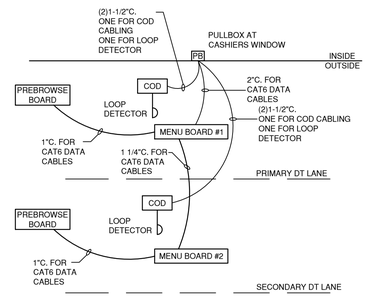
NOTE:
* VERIFY EXACT CIRCUITS & QUANTITIES OF CIRCUITS WITH PANEL SCHEDULES AND MANUFACTURERS INSTALLATION INSTRUCTIONS.

FOR EXISTING LOCATIONS:
* VERIFY EXISTING CP PANEL HAS AMPACITY AND SUFFICIENT SPARES/SPACE FOR (2) NEW 20A/1P CIRCUITS. UPGRADE CP PANEL TO 42 CIRCUITS IF NECESSARY.

* VERIFY EXISTING PULLBOXES ARE SIZED FOR NEW CONDUIT ROUTING. MODIFY PULLBOXES IF NECESSARY.

DRIVE THRU POWER DIAGRAM

NOT TO SCALE



DRIVE THRU LOW VOLTAGE CONDUIT DIAGRAM

NOT TO SCALE

Basis of Bearing:
State Plane NAD83 (2011)

0 10 15

SCALE: 1" = 10'

Know what's **below.**
Call before you dig.

CAUTION!!!
ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

REV	DATE	DESCRIPTION	BY

STATE OF OHIO
GREGORY J. KOCH
69324
REGISTERED
PROFESSIONAL ENGINEER
3/12/20

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

McDonald's®

PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

L/C# 34-2068

JOB NO. 19-0175

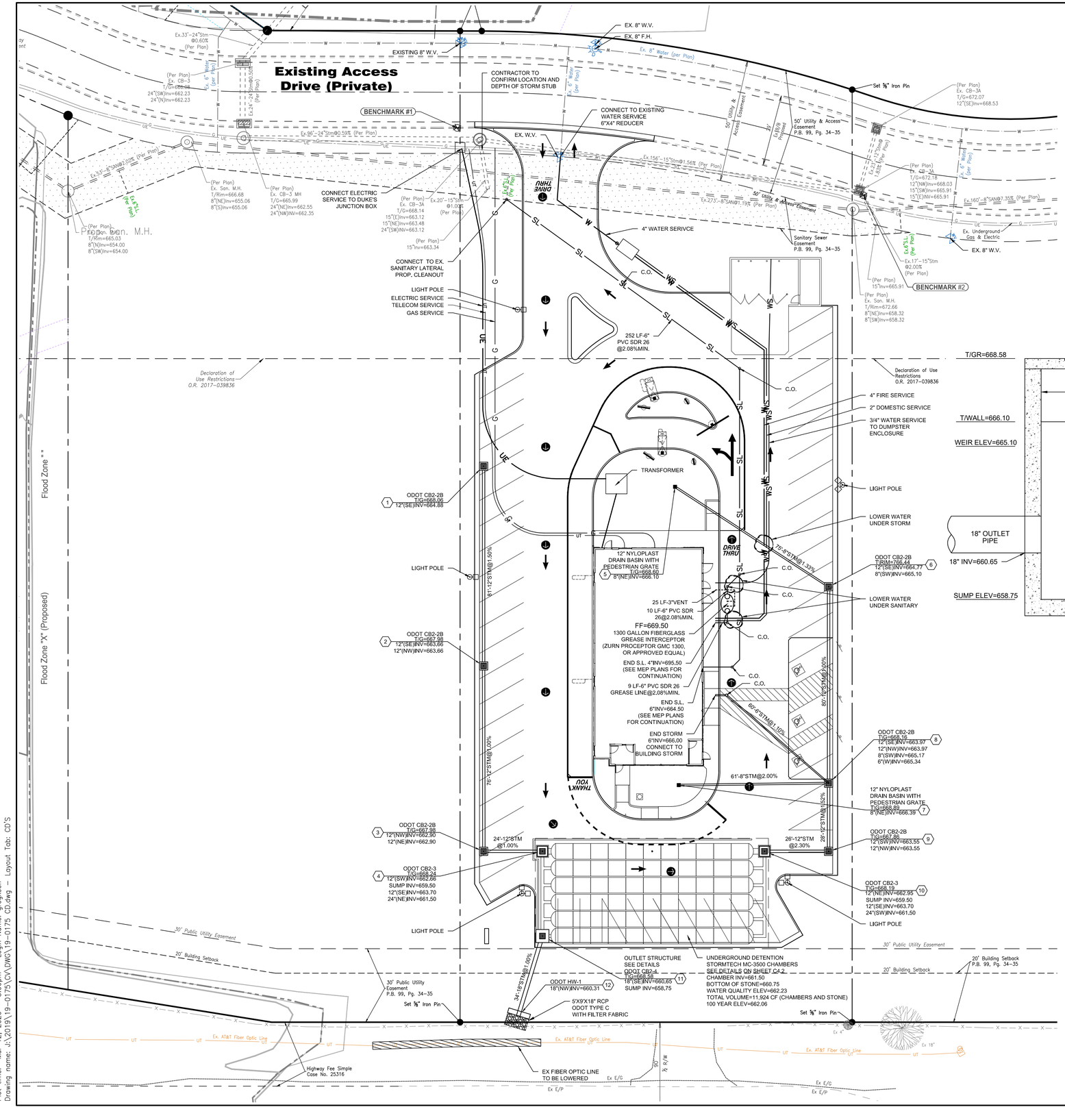
DATE: 12/5/19

SCALE: 1"=10'

DRIVE THRU DETAILS

SHEET C3.3

Plot time: Mar 12, 2020 - 4:59pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\(C)\DWG\19-0175 CD.dwg - Layout Tab: CD'S

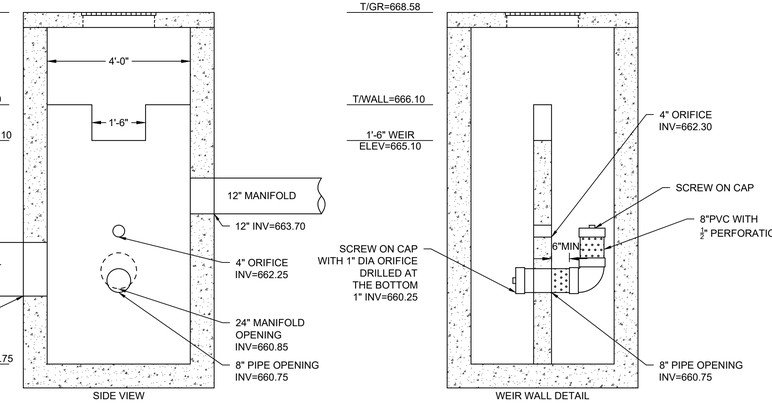


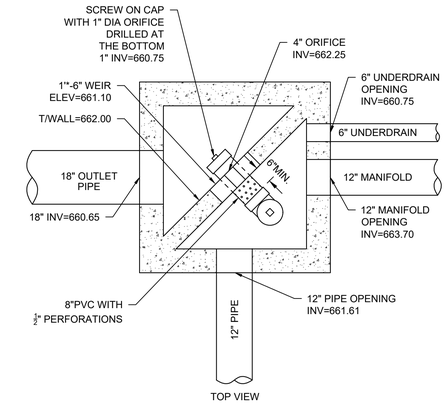
POST CONSTRUCTION WATER QUALITY

1. THE OWNER IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE PERMANENT WATER QUALITY SYSTEM ON THE SITE PER THE APPROVAL AND WILL COMPLETE ANY NECESSARY REPAIRS AND/OR PREVENTIVE MAINTENANCE PROCEDURES IN A TIMELY MANNER TO ENSURE PROPER FUNCTIONING OF THE SYSTEM AS A STORM WATER MANAGEMENT DEVICE.

UTILITY NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL CONFORM TO ALL APPLICABLE CITY OF FAIRFIELD REQUIREMENTS FOR STREETS, SIDEWALKS, ALLEYS AND ROADWAY DESIGN (LATEST EDITION).
2. LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY CONFLICTS IMMEDIATELY. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BY THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS, AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
4. ALL UTILITIES SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION.
5. ALL UTILITY CONNECTIONS SHALL BE COORDINATED WITH THE MECHANICAL AND ELECTRICAL PLANS. NOTIFY ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL INSTALL ANY BENDS, FITTINGS, ETC. IN THE WATER LINE AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES (NO SEPARATE PAY).
7. NO WATER JETTING TO BACK FILL TRENCHES WILL BE ALLOWED ON THIS PROJECT.
8. STORM SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE, SDR 26. FITTINGS AND JOINTS SHALL CONFORM TO COMPATIBLE SDR 26 PIPE, WITH THE EXCEPTION THE SOLVENT CEMENT JOINTS SHALL NOT BE USED.
9. THE CONTRACTOR SHALL INSTALL THE SANITARY SEWER SYSTEM OUTSIDE OF THE BUILDING IN ACCORDANCE WITH PROCEDURES SPECIFIED BY CITY OF FAIRFIELD.
10. ALL SPOIL AND OTHER UNSUITABLE MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
11. ALL SERVICES ARE BROUGHT TO WITHIN 5 FEET OF THE BUILDING. BUILDING CONTRACTOR SHALL INCLUDE IN THEIR BID THE COST TO CONNECT ALL SERVICES TO THE BUILDING.
12. CLEAN OUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLUMBING CODE AND AS DIRECTED BY CITY INSPECTOR. ALL CLEAN OUT TOPS SHALL INSTALLED AT LEAST 2" ABOVE FINISHED GRADE OUTSIDE PAVEMENT AND FLUSH WITH FINISHED GRADE WITHIN THE PAVEMENT AREAS.
13. CLEAN OUT TOPS WITHIN THE PAVEMENT AREAS SHALL BE TRAFFIC RATED.
14. THE SANITARY SEWER SERVICE FOR 5211 PLEASANT AVENUE SHALL REMAIN IN SERVICE. IF A SHUTDOWN IS NEEDED, CONTRACTOR SHALL COORDINATE WITH THE BUSINESS OWNER AND THE CITY OF FAIRFIELD.
15. THE FIRE LINE PIPE MATERIAL:
    15.1. FROM CONNECTION TO EXISTING 8" MAIN TO METER PIT SHALL BE DUCTILE IRON, CLASS 55.
    15.2. FROM METER PIT TO THE BUILDING SHALL BE C900 PVC PIPE.
16. THE DOMESTIC WATER SEWER SHALL BE POLYETHLENE PIPE FROM THE METER PIT TO THE BUILDING.





OUTLET CONTROL STRUCTURE - STR. NO 11
MODIFIED ODOT CB 2-3

NOT TO SCALE

Basis of Bearing: State Plane NAD83 (2011)

0 20 30

SCALE: 1" = 20'

Know what's below. Call before you dig.

CAUTION!!!
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REV	DATE	DESCRIPTION	BY
1	02-14-20	REVISE PER SOUTH LEBANON COMMENTS	GJK
2	03-12-20	REVISE UNDERGROUND DETENTION & UTILITIES	GJK

STATE OF OHIO
GREGORY J. KOCH
E - 69324
REGISTERED
PROFESSIONAL ENGINEER
3/12/20

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

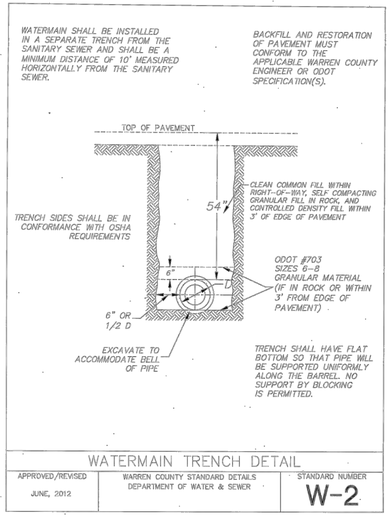
DATE: 12/5/19

SCALE: 1"=20'

UTILITY PLAN

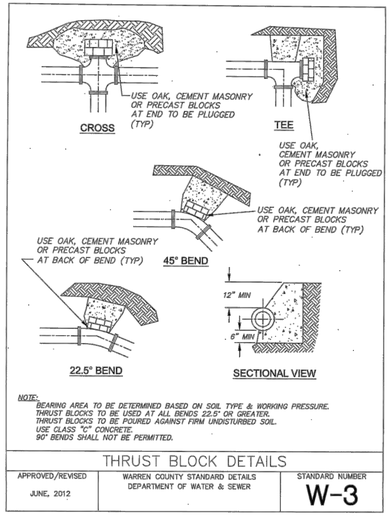
SHEET: C4.0

Plot time: Mar 12, 2020 - 5:00pm -- Login Name: gregkoch
Drawing name: J:\2019\19-0175\CAD\MCD\19-0175 CD.dwg -- Layout Tab: CD'S



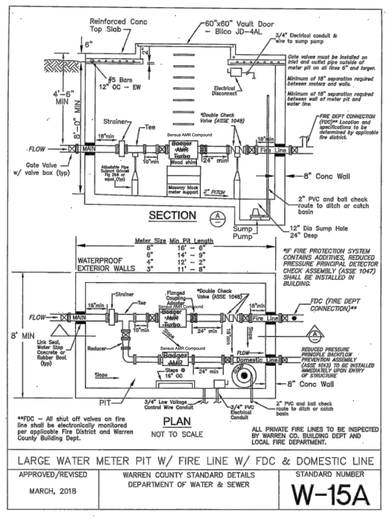
WATERMAIN TRENCH DETAIL

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
JUNE, 2012		W-2



THRUST BLOCK DETAILS

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
JUNE, 2012		W-3



LARGE WATER METER PIT W/ FIRE LINE W/ FDC & DOMESTIC LINE

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		W-15A

Gate Valves - AWWA Resilient Seated with cast iron body, bronze mounted, flanged connections, nonrising stem, fusion epoxy coating, 400 PSI hydrostatic rated. Valve shall be Metro Seal 250 by US Pipe or equal.

Flanged Coupling Adaptors - Flanged adaptor connections for plain end pipe at fittings and valves shall be Dresser Style 127 or 128, or equal.

Vault Door - 60" x 60" double leaf aluminum diamond plate with hold open arm locks. Green space area hatches rated for 300 PSF. Traffic areas shall be AASHTO H-20. Doors shall be JD-4AL or JD-4AL HD0 by Bilco or equal.

Strainer - Strainers 6" or smaller must be Badger Bronze Plate Strainers or equal. Screens must be made of non-corrosive 316 stainless steel with 3/16" or 1/4" perforations. Strainers 8" or larger must be Badger Model ML-MS Plate Strainers or equal. Screens must be made of non-corrosive stainless steel.

Sump Pump - Submersible pump with automatic level control, 115V single phase, discharge 25 - 30 gpm at 10 ft TDH. Sump pump operation and maintenance is the responsibility of the owner.

Piping - All piping 3" and larger shall be Class 52 ductile iron with Flanged fittings. Piping smaller than 3" shall be threaded steel. Domestic and sprinkler lines shall be Type K Copper through the vault.

Backflow Preventer - FIRE: ASSE 1048 Double Check Detector or ASSE 1047 Reduced Pressure Principle Detector if additives in system. ASSE 1047 to be installed in the building.

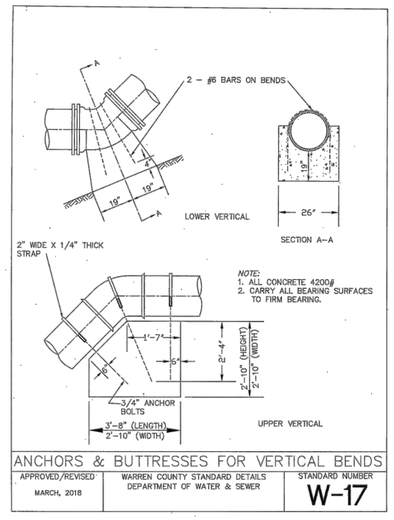
DOMESTIC: ASSE 1013 Reduced Pressure Principle Backflow Prevention Assembly installed immediately upon entry of structure.

IRRIGATION: ASSE 1013 Reduced Pressure Principle Backflow Prevention Assembly installed immediately upon entry of structure and before any sprinklers.

The operation and maintenance of all backflow preventers is the responsibility of the property owner.

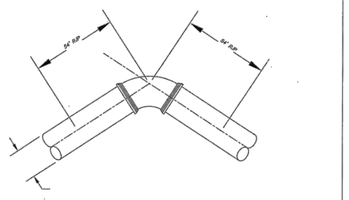
LARGE WATER METER PIT EQUIPMENT SCHEDULE

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		W-15C



ANCHORS & BUTTRESSES FOR VERTICAL BENDS

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		W-17



MINIMUM 54' OF RESTRAINED JOINT PIPE (RJP) IS REQUIRED BEFORE AND AFTER ALL BENDS. REFER TO TABLE BELOW.

RESTRAINT OPTIONS:

MECHANICAL JOINT W/ MEGALUGS ~ ALL SIZES OF PIPE
MJ FIELD LOCKS ~ < 24" PIPE

TABLE
REQUIRED LENGTH OF RESTRAINED JOINTS
d=DIAMETER OF PIPE
l=LENTH OF PIPE

d	4"	6"	8"	10"	12"	16"	20"	24"
l	54'	54'	54'	54'	66'	98'	125'	145'

REQUIRED RESTRAINED JOINTS FOR BENDS

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		W-18

WATER

1. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 4'-6".
A) ALL WATER SERVICE LATERALS SHALL HAVE A MINIMUM COVER OF 42".
2. ALL WATER MAINS SHALL BE DUCTILE IRON CONFORMING WITH AWWA SPEC. C-151 CLASS 52 IN SIZES 4"-16" AND PSI CLASS 350 FOR 20" AND ABOVE.
3. COMPACT FITTINGS ARE PERMITTED.
4. ALL WATER VALVES MUST OPEN LEFT. ALL VALVE BOX LIDS MUST BE CAST/STAMPED "WCWD" IN 1 1/2" LETTERS AND BE NEENAH NF-1913D002 OR EQUAL. ALL VALVE EXTENSIONS TO HAVE SET SCREWS.
5. A CONCRETE SLAB MUST BE PROVIDED AT FINAL GRADE AROUND ALL MAIN VALVE BOXES. THE SLABS MUST BE EIGHTEEN INCHES (18") SQUARE /CIRCLE AND NINE INCHES (9") THICK. PRE-FABRICATED CONCRETE RINGS ARE ACCEPTABLE.
6. WATER AND SEWER LINES SHALL HAVE A MINIMUM OF TEN FEET (10') HORIZONTAL SEPARATION AND/ OR TWO FEET (2') VERTICAL SEPARATION.
7. NO GATE VALVE, METER PIT, BLOW OFF OR CORPORATION STOP SHALL BE LOCATED UNDER OR WITHIN THREE FEET (3') OF DRIVEWAYS, ROADWAYS OR SIDEWALKS.
8. NO DRIVEWAY SHALL BE INSTALLED WITHIN FIVE FEET (5') OF A FIRE HYDRANT.
9. A MINIMUM OF THREE FEET (3') IS REQUIRED BETWEEN CORPORATION STOPS. NO TAP SHALL BE MADE WITHIN THREE (3') OF A BELL.
10. THE LOCATION OF WATER SERVICE LATERALS MUST BE STAMPED IN THE CURB AT THE TIME THE CURB IS PLACED TO PERMANENTLY INDICATE THE LOCATION OF SAID LATERALS.
11. THE LOCATION OF ALL WATER SERVICE LATERALS, BENDS, TEES, ETC. MUST BE PROVIDED ON THE AS-BUILT PLANS. ALL OF THESE APPURTENANCES SHOULD BE SURVEYED IN STATE PLANE COORDINATES AND ELECTRONICALLY DELIVERED WITH AS-BUILTS.
12. CONTRACTOR SHALL SUBMIT AS-BUILT PLANS OF SANITARY AND WATER LATERALS TO THE OWNER.
13. ALL WATER MAINS CROSSING UNDER STORM DRAINS SHALL BE BACK-FILLED WITH GRANULAR MATERIAL, O.D.O.T. ITEM 310.02, BETWEEN MAINS AND DRAINS.

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		WG-1A

WATER

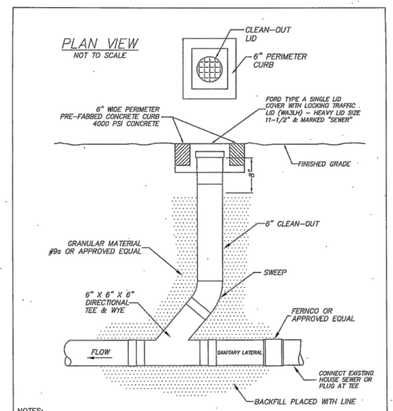
14. EACH SERVICE LATERAL MUST BE A CONTINUOUS PIECE OF PIPE FROM THE CORP STOP TO THE METER. COUPLINGS SHALL NOT BE ALLOWED. TYPE K COPPER SHALL BE USED FOR 3/4" AND 1" SERVICES. POLYETHYLENE 200 PSI (COPPER TUBE SIZE) MAY BE USED FOR 1 1/2" AND 2" SERVICES. TRACER WIRE MUST BE USED WITH POLY AND SDR 21.
15. SERVICE LINES 1" AND LARGER MUST BE EITHER TYPE K COPPER, POLY 200 PSI (ASTM D-2737) OR SDR 21 (SLIP-JOINT) (ASTM-2241). TRACER WIRE MUST BE TAPED EVENLY EVERY 3' ON POLY AND SDR 21 FROM THE METER PIT INTO THE STRUCTURE BEING SERVED (A 3' LEAD IS REQUIRED INSIDE THE PIT).
16. 1 1/2" AND 2" SERVICE LINES FROM THE CORP STOP TO THE METER PIT MUST BE TYPE K COPPER OR POLYETHYLENE 200 PSI. POLY MUST HAVE A TRACER WIRE. SEE W-10B.
17. FIRE HYDRANTS MUST BE PROVIDED AT THE ENTRANCE TO ALL SUBDIVISIONS AND AT ALL STREET INTERSECTIONS.
18. AN APPROVED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED ON ALL WATER SERVICE LATERALS BY THE PROPERTY OWNER PRIOR TO ANY POINT OF CONNECTION OR USAGE. THE FOLLOWING DEVICES AND LOCATIONS ARE REQUIRED.
A) RESIDENTIAL DWELLING UNITS (3 FAMILY OR LESS): LOCATED IMMEDIATELY UPON ENTRY OF STRUCTURE. DUEL CHECK VALVE A.S.S.E. 1024.
B) LANDSCAPE IRRIGATION SYSTEMS: REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY A.S.S.E. 1013. LOCATED IMMEDIATELY UPON ENTRY OF STRUCTURE.
C) FIRE PROTECTION SYSTEMS: DOUBLE CHECK DETECTOR CHECK ASSEMBLY A.S.S.E. 1048 OR REDUCED PRESSURE PRINCIPLE DETECTOR CHECK A.S.S.E. 1047 IF SYSTEM CONTAINS ADDITIVES. A.S.S.E. 1048 LOCATED IN VAULT AND A.S.S.E. 1047 LOCATED IN BUILDING.
D) NON-RESIDENTIAL SERVICES: REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY A.S.S.E. 1013, LOCATED IMMEDIATELY UPON ENTRY OF STRUCTURE.
19. SWAB PIPE WITH 50 PPM CHLORINE SOLUTION BEFORE INSTALLATION.
20. ALL NEW WATER MAINS SHALL BE PRESSURE TESTED FOR 2 HOURS AT 200 PSI, WHICHEVER IS GREATER. ALLOWABLE LEAKAGE SHALL BE PER TABLE 6A OF AWWA C-600.
21. DEDUCT METERS SHALL NOT BE ALLOWED.
22. NO IRRIGATION CONNECTIONS SHALL BE ALLOWED IN THE METER PIT.
23. BACK FLOW PREVENTER THAT COMPLIES WITH A.S.S.E. 1013 IS TO BE INSTALLED AHEAD OF ANY SPRINKLER BUT NOT IN METER PIT.
24. ALL MATERIALS USED SHALL BE DOMESTIC, MADE IN THE UNITED STATES OF AMERICA.

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		WG-1B

PROCEDURE FOR CONNECTION TO EXISTING WATER SYSTEM

1. MUST NOTIFY WARREN COUNTY WATER DEPARTMENT THREE (3) DAYS IN ADVANCE OF ANY SHUT DOWN. WARREN COUNTY WILL ISSUE THE SHUT DOWN NOTIFICATION AND/OR BOIL ADVISORY TO AFFECTED CUSTOMERS PER OHIO EPA REQUIREMENTS IF DETERMINED NECESSARY BY WARREN COUNTY.
2. EXPOSE EXISTING MAIN AT PROPOSED CONNECTION POINT. NO WET TAP SHALL BE MADE WITHIN THREE (3) FEET OF A BELL OR PIPE CONNECTION.
3. COUNTY PERSONNEL TO OPERATE CLOSING OF APPROPRIATE VALVES TO ISOLATE LINE TO BE TAPPED.
4. INSTALL PROPER TAPPING SLEEVE AND TAPPING VALVE. THE TAPPING SLEEVE AND VALVE SHALL BE TESTED AT 200 PSI FOR A PERIOD OF AT LEAST 5 MINUTES. THE PIPE SLUG MUST BE REMOVED AND INSPECTED BY COUNTY PERSONNEL.
5. IF THE TAPPING SLEEVE AND VALVE WILL BE UNDER FUTURE PAVEMENT, THE BURIED VALVE MUST BE LEFT OPEN AND A NEW VALVE SET OUT OF PAVEMENT.
6. FIELD CUT EXISTING MAIN AS NECESSARY TO ACCOMMODATE TEE AND CLOSE COUPLED VALVES AT EACH END OF TEE. CARE IS TO BE TAKEN SO AS NOT TO GET DIRT IN EXISTING MAIN.
7. THOROUGHLY CLEAN AND DISINFECT PIPE AND APPURTENANCES TO BE INSTALLED.
8. INSTALL TEE AND VALVES - DRESSER COUPLINGS CAN BE USED IF NECESSARY. PROPOSED MAIN VALVE IS TO BE CAPPED AND SHUT OFF. EXISTING MAIN IS THEN TO BE RETURNED TO SERVICE BY COUNTY PERSONNEL.
9. CONSTRUCTION OF PROPOSED MAIN IS TO BE COMPLETED WITHIN A JOINT OF CONNECTION TO TEE AND VALVES INSTALLED ABOVE.
10. ENTIRE LINE IS TO BE PRESSURE TESTED AND DISINFECTED TO COUNTY STANDARDS.
11. ENTIRE LENGTH OF PIPE IS TO BE THOROUGHLY CLEANED AND DISINFECTED PRIOR TO INSTALLATION. PERMATEX CHLORINE TABLETS TO BE USED FOR DISINFECTION. DOSAGE SHALL BE PER MANUFACTURER'S SPECIFICATIONS BASED ON PIPE MATERIAL.
12. NEW MAIN IS TO BE PUT INTO SERVICE BY COUNTY PERSONNEL.
13. TAPPING SLEEVES/SADDLES TO BE TWO-PIECE CAST IRON OR DUCTILE IRON (MUELLER H615). JCM412 OR FORD FTSS TAPPING SLEEVES PERMITTED ON C-900. SIZE ON SIZE TAPPING SLEEVES ARE NOT PERMITTED.

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		WG-2



NOTES:

CLEANOUTS SHALL BE INSTALLED AT ALL 45° BENDS.

ALL STRUCTURES MUST HAVE A CLEANOUT THAT IS ACCESSIBLE WITHIN TWO FEET (2') FROM THE POINT OF ENTRY INTO THE STRUCTURE.

SANITARY CLEAN-OUT

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		S-17

DETAILED PROCEDURES FOR SANITARY SEWER

1. PROCEDURE FOR MAKING SEWER LATERAL CONNECTIONS TO EXISTING SEWER:
A. IF ABS COMPOSITE - EXCAVATE TO POINT OF LATERAL ON MAIN; CLEAN EXISTING PIPE; ALIGN SADDLE TO PROPER POSITION AND MARK AREA TO BE CUT; CUT HOLE IN PIPE AS REQUIRED MAKING SURE THE CUT OUT DOESN'T ENTER THE MAIN; ATTACH AND SEAL SADDLE WITH STAINLESS STEEL STRAPS AND MASTIC SEALER BETWEEN SADDLE AND PIPE. INSERTA TEES ARE NOT PERMITTED.
B. IF CLAY OR CONCRETE - EXCAVATE TO POINT OF LATERAL ON MAIN; PLUG OUTLET PIPE AT UPSTREAM MANHOLE - PUMP TO DOWNSTREAM MANHOLE IF NECESSARY; REMOVE CLOSEST LENGTH OF PIPE AND REPLACE WITH TEE LATERAL SECTION OF PIPE OR CORE EXISTING PIPE IN PLACE.
2. PROCEDURE FOR MAKING SEWER EXTENSIONS FROM EXISTING MANHOLES: CONSTRUCT LINE TO WITHIN ONE JOINT OF EXISTING MANHOLE; AFTER LINE PASSES LEAKAGE TEST AND WARREN COUNTY SANITARY ENGINEER GIVES GO AHEAD - CONNECTION IS TO BE MADE; PLUG OUTLET PIPE AT UPSTREAM MANHOLE - PUMP TO DOWNSTREAM MANHOLE IF NECESSARY; A HOLE IS CUT AT THE PROPOSED INLET POINT AND THE LAST JOINT IS LAID; EXISTING BENCH AND CHANNEL OF MANHOLE IS REBUILT AND SHAPED AS REQUIRED; NEW CONNECTION IS TO BE SEALED AS REQUIRED.
3. PROCEDURE FOR MAKING NEW MANHOLES ON EXISTING SEWER MAINS: EXCAVATE AND EXPOSE EXISTING SEWER AT POINT OF NEW MANHOLE; BUILD MANHOLE OVER EXISTING LINE WHILE NOT DISTURBING EXISTING LINE; BUILD NEW LINE(S) FROM NEW MANHOLE; AFTER NEW LINE(S) PASS(ES) LEAKAGE TEST AND WARREN COUNTY SANITARY ENGINEER GIVES GO AHEAD - PLUG OUTLET PIPE AT EXISTING UPSTREAM MANHOLE (PUMP TO EXISTING DOWNSTREAM MANHOLE IF NECESSARY); BREAKOUT TOP OF EXISTING SEWER AS REQUIRED AND FORM A BENCH AND CHANNEL AS REQUIRED.
4. STORM WATER AND EXTRANEOUS FLOWS ARE PROHIBITED FROM ENTERING THE EXISTING SYSTEM DURING CONSTRUCTION. NO OPEN CUT TRENCHES WILL BE ALLOWED TO REMAIN OPEN OVERNIGHT. STORM DRAINS, DIVERSION DITCHES, PUMPS ETC., SHALL BE USED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE SYSTEM AT ALL TIMES.
5. ALL SANITARY SEWER PIPE MUST BE BEDDED WITH NUMBER 57 STONE EXTENDING FROM A POINT NOT LESS THAN 6" BELOW THE BOTTOM OF THE PIPE TO THE SPRINGLINE OF THE PIPE. BACKFILL WITH NUMBER 9 GRITS FROM THE SPRINGLINE TO A POINT NOT LESS THAN 12" ABOVE THE CROWN OF THE PIPE. BEDDING SHALL PROVIDE A UNIFORM SUPPORT ALONG THE ENTIRE PIPE BARREL, WITHOUT LOAD CONCENTRATION AT JOINT COLLARS OR BELLS. BEDDING DISTURBED BY PIPE MOVEMENT OR BY REMOVAL OF SHORING OR MOVEMENT OF THE TRENCH SHIELD OR BOX SHALL BE RECONSOLIDATED PRIOR TO BACKFILL. BEDDING TO BE COMPACTED TO 95% PROCTOR.

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		SG-1

SEWER

1. ALL SANITARY PIPE SHALL CONFORM TO ASTM D-2680 FOR ABS/PVC GASKETED COMPOSITE PIPE (TRUSS), ASTM D-3034 FOR SDR 26 GASKETED 4" - 15" DIAMETER OR ASTM F-679 FOR SDR 26 GASKETED 18" - 30" DIAMETER - PIPE LARGER THAN 15" SHALL CONFORM TO ASTM F-949 (A2000) OR ASTM F-1803. CERAMIC COATED CLASS 53 DUCTILE IRON PIPE OR EQUAL MUST BE USED WHERE SPECIFIED BY THE COUNTY SANITARY ENGINEER. JOINTS FOR PVC GRAVITY SEWER PIPE SHALL BE PUSH-ON TYPES WITH RUBBER GASKETS. PIPE ENDS SHALL NOT BE BEVELED. PIPE ENDS MUST BE SEALED.
2. ROOF DRAINS, FOUNDATION DRAINS AND OTHER STORM WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED.
3. NO MANHOLE, OR ANY PORTION OF THE MANHOLE, SHALL BE LOCATED UNDER A SIDEWALK OR DRIVEWAY.
4. SANITARY SEWER LATERALS SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS:
A) ABS PIPE - ASTM D-2751 WITH SDR 23.5 (6" GLUE JOINT)
B) PVC PIPE - ASTM D-3034 WITH SDR 23.5 (6" GLUE OR GASKET JOINT)
ASTM D-2665 SCHEDULE 40
ASTM D-3034 WITH SDR 35 (6" ONLY)
C) DUCTILE IRON - CLASS 53 (6")
5. SEWER LATERALS MUST BE EXTENDED TO THE HOUSE SIDE OF UTILITY EASEMENTS AND SHALL BE MARKED BY TWO INCHES (2") BY FOUR INCHES (2" X 4") OR LARGER POSTS. POSTS SHALL BE PAINTED GREEN. A SIX FOOT (6') LENGTH OF #6 REINFORCED BAR SHALL BE INSTALLED AGAINST THE POST. END OF SEWER LATERAL SHALL NOT EXCEED 4' IN DEPTH UNLESS APPROVED BY THE COUNTY SANITARY ENGINEER. SEE DETAIL S-14A.
6. ONLY SANITARY WYES WITH 45° BENDS SHALL BE USED FOR SANITARY LATERAL INSTALLATION. ALL WYES TO BE GLUE JOINTS ON TRUSS AND COMPOSITE PIPE. ALL SANITARY LATERALS MUST BE SIX INCHES (6") IN DIAMETER WITHIN THE RIGHT-OF-WAY NO CONNECTION SHALL BE MADE TO THE CROWN OF THE SEWER MAIN.
7. ALL LATERALS TO BE NOT LESS THAN SIX INCHES (6") INSIDE DIAMETER.
8. THE LOCATION OF SEWER LATERALS MUST BE STAMPED IN THE CURB AT THE TIME THE CURB IS PLACED TO PERMANENTLY INDICATE THE LOCATION OF SAID LATERALS.
9. THE LOCATION OF ALL SEWER LATERALS MUST BE PROVIDED ON THE AS-BUILT PLANS.
10. MANHOLE LATERALS SHALL HAVE AN INVERT TWO INCHES (2") ABOVE MAIN-LINE INVERT.

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SEWER (CONTINUED)

11. EXISTING MANHOLE CASTINGS ARE TO BE RAISED BY EITHER A MANHOLE ADJUSTING RING OR A BARREL SECTION ADDED. IF THE HEIGHT OF NECESSARY ADJUSTMENT IS OVER ONE FOOT (1') OR THERE IS ALREADY AN EXISTING ADJUSTMENT RING BEING USED, THE CONTRACTOR IS TO USE A NEW BARREL SECTION ONLY. EXTRA CARE IS TO BE TAKEN TO INSURE A PROPER AND TIGHT SEAL AT ALL NEW JOINTS.
12. THE CONTRACTOR MUST INSTALL MECHANICAL PLUGS(S) AT THE POINT(S) OF CONNECTION TO THE EXISTING SEWER PRIOR TO INITIATING ANY CONSTRUCTION. THE BULK HEADS(S) OR MECHANICAL PLUG(S) SHALL REMAIN IN PLACE UNTIL THE NEW MAINS HAVE BEEN FLUSHED, CLEANED, TESTED, TELEVISED, AND APPROVED FOR USE BY WARREN COUNTY. THE MECHANICAL PLUG(S) CAN ONLY BE REMOVED IN THE PRESENCE OF A WARREN COUNTY SEWER INSPECTOR.
13. TRENCH SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST INSURE THAT ALL APPLICABLE OSHA OPEN TRENCH SAFETY REQUIREMENTS ARE FOLLOWED. IT IS NOT WARREN COUNTY'S RESPONSIBILITY TO INSPECT EACH SITE FOR COMPLIANCE.
14. HDPE PIPE MAY BE USED FOR DIRECTIONAL BORING OF FORCE MAINS WITH APPROVAL FROM THE COUNTY SANITARY ENGINEER. ALL DIRECTIONAL DRILLING SHOULD BE ACCOMPANIED BY DRILLING LOGS AT 25' STATION INCREMENTS. PVC PIPE SHALL BE PERMITTED FOR FORCE MAINS SIX INCHES (6") OR SMALLER IN DIAMETER. FORCE MAINS EIGHT INCHES (8") OR LARGER MUST BE CLASS 53 DUCTILE IRON WITH AN INTERIOR LINING OF EPOXY OR CERAMIC. PVC SHALL CONFORM TO AWWA C900 REQUIREMENTS AND HAVE AN EQUIVALENT OUTSIDE DIAMETER OF DR 14.
15. MINIMUM SLOPE SHALL BE AS FOLLOWS:

PIPE SIZE	MINIMUM SLOPE (%)
6"	.200
8"	.50
10"	.35
12"	.28
15"	.19
18"	.15

16. ALL MATERIALS USED SHALL BE DOMESTIC, MADE IN THE UNITED STATES OF AMERICA.

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PIPE CONNECTIONS INTO MANHOLES

SEWER PIPE TO MANHOLE CONNECTIONS ON ALL SANITARY SEWERS SHALL BE FLEXIBLE AND WATERTIGHT. SEWER PIPE SHALL BE SEALED IN THE MANHOLE SECTION PIPE OPENINGS WITH A RESILIENT CONNECTOR MEETING THE REQUIREMENTS OF ASTM C923. THE CONNECTION MAY BE ANY OF THE FOLLOWING TYPES:

1. RUBBER SLEEVE WITH STAINLESS STEEL BANDING
A) KOR-N-SEAL AS MANUFACTURED BY POLLUTION CONTROL SYSTEMS, INC.
B) LOCK JOINT FLEXIBLE MANHOLE SLEEVE AS MANUFACTURED BY INTERSPACE CORPORATION
C) OR EQUAL
2. RUBBER GASKET COMPRESSION
A) PRESS WEDGE II AS MANUFACTURED BY PRESS-SEAL GASKET CORPORATION
B) DURA-SEAL MANUFACTURED BY DURA TECH, INC.
C) OR EQUAL

RESILIENT CONNECTOR SHALL BE CAST INTEGRALLY INTO THE WALL OF THE MANHOLE SECTION AT TIME OF MANUFACTURE OR SHALL BE INSTALLED BY MECHANICAL MEANS IN OPENINGS CUT INTO MANHOLE WALL PER ASTM C923.

ANY CONNECTION TO AN EXISTING MANHOLE MUST BE MADE BY CORING THE MANHOLE. ANY CORE TO A MANHOLE MUST BE CENTERED IN THE BARREL SECTION. NO CORE SHALL BE MADE ALONG THE SEAM OF THE BARREL SECTION(S).

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2008		SG-3

SEWER TESTING

1. THE CONTRACTOR MUST INSTALL MECHANICAL PLUG(S) AT THE POINT(S) OF CONNECTION TO THE EXISTING SEWER PRIOR TO INITIATING ANY CONSTRUCTION. THE MECHANICAL PLUG(S) SHALL REMAIN IN PLACE UNTIL THE NEW MAINS HAVE BEEN FLUSHED, CLEANED, TESTED, TELEVISED, AND APPROVED FOR USE BY WARREN COUNTY. THE MECHANICAL PLUG(S) CAN ONLY BE REMOVED IN THE PRESENCE OF A WARREN COUNTY SEWER INSPECTOR.
2. ALL NEW MANHOLES SHALL BE VACUUM TESTED. A VACUUM OF 10" OF MERCURY SHALL BE DRAWN ON THE MANHOLE. FOR A 4' MANHOLE LESS THAN 20' DEEP, MANHOLE SHALL HOLD 9" OF MERCURY FOR AT LEAST 1 MINUTE.
3. ALL SANITARY SEWER MAINS MUST BE AIR TESTED. THE STANDARD TEST IS AN AIR PRESSURE TEST OF 5.0 PSI FOR A FIVE (5) MINUTE PERIOD WITH A MAXIMUM OF 1.0 PSI LOSS.
4. ALL NON-TRUSS PIPE SHALL BE TESTED FOR DEFLECTION AFTER BACKFILLING IS COMPLETED (30 DAY MINIMUM REQUIRED). A DEFLECTION TEST WITH A NINE POINT MANDREL WILL BE REQUIRED. NO MECHANICAL PULLING DEVICE SHALL BE USED. A VERTICAL RING DEFLECTION GREATER THAN FIVE PERCENT (5%) WILL NOT BE ALLOWED. THIS DEFLECTION IS DEFINED AS A FIVE PERCENT REDUCTION IN THE VERTICAL BASE OR AVERAGE INSIDE DIAMETER.
5. AT THE TIME THE SANITARY SEWER IS TESTED, THE SEWER MUST BE CLEANED AND TELEVISED WITH VIDEO DOCUMENTATION (DVD) PROVIDED TO WARREN COUNTY. THE VIDEO MUST INCLUDE AUDIO IDENTIFICATION OF PIPE SPANS FROM MANHOLE TO MANHOLE, FLOW DIRECTION, TILT AND PAN OF ALL LATERALS AND CALL OUT ANY SUSPECT PROBLEMS IN THE SYSTEM. ALL PROBLEMS MUST BE IDENTIFIED BY THE CONTRACTOR. THE NECESSARY REPAIRS MUST BE MADE AND THE SEWER MUST THEN BE RE-CLEANED, RE-TESTED AND RE-TELEVISED.
6. A SECOND VIDEO INSPECTION IS REQUIRED ONE YEAR AFTER INSTALLATION AND/OR PRIOR TO THE RELEASE OF THE MAINTENANCE BOND. IF A DEFICIENCY IS IDENTIFIED DURING THIS TELEVISED INSPECTION, THE FAILED SEWER PIPE MUST BE TESTED AND REPAIRED TO THE SATISFACTION OF THE COUNTY SANITARY ENGINEER.
7. THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE THE TELEVISING, TESTING AND REPAIRS OF THE SANITARY SEWER.

APPROVED/REVISED	WARREN COUNTY STANDARD DETAILS DEPARTMENT OF WATER & SEWER	STANDARD NUMBER
MARCH, 2018		SG-4

REV	DATE	DESCRIPTION	BY
1	02-14-20	REVISE PER SOUTH LEBANON COMMENTS	GJK

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

DATE: 12/5/19

SCALE: 1"= NTS

UTILITY DETAILS

SHEET: C4.1

Plot time: Feb 14, 2020 - 1:54pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\CV\DWG\19-0175 C03.dwg - Layout Tab: C4.1 UTILITY DETAILS

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	KEVIN HENDRICKSON 513-497-9953 KEVIN.HENDRICKSON@ADS-PIPE.COM
ADS SALES REP:	JUSTIN MEYER 513-325-9139 JUSTIN.MEYER@ADS-PIPE.COM
PROJECT NO:	S159313

ADVANCED DRAINAGE SYSTEMS, INC.

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MCDONALDS SOUTH LEBANON

SOUTH LEBANON, OH

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45s76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (+1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE. THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM -9" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT

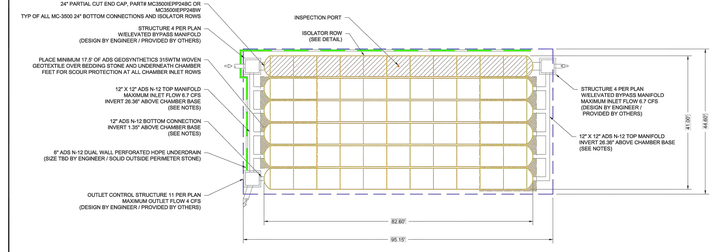
55	STORMTECH MC-3500 CHAMBERS
12	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
30	% STONE VOID
12,208	**INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)**
4,244	SYSTEM AREA (SF)
279	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

673.25	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
667.25	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
666.75	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
666.75	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
666.75	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
666.25	TOP OF STONE
665.25	TOP OF MC-3500 CHAMBER
663.70	12" TOP MANIFOLD INVERT
661.67	24" ISOLATOR ROW CONNECTION INVERT
661.61	12" BOTTOM CONNECTION
661.50	BOTTOM OF MC-3500 CHAMBER
660.75	UNDERDRAIN INVERT
660.75	BOTTOM OF STONE

NOTES

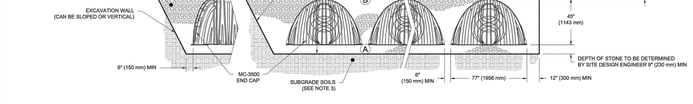
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

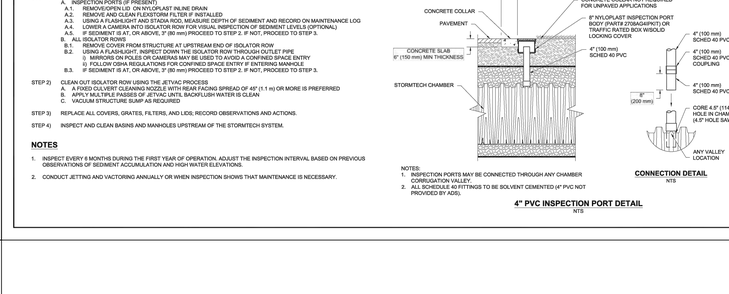
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[1,2]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45s76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



MC-3500 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO THE ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i). MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

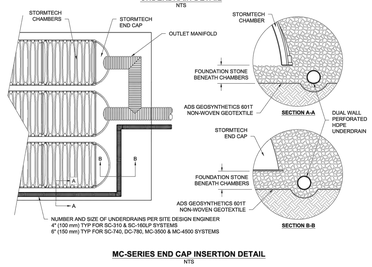
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

NOTES:
1. INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.
2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED (4" PVC NOT PROVIDED BY ADS).

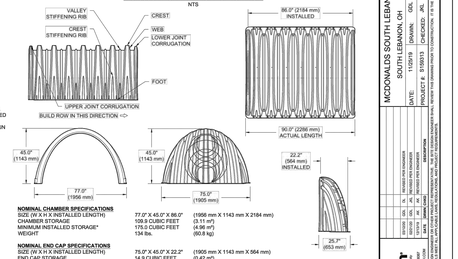
4" PVC INSPECTION PORT DETAIL
NTS

CONNECTION DETAIL
NTS

UNDERDRAIN DETAIL
NTS



MC-3500 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.8 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" (152 mm) STONE BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

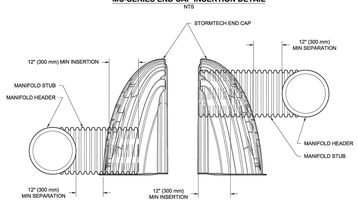
PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.38" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW		---	1.77" (45 mm)
MC3500IEPP18BC		---	
MC3500IEPP18BW		14.48" (368 mm)	---
MC3500IEPP24TC	24" (600 mm)		
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

CUSTOM PARTIAL CUT INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR CUTS GREATER THAN 12" (300 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

MC-SERIES END CAP INSERTION DETAIL
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

REV	DATE	DESCRIPTION	BY
1	03-12-20	REVISE UNDERGROUND DETENTION & UTILITIES	GJK

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www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

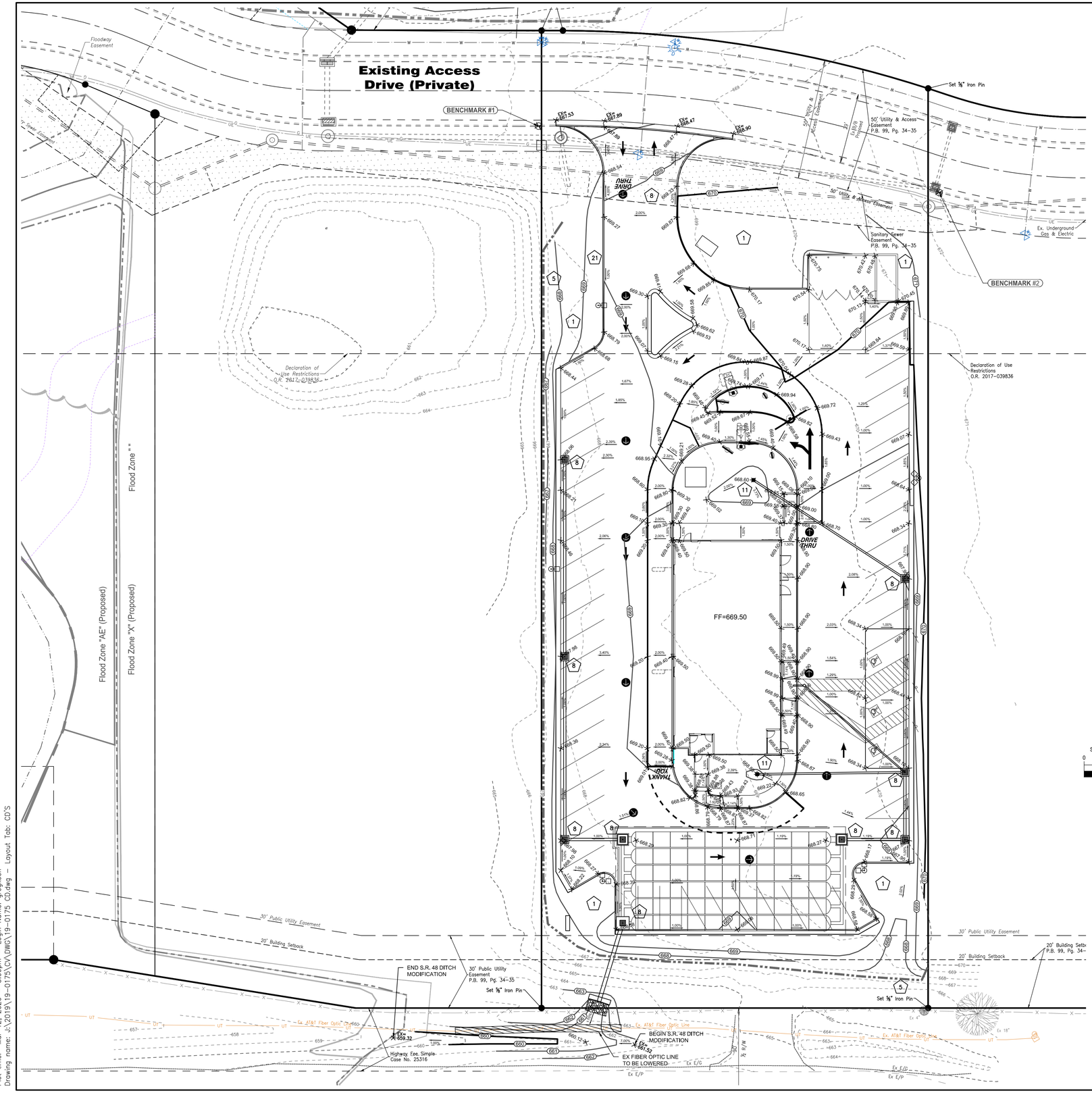
JOB NO. 19-0175

DATE: 12/5/19

SCALE: 1"= NTS

UTILITY DETAILS

SHEET: C4.2



GRADING NOTES

1. LOCATION OF EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO BEGINNING WORK.
2. THE GRADING PLAN IS TO BE USED FOR GRADING PURPOSES ONLY.
3. CONTRACTOR SHALL OBTAIN A COPY OF THE COMPLETE GEOTECHNICAL REPORT AND ALL ADDENDUMS PRIOR TO BIDDING THE PROJECT.
4. CONTRACTORS SHALL SET UP AN ONSITE PRE-CONSTRUCTION MEETING WITH THE OWNER, EARTHWORK CONTRACTOR, AND SITE CIVIL ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
5. CONTRACTOR SHALL VERIFY ALL EARTHWORK QUANTITIES PRIOR TO AWARD OF CONTRACT. PAY QUANTITIES ARE FINAL EXCEPT FOR DOCUMENTED UNDERCUT APPROVED BY DEVELOPER PRIOR TO COMPLETION OF THE EXTRA WORK. UPON REQUEST, CONTRACTORS MAY HAVE ACCESS TO THE SITE TO FIELD CHECK TOPOGRAPHY.
6. ALL PROPOSED CONTOURS & SPOT ELEVATIONS ARE INTENDED TO BE FINAL GRADES AND REFLECT PAVEMENT, FINISH FLOOR OR TOP SOIL PLACEMENT UNLESS OTHERWISE SPECIFIED. ALL SPOT ELEVATIONS IN PAVEMENT AREAS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. ALL EARTHWORK AND CONSTRUCTION ACTIVITY SHALL BE PERFORMED PER THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS DESCRIBED IN THE GEOTECHNICAL EXPLORATION REPORT AND ALL ADDENDUMS.

SWPPP NOTES

1. THE CONSTRUCTION ACTIVITY WILL CONSIST OF DEMOLITION OF EXISTING BUILDING, CURB, WALK AND PAVEMENT; MASS EARTHWORK; UTILITY INSTALLATION; CURB AND PAVEMENT CONSTRUCTION; AND THE PROPOSED BUILDING CONSTRUCTION.
2. ACREAGE:
   - LOT 1.57 ACRES
   - DISTURBED AREA 1.17 ACRES
3. PRIOR LAND USE: McDONALD'S RESTAURANT
4. IMPERVIOUS CALCULATIONS:
   - IMPERVIOUS AREA
   - PRE-DEVELOPED 0.11 ACRES
   - POST-DEVELOPED 0.98 ACRES
   - IMPERVIOUS PERCENTAGE
   - PRE-DEVELOPED 7.0 %
   - POST-DEVELOPED 62.4 %
5. EXISTING SOIL DATA:

SYMBOL	SOIL NAME	HSG
Gn	GENESEE LOAM	B
OcA	OCKLEY SILT LOAM, SOUTHERN OHIO TILL PLAIN, 0 TO 2 PERCENT SLOPES	B
Rn	ROSS LOAM, 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED	B

6. POSSIBLE PREVIOUS CONTAMINATIONS: FERTILIZER AND CHEMICALS TO CONTROL WEEDS.
7. THE DEVELOPMENT DRAINS TOWARD STORM SEWER ALONG NILLES ROAD.
8. RUNOFF COEFFICIENT:
   - PRE-CONSTRUCTION 0.45
   - POST-CONSTRUCTION 0.90
9. OHIO EPA NPDES PERMIT NUMBER: XXXX

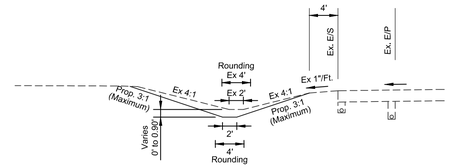
EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION.
2. BEST MANAGEMENT PRACTICES (BMPs) SHOWN ON PLANS SHALL BE REVISED OR IMPLEMENTED AS REQUIRED. CONTRACTOR SHALL MONITOR CONSTRUCTION BMPs AND PROVIDE ADDITIONAL BMPs AS REQUIRED TO PREVENT SEDIMENT RUNOFF FROM CONSTRUCTION SITE ONTO PAVEMENT AND NON-WORK AREAS.
3. AT A MINIMUM, ALL EROSION AND SEDIMENT CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD. QUALIFIED INSPECTION PERSONNEL (THOSE WITH KNOWLEDGE AND EXPERIENCE IN THE INSTALLATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROLS) SHALL CONDUCT THESE INSPECTIONS TO ENSURE THAT THE CONTROL PRACTICES ARE FUNCTIONAL AND TO EVALUATE WHETHER THE EROSION CONTROL IS ADEQUATE AND PROPERLY IMPLEMENTED OR WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.
4. SITE STABILIZATION SHALL BEGIN WITHIN 7 DAYS ON AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED FOR 14 DAYS.
5. ALL MUD OR DEBRIS TRACKED ON EXISTING STREETS AND PARKING LOT PAVEMENT SHALL BE CLEANED AT THE END OF EACH DAY OR AS DIRECTED BY THE OWNER. PERIODIC STREET SWEEPING MAY BE REQUIRED.
6. IN ADDITION TO ANY TEMPORARY EROSION, MUD, AND DEBRIS CONTROL DETAILS AND NOTES SHOWN ON THE PLANS, THE CONTRACTOR SHOULD PLACE TEMPORARY OR PERMANENT SEEDING, MULCHING AND/OR MULCH NETTING OR ANY OTHER GENERALLY ACCEPTED METHODS TO PREVENT EROSION, MUD, AND DEBRIS FROM BEING DEPOSITED ON OTHER PROPERTY, ON NEWLY CONSTRUCTED OR EXISTING ROADS, OR INTO EXISTING SEWERS OR NEW SEWERS WITHIN THE DEVELOPMENT. THE CONTRACTOR SHOULD CONTINUALLY MONITOR THE CONSTRUCTION PROGRESS AND MAKE ANY NECESSARY TEMPORARY ADJUSTMENTS TO MAINTAIN THIS CONTROL.
7. AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, TEMPORARY EROSION AND SEDIMENT CONTROLS CAN BE REMOVED.
8. DISCHARGE FROM DEWATERING OF FLOODED FOOTER OR FOUNDATION AND UTILITY TRENCHES CONTAINING SEDIMENT MUST BE DIRECTED TO A SEDIMENT CONTROL PRACTICE PRIOR TO DISCHARGE FROM THE SITE. A DE-WATERING PLAN SHALL BE DEVELOPED PRIOR TO THE COMMENCEMENT OF ANY PUMPING ACTIVITIES.
9. NON-SEDIMENT POLLUTANT SOURCES, WHICH MAY BE PRESENT ON A CONSTRUCTION SITE, INCLUDE PAVING OPERATIONS, CONCRETE WASHOUT, STRUCTURE PAINTING, STRUCTURE CLEANING, DEMOLITION DEBRIS DISPOSAL, DRILLING AND BLASTING OPERATIONS, MATERIAL STORAGE, SLAG, SOLID WASTE, HAZARDOUS WASTE, CONTAMINATED SOILS, SANITARY AND SEPTIC WASTES, VEHICLE FUELING AND MAINTENANCE ACTIVITIES, AND LANDSCAPING OPERATIONS. NON-SEDIMENT POLLUTANT SOURCES SHALL NOT BE DISCHARGED TO STORM SEWERS OR NATURAL STREAM/DRAINAGE WAYS. SEE PLAN FOR CONCRETE WASHOUT LOCATION.

POST CONSTRUCTION WATER QUALITY NOTES

1. THE OWNER IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE PERMANENT WATER QUALITY SYSTEM ON THE SITE PER THE APPROVAL AND WILL COMPLETE ANY NECESSARY REPAIRS AND/OR PREVENTIVE MAINTENANCE PROCEDURES IN A TIMELY MANNER TO ENSURE PROPER FUNCTIONING OF THE SYSTEM AS A STORM WATER MANAGEMENT DEVICE.

Basis of Bearing:
State Plane NAD83 (2011)
0 20 30
SCALE: 1" = 20'



STATE ROUTE 48 DITCH MODIFICATION

NOT TO SCALE

LEGEND

- 1 — SEEDING & MULCHING
- 5 — SILT FENCE OR MULCH BERM
- 8 — DANDY BAG (OR APPROVED EQUAL)
- 11 — INLET PROTECTION
- 21 — CONSTRUCTION ENTRANCE
- F.F. — FINISHED FLOOR ELEVATION
- EX= XXX.XX — EXISTING SPOT GRADE
- XXX.XX — PROPOSED TOP OF PAVEMENT
- PROPOSED CONTOURS
- EXISTING CONTOURS

Know what's below. Call before you dig.

CAUTION!!!
ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

REV	DATE	DESCRIPTION	BY
1	03-12-20	REVISE UNDERGROUND DETENTION & UTILITIES	GJK

STATE OF OHIO
GREGORY J. KOCH
69324
REGISTERED
PROFESSIONAL ENGINEER
3/12/20

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Mason, OH 45040 - 513.336.6600

L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

DATE: 12/5/19

SCALE: 1"=20'

GRADING PLAN

SHEET: C5.0

Plot time: Mar 12, 2020 - 5:00pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\CV\DWG\19-0175 C0.dwg - Layout Tab: CD'S

PERMANENT SEEDING (1)

Permanent seeding includes the seedbed preparation, seeding, and the establishment of perennial vegetation used to permanently stabilize soil, prevent sediment pollution, reduce runoff by promoting infiltration, and provide storm water quality benefits offered by dense vegetation.

CONDITIONS WHERE PRACTICE APPLIES

Permanent seeding should be applied to:

* Areas or portions of construction-sites which can be brought to final grade. Applications of permanent seeding should not be delayed while construction on limited portions of the site being completed.
* Areas on that will be regraded, but will be dormant for a year or more.

PLANNING CONSIDERATIONS

Healthy dense turf will have a dramatic long lasting effect on stormwater quality as well as promoting infiltration and reducing the amount of runoff. To establish quality vegetation, careful preparation of the seedbed, soil, even subsoil is highly encouraged.

Soil Compaction--Stormwater quality and the amount of runoff both vary significantly with soil compaction. Non-compacted soils improve stormwater by promoting:

* dense vegetation.
* high infiltration & lower runoff rates.
* pollutant filtration, deposition & absorption, and
* beneficial biologic activity in the soil.

Construction activity can cause highly compacted soils but also offers the opportunity to improve soil condition. The best time for improving soil condition is during the establishment of permanent vegetation. It is highly recommended that subsoilers, plows or others implements be specified as part of final seedbed preparation. Use discretion in slip-prone areas.

Minimum Soil Conditions--Vegetation cannot be expected to stabilize soil that is unstable due to its texture, structure, water movement or excessively steep slope. The following minimum soil conditions are needed for the establishment and maintenance of a long-lived vegetation cover. If these conditions cannot be met, see the Standards and Specifications for Resoiling.

* Soils must include enough fine-grained material to hold at least a moderate amount of available moisture.
* The soil must be free from material that is toxic or otherwise harmful to plant growth.

Permanent Seeding			
Seed Mix	Seeding Rate lb./ac.	Seeding Rate lb./1,000 ft.^{2}	Notes:
General Use			
Creeping Red Fescue Ryegrass Kentucky Bluegrass	20-40 10-20 10-20	1/2-1 1/4-1/2 1/4-1/2	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
Steep Banks or Cut Slopes			
Tall Fescue	40	1	
Crown Vetch Tall Fescue	10 20	1/4 1/2	Do not seed later than August
Flat Pea Tall Fescue	20 20	1/2 1/2	Do not seed later than August
Road Ditches and Swales			
Tall Fescue	40	1	
Dwarf Fescue Kentucky Bluegrass	90 5	2 1/4	
Lawns			
Perennial Ryegrass Kentucky Bluegrass	60 60	1 1/2 1 1/2	
Creeping Red Fescue Kentucky Bluegrass	60 60	1 1/2 1 1/2	For shaded areas

Note: Other approved seed species may be substituted.

Maintenance for Permanent Seedings Fertilization and Mowing					
Mixture	Formula	lb./ac.	lb./1,000 sq. ft.	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12	Fall, yearly or as needed	Not closer than 3"
Tall Fescue	10-10-10	500	12		Not closer than 4"
Dwarf Fescue	10-10-10	500	12		Not closer than 2"
Crown Vetch Fescue	0-20-20	400	10	Spring, yearly following establishment and every 4-7 yrs. thereafter	Do not mow
Flat Pea Fescue	0-20-20	400	10		Do not mow
Note: Following soil test recommendations is preferred to fertilizer rates shown above.					

SITE PREPARATION

1. A subsoiler, plow or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
3. Resoil shall be applied where needed to establish vegetation.

SEEDBED PREPARATION

1. Lime--Agricultural group limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 lb./1,000 sq. ft. or 2 tons/ac.
2. Fertilizer--Fertilizer shall be applied as recommended by a soil test. In lieu of a soil test, fertilizer shall be applied at a rate of 12 lb./1,000 sq. ft. or 500 lb./ac. of 10-10-10- or 12-12-12 analysis.
3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 in. On sloping land the soil shall be worked on the contour.

SEEDING DATES AND SOIL CONDITIONS

Seeding should be done March 1 to May 31 or August 1 to September 30. These seeding dates are ideal but, with the use of additional mulch and irrigation, seedings may be made any time throughout the growing season. Tillage/seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

MULCHING

1. Mulch material shall be applied immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization. Dormant seeding shall be mulched.
2. Materials

* Straw--If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq. ft. sections and spread two 45-lb. bales of straw in each section.
* Hydroseeders--If wood cellulose fiber is used, it shall be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
* Other--Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

3. Straw Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water.

* Mechanical--A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped by, generally, be left longer than 6 in.

PERMANENT SEEDING (1)

MAINTENANCE

1. Permanent seeding shall not be considered established for at least 1 full yr. from the time of planting. Seeded areas shall be inspected for failure and vegetation conditions, it may be necessary to irrigate, fertilize, overseed, or reestablish plantings in order to provider permanent vegetation for adequate erosion control.
2. Maintenance fertilization rates shall be established by soil test recommendations or by using the rates shown in the following table.

DORMANT SEEDINGS.

1. Seeding shall not be planted from October 1 through November 20. During this period the seeds are likely to germinate but probably will not be able to survive the winter.
2. The following methods may be used for "Dormant Seeding":

* From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
* From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
* Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
* Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.
* Mulch Nettings--Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
* Asphalt Emulsion--Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.
* Synthetic Binders--Synthetic binders such as Acrylic DLR (Agri-Tac), DAC-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
* Wood Cellulose Fiber--Wood cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

IRRIGATION

1. Permanent seeding shall include irrigation to establish vegetation during dry or hot weather or on adverse site conditions as needed for adequate moisture for seed germination and plant growth.
2. Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.

TEMPORARY SEEDING (1)

Temporary seeding provides erosion control on areas in between construction operations. Grasses which are quick growing are seeded and usually mulched to provide prompt, temporary soil stabilization. It effectively minimizes the area of a construction-site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

CONDITIONS WHERE PRACTICE APPLIES

Temporary seeding should be applied on exposed soil where additional work (grading,etc.) is not scheduled for more than 21 days. Permanent seeding should be applied if the areas will be idle for more than a year.

PLANNING CONSIDERATIONS

This practice has the potential to drastically reduce the amount of sediment eroded from a construction-site. Control efficiencies greater than 90% will be achieved with proper applications of temporary seeding. Because practices used to trap sediment are usually much less effective, temporary seeding is to be used even on areas where runoff is treated by sediment trapping practices. Because temporary seeding is highly effective and practical on construction-sites, its liberal use is highly recommended.

Temporary Seeding Species Selection			
Seeding Dates	Species	Lb./1,000 ft.^{2}	Per Acre
March 1 to August 15	Oats Tall Fescue Annual Ryegrass	3 1 1	4 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
August 16 to November 1	Rye Tall Fescue Annual Ryegrass	3 1 1	2 bushel 40 lb. 40 lb.
	Wheat Tall Fescue Annual Ryegrass	3 1 1	2 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
November 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding.		
Note: Other approved seed species may be substituted.			

1. Structural erosion- and sediment-control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction-site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or more. These idle areas should be seeded as soon as possible after grading or shall be seeded within 7 days. Several applications of temporary seeing are necessary on typical construction projects.
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. However, temporary seeding shall not be postponed if ideal seedbed preparation is not possible.
4. Soil Amendments--Applications of temporary vegetation shall establish adequate stands of vegetation which may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer.
5. Seeding Method--Seed shall be applied uniformly with a cyclone seeder, drill cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

MULCHING TEMPORARY SEEDING

1. Applications of temporary seeding shall include mulch which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization.
2. Materials:

* Straw--If straw is used, it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
* Hydroseeders--If wood cellulose fiber is used, it shall be used at 2,000 lb/ac. or 46 lb./1,000 sq. ft.
* Other--Other acceptance mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

3. Straw mulch shall be anchored immediately to minimize loss by wind or water.
Anchoring Methods:

* Mechanical--A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 in.
* Mulch Nettings--Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentration runoff and on critical slopes.
* Asphalt Emulsion--Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.
* Synthetic Binders--Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
* Wood-Cellulose Fiber--Wood-cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal.

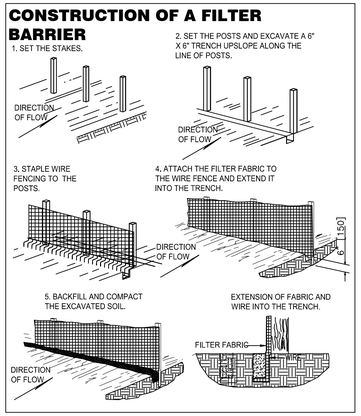
INSTALLATION (5) SILT FENCE

1. PUT UP BEFORE ANY OTHER WORK IS DONE.
2. INSTALL ON DOWNSLOPE SIDE(S) OF SITE WITH ENDS EXTENDED UP SIDESLOPES A SHORT DISTANCE.
3. PLACE PARALLEL TO THE CONTOUR OF THE LAND AND AT THE FLATTEST AREA AVAILABLE TO ALLOW WATER TO POND BEHIND FENCE.
4. STAKE TO BE A MINIMUM OF 32 INCHES LONG
5. MINIMUM HEIGHT SILT FENCE 16 INCHES ABOVE ORIGINAL GROUND SURFACE
6. LEAVE NO GAPS BETWEEN SECTIONS OF SILT FENCE INSPECT AND REPAIR ONCE A WEEK AND AFTER EVERY 1/2 INCH RAIN. REMOVE SEDIMENT IF DEPOSITS REACH HALF THE FENCE HEIGHT.
7. MAXIMUM DISTANCE FROM TOE OF THE SLOPE, LEAVING AT LEAST 5' DISTANCE.
8. STAKE ON DOWNHILL SIDE OF GEOTEXTILE WITH 8" OF CLOTH CLOTH BELOW THE GROUND SURFACE; EXCESS MATERIAL TO LAY ON THE BOTTOM OF 6" TRENCH
9. ODOT TYPE "C" GEOTEXTILE FABRIC OR EQUAL
10. MAINTAIN UNTIL A LAWN IS ESTABLISHED.

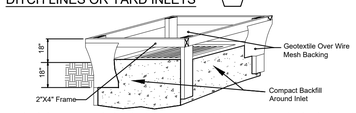
MATERIALS: FILTER FABRIC SHALL MEET THE REQUIREMENTS OF CMS 712.09, TYPE C. SUPPORT STAKES SHALL BE A MINIMUM OF 1.5"X1.5" [38X38], NOMINAL, AND SHALL BE HARDWOOD OF SOUND QUALITY. THE STAKES SHALL BE DRIVEN A MINIMUM OF 8" [150] BELOW THE BOTTOM OF THE FILTER FABRIC. THE MAXIMUM SPACING BETWEEN SUPPORT STAKES SHALL BE 10' [3 M].

CONSTRUCTION: THE BOTTOM OF THE FABRIC SHALL BE BURIED 6" [150] BELOW THE GROUND. THE ENDS OF ADJACENT SECTIONS OF FENCE SHALL BE OVERLAPPED WITH THE END STAKE OF EACH SECTION WRAPPED TOGETHER PRIOR TO INSTALLATION. THE GROUND ELEVATION OF THE FENCE SHALL BE HELD CONSTANT EXCEPT THAT THE END ELEVATIONS SHALL BE RAISED UPSLOPE TO PREVENT FLOW AROUND THE END OF THE FENCE. MAINTENANCE: THE FILTER FABRIC FENCE SHALL BE MAINTAINED TO BE FUNCTIONAL. THIS SHALL INCLUDE REMOVAL OF TRAPPED SEDIMENT AND REQUIRED CLEANING, REPAIR, AND REPLACEMENT OF THE FILTER FABRIC. THE MAINTENANCE OR REPLACEMENT COST WILL BE PAID FOR BY THE DEPARTMENT UNDER UNIT BID PRICES, AGREED UNIT PRICES, OR CMS 109.04.

PAYMENT: THE COST OF ALL MATERIALS, CONSTRUCTION AND REMOVAL SHALL BE PAID FOR UNDER ITEM 207 - TEMPORARY PERIMETER FILTER FABRIC FENCE OR TEMPORARY DITCH CHECK FILTER FABRIC FENCE, LINEAR FOOT [METER].

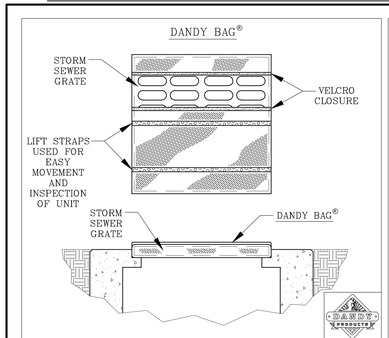


INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS (11)



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
2. The earth around the inlet shall be excavated completely to the depth at least 18in.
3. The wooden frame shall be constructed of 2-by-4-in. construction grade lumber. The 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.
4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
5. Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
6. Backfill shall be placed around the inlet in compacted 6-in. layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a setting pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

DANDY BAGS DETAIL (8)



DETAIL OF INLET SEDIMENT CONTROL DEVICE

PROJECT:		DR. BY:
CITY/STATE:	DATE:	DR. NO:

DANDY BAG® SPECIFICATIONS

NOTE: THE DANDY BAG® WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

HI-FLOW DANDY BAG® (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/m^2 (gal/min/ft^2)	5907 (145)
Permittivity	ASTM D 4491	Sec^{-1}	2.1

*Note: All Dandy Bags® can be ordered with our optional oil absorbent pillows

Detail Provided By:
Site Supply Inc.
33 Glendale-Millford Road
Loveland, OH 45140
Phone: (513) 248-1498
Fax: (513) 248-4584
cbrowning@sitefabric.com
http://www.sitefabric.com

Erosion Prevention and Sediment Control Site Inspection Form

Introduction: By using some simple Best Management Practices (BMP's) developers and contractors can do their share to protect water resources from the harmful effects of sediment. The topography of the site and the extent of the construction activities will determine which of these practices are applicable to any given site, but the BMP's listed here are applicable to most construction sites. For details on the installation and maintenance of these BMP's, please refer to the approved plans and or the Rainwater **and Land Development, Ohio's Standards for Storm Water Management, Land** *Development and Urban Stream Protection (ODNR, 1996).*

Temporary Stabilization is the most effective BMP. All disturbed areas that will lie dormant for 14 days or more must be stabilized within 7 days of the date the area becomes inactive. The goal of temporary stabilization is to provide cover quickly. Areas within 50 feet of a stream must be stabilized within 2 days of reaching final grade. This is accomplished by seeding with fast-growing grasses, then covering with straw mulch. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. To minimize your costs of temporary stabilization, leave natural cover in place for as long as possible by only disturbing areas worked within the next 14 days.

Construction Entrances are installed to minimize off-site tracking of sediments. A rough stone access drive underlain with woven geotextile shall be installed at every point where vehicles enter or exit the site. Every individual lot should also have its own drive once construction on the lot begins. Maintenance is performed by top dressing with stone and/or street sweeping.

Sediment Basins/Traps are the sediment control of choice for areas, which exceed the design capacity of silt fence (see page 119 of the Rainwater manual) or to control concentrated flows or runoff. There are two types: sediment basins and sediment traps. A trap is appropriate where the contributing drainage area is 10 acres or less. The outlet is an earthen embankment with a simple stone spillway underlain with woven geotextile. A sediment basin is appropriate for drainage areas larger than 10 acres. The outlet is an engineered riser pipe. Often a permanent storm water management pond, such as a retention or detention basin, can be retrofitted to act as a sediment basin during construction. All sediment ponds, regardless of whether they are a trap or a basin, or whether they will become a permanent storm water pond, must provide a minimum storage of 67 cubic yards per acre of total contributing drainage area. Sediment ponds must be installed prior to mass clearing and grading. Maintenance must be performed once the basin loses 40% of capacity, and 30% for storm water basins retrofitted as sediment basins.

Silt Fence or Mulch Berms are typically used at the perimeter of a disturbed area. They are only for small drainage areas on relatively flat slopes or around small soil storage piles; not suitable where runoff is concentrated in a ditch, pipes or though streams. For large drainage areas where flow is concentrated, collect runoff in diversion berms or channels and pass it through a sediment pond prior to discharging it from the site. Combination barriers constructed of silt fence supported by welded wire fencing, mulch berms supported by rock check dams, or silt fence embedded within rock check dams may be effective within small channels. As with all sediment controls, silt fence or mulch berms must be capable of ponding runoff so that sediment can settle out of suspension. These must be installed within 7 days of first grubbing the area it controls. Whenever practical they should be installed before clearing or grubbing the area it controls.

Inlet Protection must be installed on all yard drains and curb drains when these inlets do not drain to a sediment trap or basin. Even if there is a sediment trap or basin, inlet protection is still recommended, as it will reduce the amount of sediment entering the basin and increase the overall sediment removal efficiency. Best used on roads with little or no traffic. If working properly, inlet protection will cause water to pond. If used on curb inlets, streets will flood temporarily during heavy storms, (overflow should be built-in.) Check with the authority that has jurisdiction over the roads before installing. They may prefer an alternate BMP. Care should be taken when placing inlet protection so that the runoff is not diverted to public roads or other areas where it could cause a hazard.

Permanent Stabilization must occur on areas at final grade within 7 days of reaching final grade. This is usually accomplished by using seed and mulch, but special measures are sometimes required. This is particularly true in drainage ditches or on steep slopes. These measures include the addition of topsoil, erosion control matting, rock riprap or retaining walls. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. At all times of the year, the area should be temporarily stabilized until a permanent seeding can be applied.

Inspections shall be performed at least once a week and within 24 hours after a storm event greater than 1/2 inch of rainfall within a 24-hour duration using the enclosed Inspection Form. Inspections can be tracked using the enclosed Inspection Log. These shall be maintained throughout the development process and kept on file for three years per OEPA requirements. Erosion prevention and sediment control (EP&SC) measures shall be observed to ensure correct operation. Discharge locations shall be inspected to determine effectiveness of EP&SC measures in preventing significant impacts to the receiving waters. Where practices require repair or maintenance, it must be accomplished within three days of the inspection or as soon as site conditions allow. Repairs to sediment ponds shall be completed within 10 days or as soon as site conditions allow. Most of these BMP's are easy to implement with a little bit of planning and go a long way toward keeping your site clean and organized if they are properly installed and maintained. Please be sure to inform all parties on site how these BMPs affect their operations on the site, particularly those that will be working near a stream.

Erosion Prevention and Sediment Control Site Inspection Form

Inspector: _____ Date: _____

General:
Amount of rainfall since last inspection: _____inches
Overall site conditions: _____

Construction Entrances:
Is the entrance installed correctly according to the approved plan? YES NO N/A
(Check for mud in stones/street, runoff diverted from street, etc..)
Action Needed: _____

Sediment Basins/Traps:
Are all Basins installed correctly according to the approved plan? YES NO N/A
(Check for runoff directed to basin, down slope areas stabilized, riser pipe wrapped with wire fence/filter fabric, emergency overflow, accumulated sediment more than 40% of volume, etc..)
Action Needed: _____

Silt Fence/Mulch Berms:
Are all Silt Fence/Mulch Berm (SF/MB) installed correctly according to the approved plan?
YES NO N/A (Check for fabric trenched in, follow contour, turned upslope at ends, silt accumulated, broken stakes, tight fabric, installed in all areas where sediment could leave the site)
Action Needed: _____

Inlet Protection:
Are all Inlet Protections installed correctly according to the approved plan? YES NO N/A
Check for runoff ponding, in good shape, silt accumulated, etc..)
Action Needed: _____

Temporary Stabilization:
Are all disturbed areas that will lie dormant for 14 days or more stabilized with seed/straw or mulch? (stockpiles, hillsides, etc..) YES NO N/A

Are all areas stabilized still in good condition and not eroding? YES NO N/A

Permanent Stabilization:
Have areas that achieved final grade within the last 7 days been stabilized? YES NO N/A

Do all storm water outflow areas have riprap or concrete to prevent scouring? YES NO N/A

Stream Crossing:
Are the Stream Crossings installed correctly according to the approved plan? YES NO N/A
(Check for stabilized edges, runoff diverted from stream, mud over stones, end of useful life, etc..)
Action Needed: _____

Erosion Prevention and Sediment Control Site Inspection Form

If you answered "no" to any of the above questions, note any corrective action needed above, and note on the Inspection Log when the action was completed.

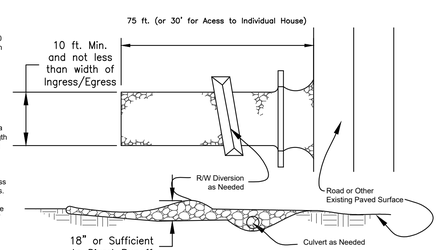
Inspection Log

The site shall be inspected before and after storm events with 0.5 inches or greater predicted or actual precipitation, and documented on the Construction Site Inspection Form. Incidents of noncompliance must be reported to the Engineer. A log of all inspections, as shown below, shall be kept current.

Date:	Inspector:	Actions Performed/Date:

CONSTRUCTION ENTRANCE (21)

1. Stone Size--Two-inch stone shall be used, or recycled concrete equivalent.
2. Length--The construction entrance shall be as long as required to stabilize high traffic areas but not less than 50 ft. (except on single residence lot where a 30-ft. minimum length applies).
3. Thickness--The stone layer shall be at least 6 in. thick.
4. Width--The entrance shall be at least 10 ft. wide, but not less than the full width at points where ingress or egress occurs.
5. Bedding--A geotextile shall be placed over the entire area prior to placing stone. It shall have a Grab Tensile Strength of at least 200 lb. and a Mullen Burst Strength of at least 190 lb.
6. Culvert--A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flowing across the entrance from being directed out onto paved surfaces.
7. Water Bar--A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
8. Maintenance--Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surfaces where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
9. Construction entrances shall not be relied upon to remove mud fro vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.



BY	DESCRIPTION	DATE	REV

STATE OF OHIO
GREGORY J. KOCH
E-69324
REGISTERED
PROFESSIONAL ENGINEER
2/17/20

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

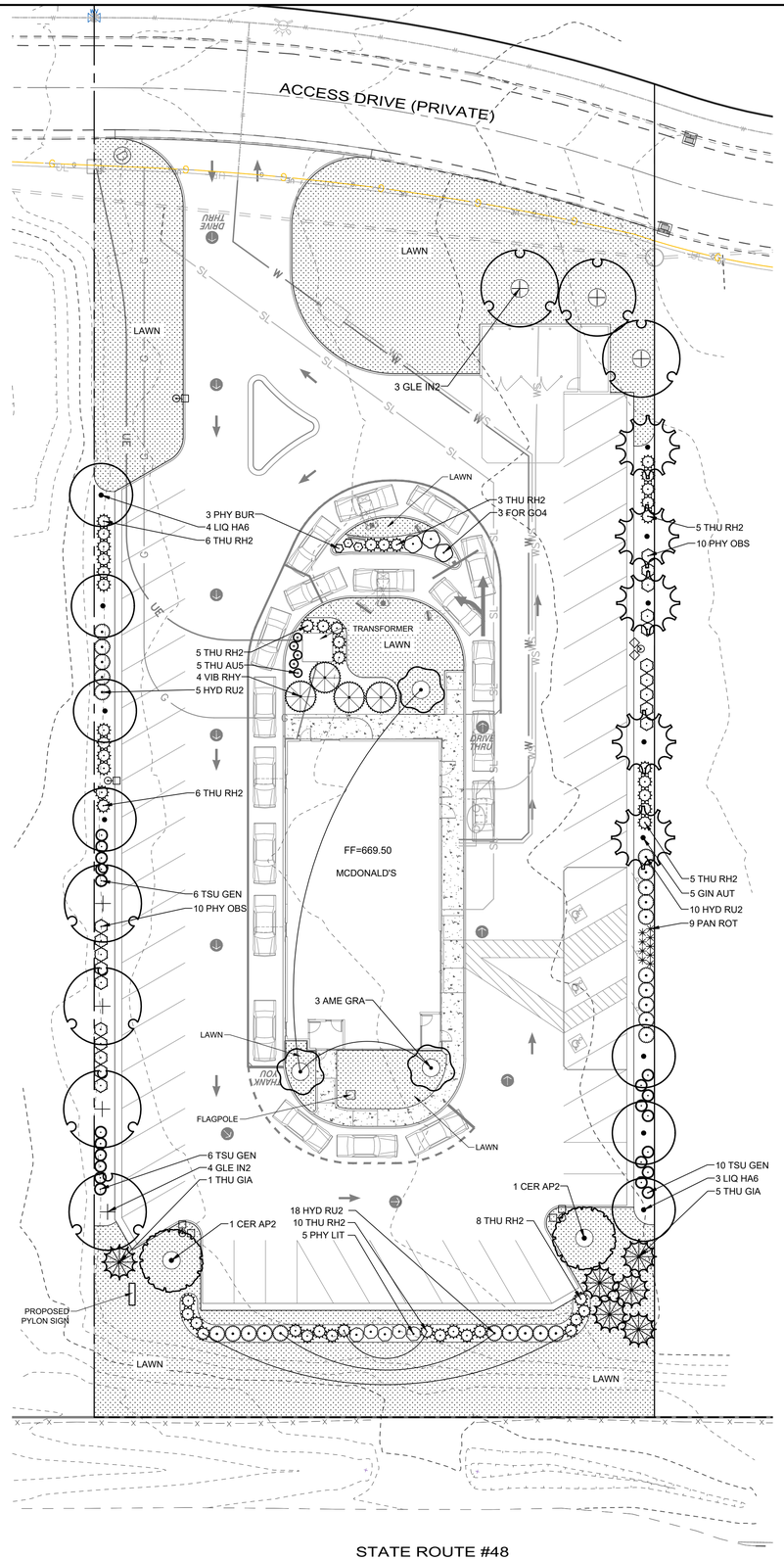
DATE: 12/5/19

SCALE: 1"=20'

EROSION DETAILS

SHEET: C5.1

Plot time: Feb 14, 2020 - 1:53pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\CV\DWG\19-0175 C5.dwg - Layout Tab: C5.1



ZONING CALCULATIONS

REQUIRED PARKING LOT SCREENING (SECTION 15.17.5)
ALL PARKING LOTS WITH FIVE (5) OR MORE PARKING SPACES, INCLUDING VEHICULAR SALES LOTS, THAT FACE ANY PROPERTY IN ANY ZONE OR ANY PUBLIC OR PRIVATE STREET RIGHT-OF-WAY OR ACCESS ROAD OR SERVICE ROAD SHALL PROVIDE A LANDSCAPE SCREEN AS FOLLOWS:

1. THE BUFFER WIDTH SHALL BE A MINIMUM OF 10' WIDE
2. A 30" HIGH CONTINUOUS SCREEN CONSISTING OF AN EARTH MOUND, PLANTING, HEDGE OR DECORATIVE WALL OR ANY COMBINATION THEREOF, SHALL BE PROVIDED.
3. ONE DECIDUOUS TREE SHALL BE REQUIRED FOR EVERY 30 LF OF THE REQUIRED BUFFER ZONE
4. THE PLANNING COMMISSION MAY MODIFY OR WAIVE THE PARKING LOT PERIMETER LANDSCAPING REQUIREMENTS IF THE PROVIDED BUFFER STRIP LANDSCAPING ADJACENT TO RIGHTS-OF-WAY AND BETWEEN LAND USES ADEQUATELY SCREENS THE PARKING LOT FROM VIEW FROM ADJACENT PROPERTIES AND ROADS

SOUTH BUFFER
A 4' TALL CONTINUOUS SHRUB BUFFER IS PROVIDED IN LIEU OF TREES TO SCREEN THE PARKING LOT AND ALLOW VIEWS OF THE BUILDING FROM STATE ROAD 48

EAST BUFFER
232.62 LF / 30 = 8 DECIDUOUS TREES

WEST BUFFER
216.5 LF / 30 = 8 DECIDUOUS TREES

ON-SITE LANDSCAPING (SECTION 15.17.9)
FOR EVERY NEW NON-RESIDENTIAL DEVELOPMENT, THERE SHALL BE INTERIOR LANDSCAPING AREAS EXCLUSIVE OF ANY OTHER REQUIRED LANDSCAPING CONSISTING OF AT LEAST 5% OF THE TOTAL LOT AREA. THIS LANDSCAPED AREA SHOULD BE GROUPED NEAR BUILDING ENTRANCES, ALONG BUILDING FOUNDATIONS, ALONG PEDESTRIAN WALKWAYS, AND ALONG SERVICE AREAS. ALL INTERIOR LANDSCAPING SHALL CONFORM TO THE FOLLOWING:

1. ONE DECIDUOUS TREE OR ORNAMENTAL TREE OR EVERGREEN TREE SHALL BE PROVIDED FOR EVERY 400 SF OF REQUIRED INTERIOR LANDSCAPING AREA
2. ONE SHRUB SHALL BE PROVIDED FOR EVERY 250 SF OF REQUIRED LANDSCAPING AREA
3. THE INTERIOR LANDSCAPING AREA SHALL CONTAIN GRASS, GROUND COVER, 4" DEEP SHREDDED BARK MULCH, AND SHALL BE CURVED OR EDGED AS NECESSARY

TOTAL LOT AREA = 63,515 SF
63,515 SF X 5% = 3,175.75 SF OF REQUIRED LANDSCAPING AREA

3,175.75 / 400 SF = 8 REQUIRED TREES
3,175.75 / 250 SF = 13 REQUIRED SHRUBS

INTERIOR PARKING LOT LANDSCAPING (SECTION 15.17.10)
WITHIN EVERY PARKING AREA CONTAINING AT LEAST 5 PARKING SPACES, AT LEAST 5% OF THE TOTAL PARKING LOT AREA SHALL BE LANDSCAPED, IN ADDITION TO ANY OTHER LANDSCAPING REQUIREMENTS. THIS LANDSCAPING SHALL MEET THE FOLLOWING STANDARDS:

1. ONE DECIDUOUS TREE SHALL BE PLANTED FOR EVERY 300 SF OF REQUIRED INTERIOR PARKING LOT LANDSCAPING AREA
2. LANDSCAPING SHALL BE DISPERSED THROUGHOUT THE PARKING LOT IN ORDER TO BREAK UP LARGE EXPANSES OF PAVEMENT AND HELP DIRECT SMOOTH TRAFFIC FLOW WITHIN THE LIGHT. a MINIMUM OF 1 TREE SHALL BE PLANTED AND INCLUDED IN EACH LANDSCAPING ISLAND OR REQUIRED LANDSCAPING AREA PURSUANT TO THE CALCULATIONS OF THIS SECTION.
3. LANDSCAPING SHALL BE INSTALLED SUCH THAT WHEN MATURE, IT DOES NOT OBSCURE TRAFFIC SIGNS OR LIGHT, OBSTRUCT ACCESS TO FIRE HYDRANTS NOR INTERFERE WITH ADEQUATE MOTORIST SIGHT DISTANCE.
4. ALL LANDSCAPE ISLANDS SHALL BE CURBED. DIMENSIONS OF ISLANDS SHALL BE SHOWN ON THE SITE PLAN. MINIMUM ISLAND WIDTH SHALL BE 10'; MINIMUM RADII SHALL BE 10' AT ENDS FACING MAIN AISLES AND A MINIMUM 1' FOR RADII NOT ADJACENT TO MAIN CIRCULATION AISLES. THE LENGTH OF THE ISLANDS SHALL BE 2' SHORTER THAN ADJACENT PARKING SPACE TO IMPROVE MANEUVERING

VUA = 31,618 SF
31,618 SF X 5% = 1,580.9 SF OF REQUIRED LANDSCAPING AREA

1,580.9 / 300 SF = 6 REQUIRED TREES

PLANT SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	TYPE	MIN. SIZE
GIN AUT	5	Ginkgo biloba `Autumn Gold` TM	Maidenhair Tree	B & B	2.0" Cal
GLE IN2	7	Gleditsia triacanthos inermis `Sunburst`	Sunburst Common Honeylocust	B & B	2.0" Cal
LIQ HA6	7	Liquidambar styraciflua `Happdell`	Happidaze Sweet Gum	B & B	2.0" Cal
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	TYPE	MIN. SIZE
THU GIA	6	Thuja plicata `Green Giant`	Western Red Cedar	B & B	6` Ht.
ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	TYPE	MIN. SIZE
AME GRA	3	Amelanchier x grandiflora `Autumn Brilliance`	Autumn Brilliance Serviceberry Tree Form	B & B	2.0" Cal
CER AP2	2	Cercis canadensis `Appalachian Red`	Appalachian Red Eastern Redbud	B & B	2.0" Cal
DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT
FOR GO4	3	Forsythia x `Gold Tides`	Golden Tide Forsythia	3 gal	15" Ht.
HYD RU2	25	Hydrangea quercifolia `Ruby Slippers`	Ruby Slippers Hydrangea	5 gal	24" Ht.
PHY BUR	3	Physocarpus opulifolius `Burgundy Candy`	Burgundy Candy Ninebark	3 gal	15" Ht.
PHY LIT	5	Physocarpus opulifolius `Little Devil` TM	Dwarf Ninebark	B&B	24" Ht.
PHY OBS	20	Physocarpus opulifolius `Obsidian`	Obsidian Ninebark	3 gal	24" Ht.
EVERGREEN SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT
THU AU5	5	Thuja occidentalis `Aurea`	Golden Globe Arborvitae	B & B	18" Ht.
THU RH2	48	Thuja occidentalis `Rheingold`	Rheingold Arborvitae	5 gal	24" Ht.
TSU GEN	22	Tsuga canadensis `Gentsh White`	Gentsh White Hemlock	B & B	18" Ht.
VIB RHY	4	Viburnum x rhytidophylloides `Alleghany`	Alleghany Viburnum	B & B	36" Ht.
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT
PAN ROT	9	Panicum virgatum `Rotstrahlbusch`	Rotstrahlbusch Switch Grass	5 gal	Clump

Basis of Bearing:
State Plane NAD83 (2011)
0 20 30
SCALE: 1" = 20'

Know what's **below.**
Call before you dig.

CAUTION!!!
ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

REV	DATE	DESCRIPTION	BY
1	03-12-20	UPDATED UTILITIES	LES

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600

L/C# 34-2068

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PROPOSED McDONALD'S RESTAURANT AT:
RIVERS CROSSING WEST
VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

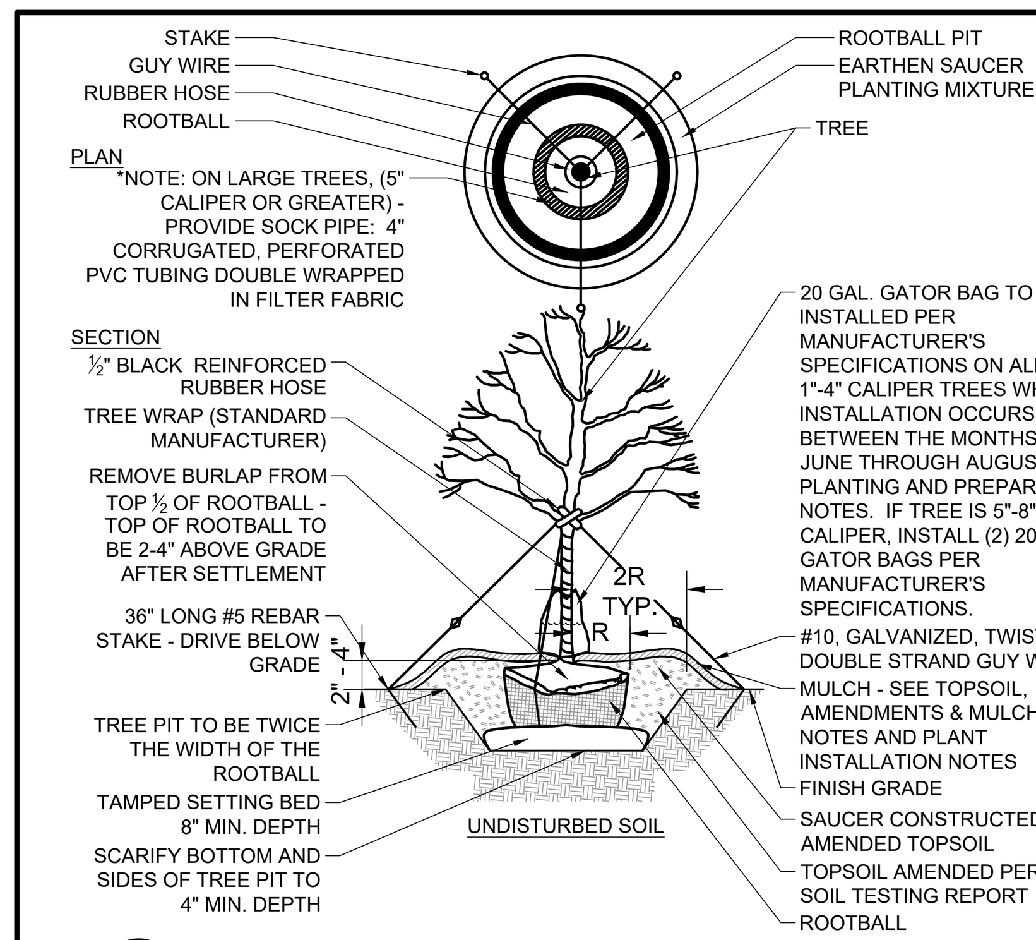
DATE: 2/7/2020

SCALE: 1"=20'

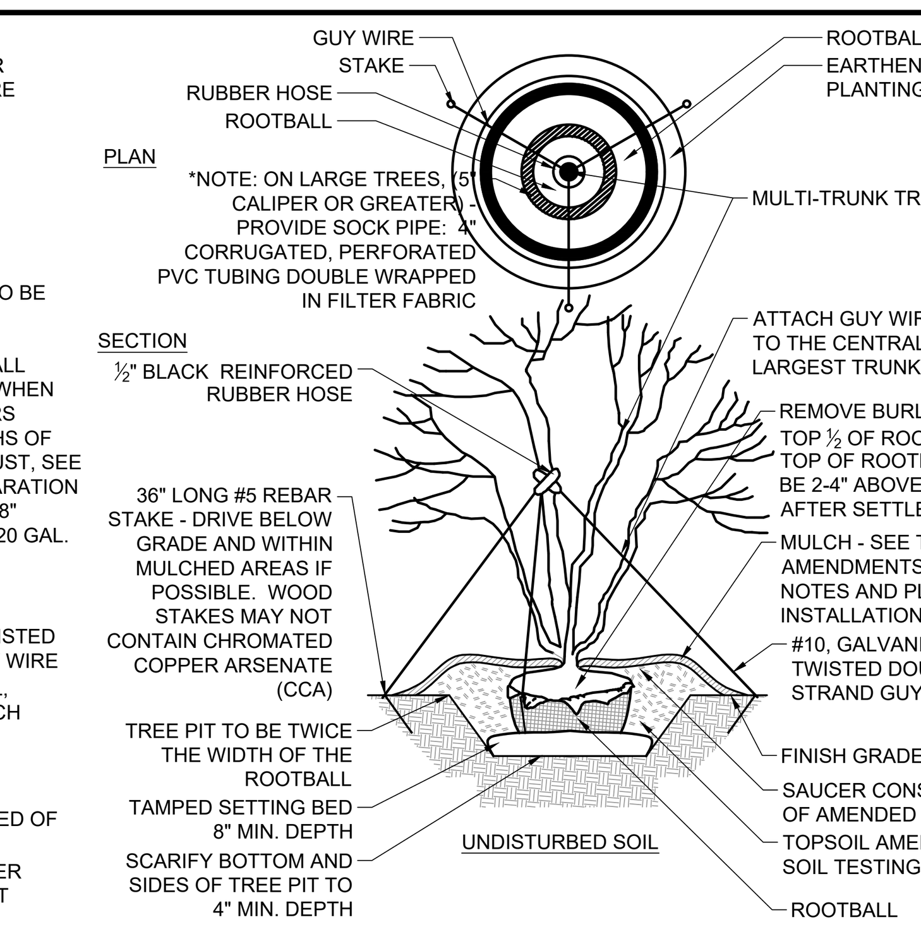
PLANTING PLAN

SHEET: L1.0

Plot time: Mar 12, 2020 - 5:02pm - Login Name: gregkoch
Drawing name: J:\2019\19-0175\LA\DWG\19-0175 Ld.dwg - Layout Tab: L1.0



1 L200 TREE PLANTING DETAIL
SCALE: NOT TO SCALE



2 L200 MULTI-STEM TREE PLANTING DETAIL
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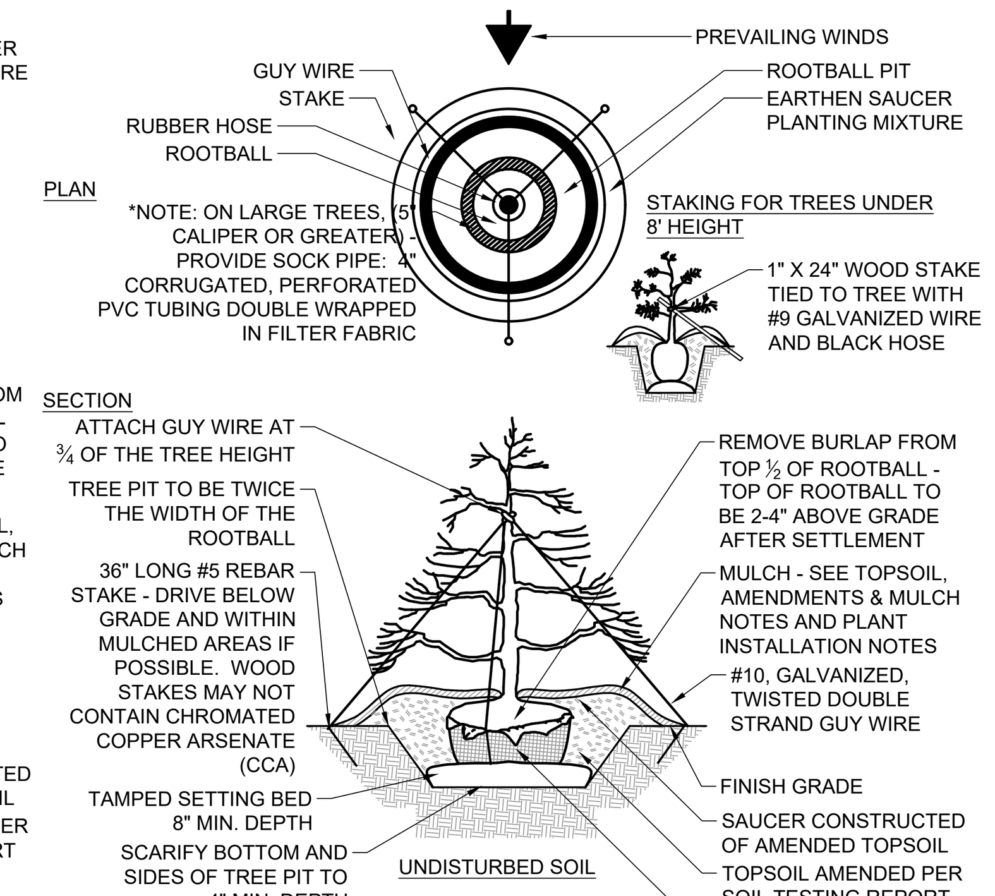

3 L200 EVERGREEN TREE DETAIL
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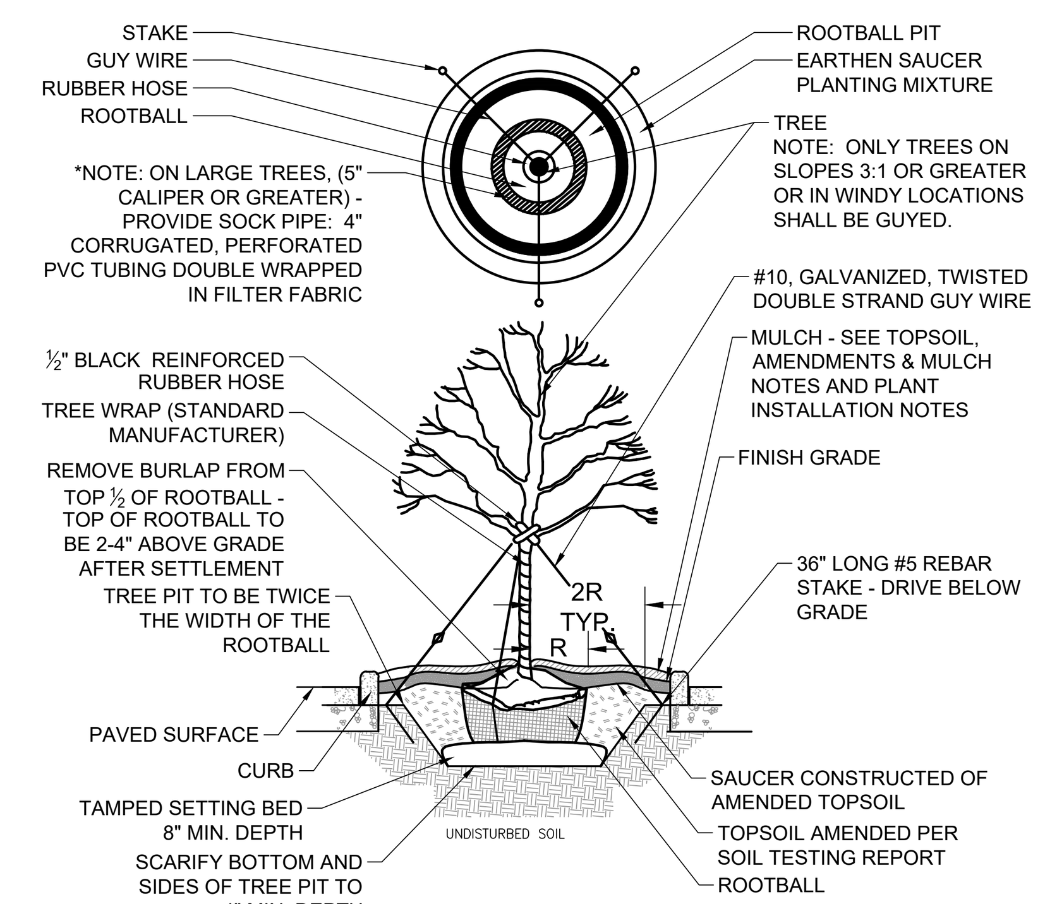

4 L200 TREE ISLAND PLANTING DETAIL
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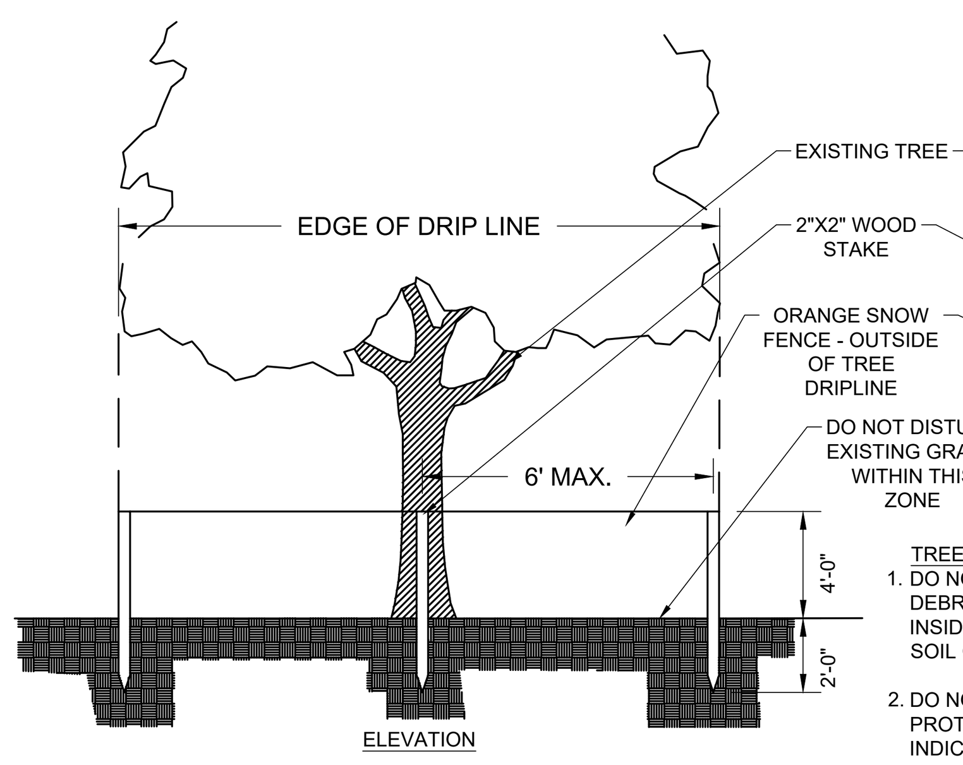
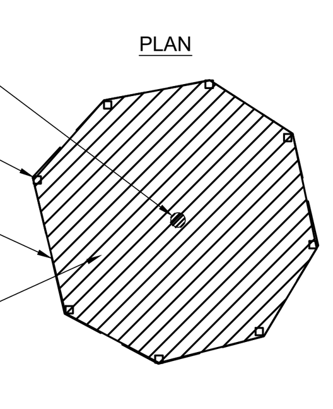
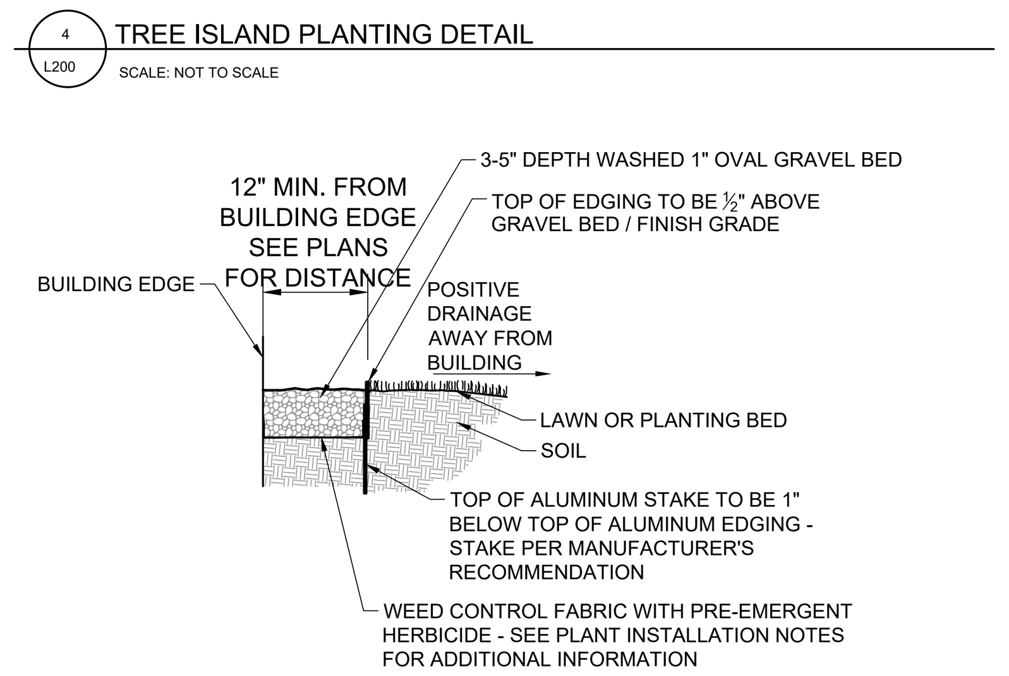




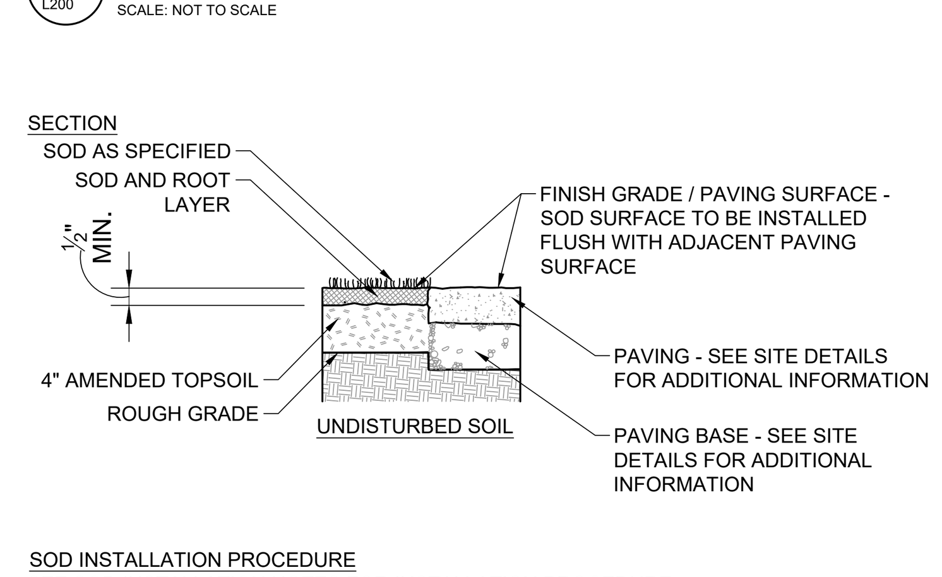
TREE PROTECTION NOTES:

1. DO NOT STAGE CONSTRUCTION MATERIALS, DEBRIS, EXCAVATED MATERIAL OR VEHICLES INSIDE TREE PROTECTION ZONES; PREVENT SOIL COMPACTION OVER ROOT SYSTEMS.
2. DO NOT EXCAVATE WITHIN TREE PROTECTION ZONES UNLESS OTHERWISE INDICATED.
3. WHERE EXCAVATION FOR NEW CONSTRUCTION IS REQUIRED WITHIN THE DRIP LINE OF TREES, HAND CLEAR AND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS.
4. ROOT PRUNING SHALL TAKE PLACE ONLY WHERE THE ROOTS OF EXISTING TREES HAVE BEEN DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION, AS DIRECTED BY A CERTIFIED ARBORIST. CUT ROOTS WITH SHARP PRUNING INSTRUMENTS - BREAKING OR CHOPPING IS PROHIBITED.
5. DO NOT FILL WITHIN TREE PROTECTION ZONES, UNLESS OTHERWISE INDICATED.
6. WHEN FILLING FOR NEW CONSTRUCTION IS REQUIRED WITHIN THE DRIP LINE, PERFORM WORK BY HAND TO MINIMIZE DAMAGE TO ROOT SYSTEM.
7. WHERE EXISTING GRADE IS BELOW THE ELEVATION OF FINISH GRADE, FILL WITH TOPSOIL. PLACE TOPSOIL BY HAND IN A SINGLE UNCOMPACTED LAYER AND HAND GRADE TO REDUCED FINISHED ELEVATIONS.
8. AERATE SURFACE SOIL, COMPACTED DURING CONSTRUCTION, 10 FT BEYOND DRIP LINE. DRILL 2 IN DIAMETER HOLES A MINIMUM OF 12 IN DEEP AT 24 IN ON CENTER. BACKFILL HOLES WITH AN EQUAL MIX OF AUGERED SOIL AND SAND.

5 L200 EXISTING TREE PROTECTION
SCALE: NOT TO SCALE

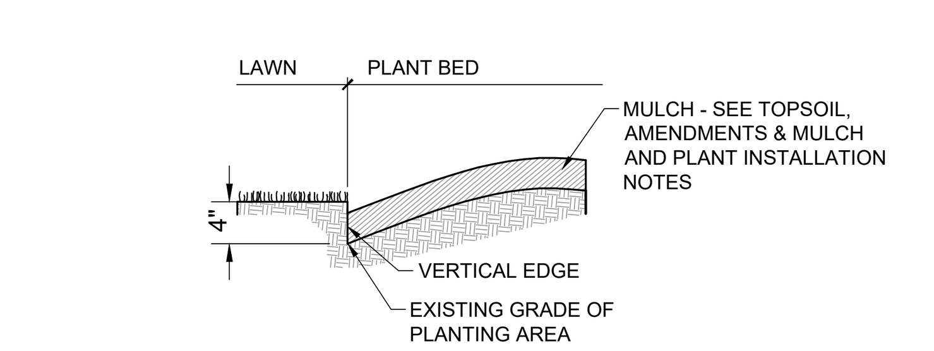


6 L200 GRAVEL PLANTING EDGE DETAIL
SCALE: NOT TO SCALE



SOD INSTALLATION PROCEDURE
SEE SOD INSTALLATION NOTES FOR INSTALLATION PROCEDURE.

7 L200 SOD/WALK INSTALLATION DETAIL
SCALE: NOT TO SCALE



8 L200 SHRUB BED EDGE DETAIL
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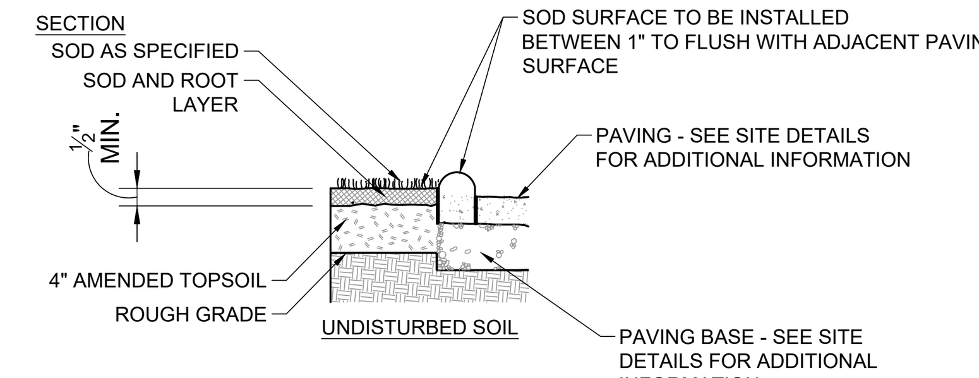

SOD INSTALLATION PROCEDURE
SEE SOD INSTALLATION NOTES FOR INSTALLATION PROCEDURE.

9 L200 SOD-CURB INSTALLATION DETAIL
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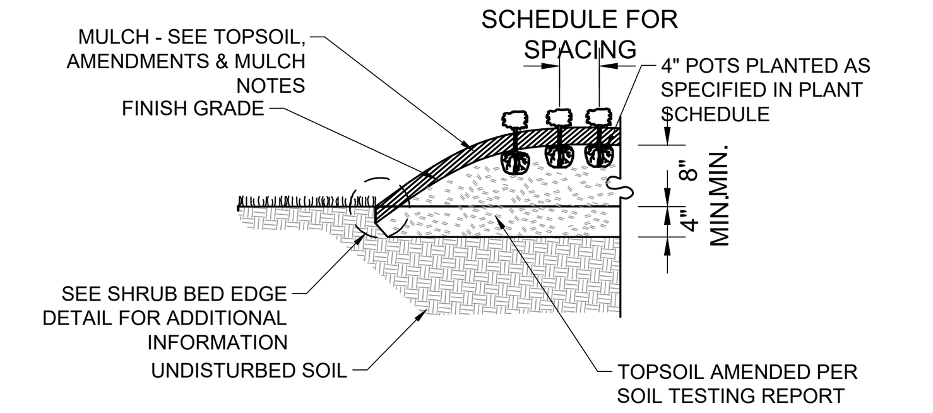

SOD INSTALLATION PROCEDURE
SEE PLANT INSTALLATION NOTES FOR INSTALLATION PROCEDURE.

10 L200 SEASONAL COLOR PLANTING DETAIL
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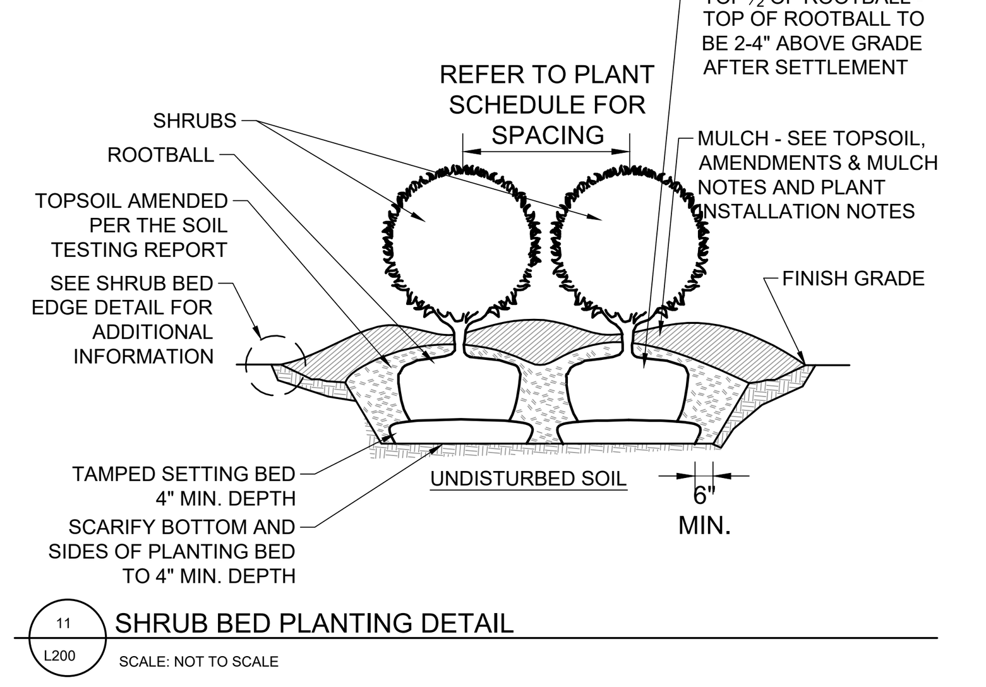

11 L200 SHRUB BED PLANTING DETAIL
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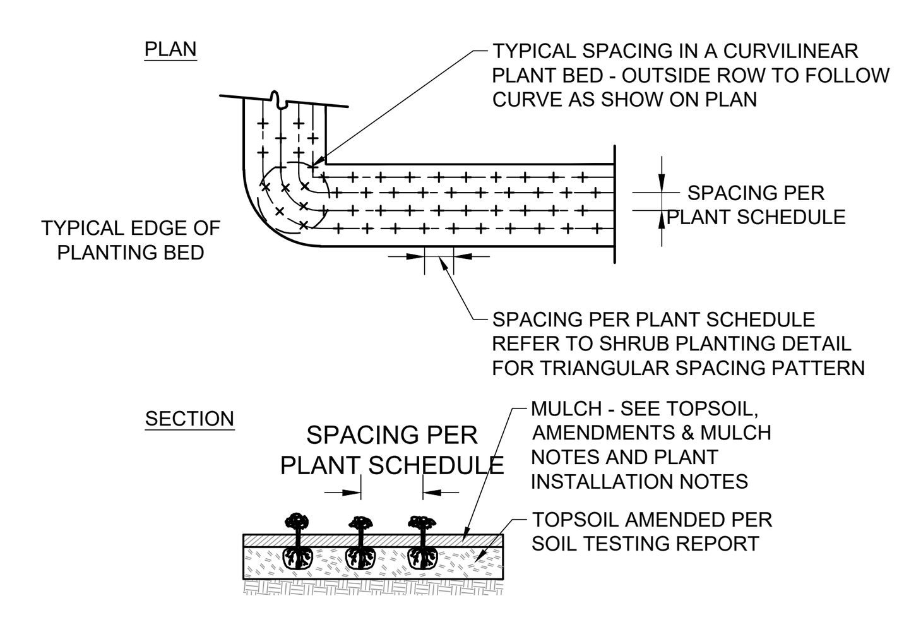
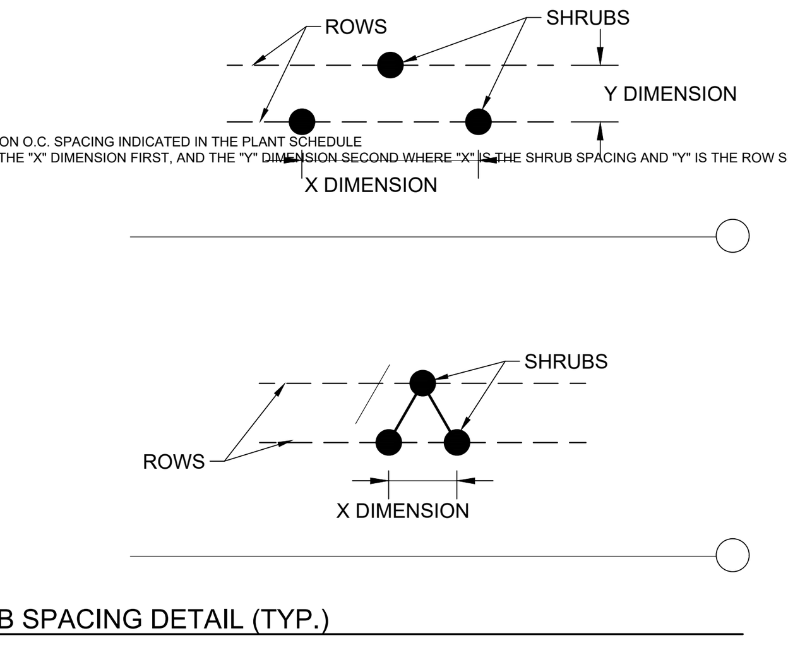


12 L200 GROUNDCOVER PLANTING DETAILS
SCALE: NOT TO SCALE

NOTE: THIS DIAGRAM REPRESENTS SPACING FOR MASS SHRUB PLANTINGS THAT HAVE BEEN GIVEN ONE O.C. (ON CENTER) DIMENSION IN THE PLANT SCHEDULE.



NOTE: TWO DIMENSION O.C. SPACING INDICATED IN THE PLANT SCHEDULE IS IN THE ORDER OF THE "X" DIMENSION FIRST, AND THE "Y" DIMENSION SECOND WHERE "X" IS THE SHRUB SPACING AND "Y" IS THE ROW SPACING. (EXAMPLE: X' x Y')

13 L200 SHRUB SPACING DETAIL (TYP.)
SCALE: NOT TO SCALE

GENERAL LANDSCAPE NOTES

A. THE CONTRACTOR SHALL VISIT THE SITE AND COMPLETELY REVIEW THESE DOCUMENTS AND FULLY UNDERSTAND THE NATURE AND SCOPE OF WORK NEEDED TO ACHIEVE THE FINISHED PRODUCT INTENDED BY THE OWNER. IN ADDITION, THE CONTRACTOR SHALL AT ONCE REPORT TO THE LANDSCAPE ARCHITECT, INACCURACIES OR INCONSISTENCIES DISCOVERED. FAILURE TO REASONABLY RECOGNIZE OR NOTIFY THE LANDSCAPE ARCHITECT OF SUCH ITEMS SHALL RELEASE THE LANDSCAPE ARCHITECT AND OWNER OF ALL LIABILITY. ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.
B. PROTECT ALL EXISTING VEGETATION TO REMAIN AS PER PLANS AND SPECIFICATIONS. INSTALL MINIMUM 4' TALL FENCE 5' OUTSIDE THE DRIP LINE OF TREES TO REMAIN. WATER TREES AND VEGETATION TO REMAIN WITH ONE INCH OF RAIN (RAIN GAUGE OR NOAH LOCAL WEATHER VERIFIED) PER WEEK FOR DURATION OF CONSTRUCTION PROJECT.
D. PRIOR TO CONSTRUCTION, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY TO COMPLETE THE WORK, LOCATING ALL UNDERGROUND UTILITIES, AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING INSTALLATION. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC., WHICH MAY OCCUR AS A RESULT OF LANDSCAPE CONSTRUCTION.
E. CONTRACTOR MUST CERTIFY THAT ITS SAFETY PROGRAM MEETS REGULATORY REQUIREMENTS AT A MINIMUM. CONTRACTOR TO PROVIDE DOCUMENTATION OF THE OSHA RECORD KEEPING SUMMARY.
F. LANDSCAPE ARCHITECT MAY OBSERVE TREES AND SHRUBS EITHER AT PLACE OF GROWTH OR SITE BEFORE PLANTING FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. LANDSCAPE ARCHITECT RETAINS RIGHT TO OBSERVE TREES AND SHRUBS FURTHER FOR SIZE AND CONDITION OF BALLS, ROOT SYSTEMS, INSECTS, INJURIES, AND LATENT DEFECTS AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. LANDSCAPE CONTRACTOR SHALL REMOVE REJECTED TREES OR SHRUBS IMMEDIATELY FROM PROJECT SITE.
G. IF EXISTING ECOLOGY CAUSES ADJUSTMENTS OF LANDSCAPE PLANS TO FIT THE SITE CONDITIONS, A STAKE OUT BY LANDSCAPE CONTRACTOR AND ADJUSTMENTS BY LANDSCAPE ARCHITECT SHALL BE REQUIRED PRIOR TO INSTALLATION.
H. ALL PLANTING AREAS SHOWN ON PLANS SHALL BE TO WITHIN 2" OF FINAL GRADE BEFORE LANDSCAPE CONTRACTOR COMMENCES INSTALLATION.
I. LANDSCAPE CONTRACT IS RESPONSIBLE FOR COORDINATING WITH OTHER CONTRACTORS AND/OR LOCATING PROPOSED SITE UTILITIES, STORM STRUCTURES, EASEMENTS, ETC.
J. ALL PLANT MATERIAL MUST BE INSTALLED ACCORDING TO THE APPROVED LANDSCAPING PLAN BY NO LATER THAN THE NEXT PLANTING SEASON OR WITHIN 6 MONTHS FROM THE COMPLETION OF ALL SITE CONSTRUCTION.
K. CONTRACTOR TO VERIFY ALL PLANT QUANTITIES. ANY DISCREPANCY BETWEEN THE PLANTING LIST AND THE PLAN SHALL BE VERIFIED BY THE LANDSCAPE ARCHITECT. ALL SUBSTITUTIONS AND/OR CHANGES SHALL BE REQUESTED IN WRITING TO THE OWNER OR OWNER'S REPRESENTATIVE AND BE APPROVED BY THE LANDSCAPE ARCHITECT AND THE CITY PRIOR TO INSTALLATION.
L. THE CONTRACTOR SHALL PROVIDE QUALITY, SIZE, GENUS, SPECIES, AND VARIETY OF EXTERIOR PLANTS INDICATED, COMPLYING WITH APPLICABLE REQUIREMENTS IN ANSI Z60.1, "AMERICAN STANDARD FOR NURSERY STOCK."
M. THE CONTRACTOR SHALL FURNISH NURSERY-GROWN TREES AND SHRUBS COMPLYING WITH ANSI Z60.1, WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK, FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.
N. TREES AND SHRUBS OF A LARGER SIZE MAY BE USED, IF ACCEPTABLE TO LANDSCAPE ARCHITECT, WITH A PROPORTIONATE INCREASE IN SIZE OF ROOTS OR BALLS.
O. IF FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF TREES OR SHRUBS IS SHOWN, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD, AND NUMBER LABEL TO ASSURE SYMMETRY IN PLANTING.
P. THE CONTRACTOR SHALL LABEL ONE TREE AND ONE SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTH THE BOTANICAL AND COMMON NAME.
Q. PLANT TAGS SHALL REMAIN ON INSTALLED PLANT MATERIAL UNTIL THE WORK HAS BEEN APPROVED BY THE CITY'S INSPECTOR AND/OR THE OWNER OR OWNER'S REPRESENTATIVE.
R. LANDSCAPE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE FROM ALL PLANT BEDS WITHOUT ADVERSELY AFFECTING SITE DRAINAGE. GRADES BEHIND CURBS FOR AREAS TO RECEIVE MULCH SHALL BE HELD 4 INCHES BELOW TOP OF CURB AND 2 INCHES BELOW TOP OF CURB FOR SOD.
S. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING, INCLUDING, BUT NOT LIMITED TO, WATERING, SPRAYING, MULCHING, FERTILIZING, ETC., ALL PLANTING AREAS AND LAWN UNTIL THE WORK IS ACCEPTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
T. IF IRRIGATION IS PART OF THE PROJECT, THE LANDSCAPE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PLANT MATERIAL WITH THE IRRIGATION CONTRACTOR. ACTIVATE IRRIGATION SYSTEM UPON COMPLETION OF ALL LAWN AREAS.
U. ALL IRRIGATION COMPONENTS SHALL BE OF THE SAME MANUFACTURER & INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
V. NO TREES SHALL BE PLANTED WITHIN 10'-0" OF A FIRE HYDRANT.

TOPSOIL, AMENDMENTS & MULCH

A. PROVIDE 4" OF TOP SOIL AT SODDED AND PLANTED AREAS. USE 1/3 ON-SITE TOP SOIL, 1/3 CLEAN FRIABLE SANDY-LOAM TOP SOIL & 1/3 COARSE SAND.
B. PROVIDE 3" DEPTH SHREDDED HARDWOOD MULCH AT A 4' DIAMETER AT ORNAMENTAL TREES AND 3' DIAMETER AT ALL SHRUBS. MULCHED AREAS TO BE COMBINED IN APPROPRIATE SHAPES AND SIZES AT GROUPINGS OF TREES AND SHRUBS.
C. SHREDDED HARDWOOD MULCH IS NOT ALLOWED WITHIN 3' OF THE BUILDING WALL. SUBSTITUTE 3" DEEP L.S. STONE AROUND PLANTINGS AT ALL LOCATIONS NEXT TO THE BUILDING.
D. STRIP TOPSOIL TO ITS FULL DEPTH AT AREAS IMPACTED AND AT ALL AREAS TO BE RE-GRADED AND RESURFACED. STOP TOPSOIL STRIPPING OUTSIDE THE DRIP LINE OF TREES TO REMAIN / DO NOT STRIP AS TO IMPACT THE ROOD LINE OF TREES TO REMAIN.
E. COORDINATE WITH THE OWNER PRIOR TO ESTABLISHING TOPSOIL STORAGE AREAS. GRADE AND SLOPE STOCKPILES FOR PROPER DRAINAGE AND TO PREVENT EROSION. THE REUSE OF STOCKPILE TOPSOIL WITHIN THE PROJECT SITE MUST BE APPROVED FOR PLACEMENT BY THE LANDSCAPE ARCHITECT.
F. ALL TOPSOIL SHALL BE SHREDDED, CLEAN, AND UNIFORM IN QUALITY FREE FROM HARD CLODS, STIFF CLAY, PARTIALLY DISINTEGRATED STONE, LIME, CEMENT, SLAG, OR OTHER UNDESIRABLE MATERIAL. TOPSOIL SHALL CONFORM TO THE FOLLOWING:
   - ORGANIC CONTENT - BETWEEN 3% - 10% ORGANIC MATTER AS DETERMINED BY LOSS OF IGNITION
   - pH - SHALL RANGE BETWEEN 6.0 - 7.5
   - SOIL TEXTURE - TOPSOIL SHALL CONSIST OF THE FOLLOWING PERCENTAGES OF SAND, SILT, AND CLAY PASSING THROUGH A 2.00 MM (#10) SIEVE
     a. SAND - 30%-75%
     b. SILT - 15%-70%
     c. CLAY - 10%-30%
G. TOPSOIL MUST BE APPROVED PRIOR TO PLACEMENT. TOPSOIL TEXT RESULTS SHALL SHOW RECOMMENDATION FOR SOIL ADDITIVES FOR FERTILIZERS TO CORRECT NUTRIENT DEFICIENCIES AS NECESSARY
H. INORGANIC SOIL AMENDMENTS INCLUDE THE FOLLOWING:
   - LIME - ASTM C 602, AGRICULTURAL LIMING MATERIAL CONTAINING A MINIMUM OF 80% CALCIUM CARBONATE EQUIVALENT AS FOLLOWS:
     a. PROVIDE LIME IN FORM OF GROUND DOLOMITIC LIMESTONE PER ASTM 605, CONTAINING NO LESS THAN L85% OF TOTAL CARBONATES AND SHALL BE GROUND TO SUCH A FINENESS THAT 50% WILL PASS THROUGH A 100 MESH SIEVE AND 90% WILL PASS THROUGH A MESH SIEVE. COARSER MATERIAL WILL BE ACCEPTABLE, PROVIDED THE SPECIFIED RATES OF APPLICATION ARE INCREASED PROPORTIONALLY ON THE BASIS OF QUANTITIES PASSING THE 100 MESH SIEVE.
   - SULFUR - GRANULAR, BIODEGRADABLE, AND CONTAINING A MINIMUM OF 90% SULFUR, WITH A MINIMUM OF 99% PASSING THROUGH NUMBER 6 SIEVE AND A MAXIMUM OF 10% PASSING THROUGH A NUMBER 40 SIEVE.
   - AXIS CALCINED DIATOMACEOUS EARTH SOIL AMENDMENT - SEE PREPARATION AND PLANTING NOTES FOR APPLICATION RATES.
I. ORGANIC MULCH - FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS, CONSISTING OF ONE DOUBLE SHREDDED HARDWOOD BARK.

PLANTING PREPARATION

A. EXAMINE AREAS TO RECEIVE PLANTS FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS ARE CORRECTED.
B. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES AND TURF AREAS AND EXISTING PLANTS FROM DAMAGE CAUSED BY PLANTING OPERATIONS.
C. INSTALL EROSION-CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.
D. APPLY ANTIDESICCANT TO TREES AND SHRUBS USING POWER SPRAY TO PROVIDE ADEQUATE FILM OVER TRUNKS (BEFORE WRAPPING), BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT DURING HANDLING AND TRANSPORTATION. IF DECIDUOUS TREES OR SHRUBS ARE MOVED IN FULL LEAF, SPRAY ANTIDESICCANT AT NURSERY BEFORE MOVING AND AGAIN TWO (2) WEEKS AFTER PLANTING.
E. WRAP TREES AND SHRUBS WITH BURLAP FABRIC OVER TRUNKS, BRANCHES, STEMS, TWIGS, AND FOLIAGE TO PROTECT FROM WIND AND OTHER DAMAGE DURING DIGGING, HANDLING, AND TRANSPORTATION.
F. LAY OUT INDIVIDUAL TREE AND SHRUB LOCATIONS AND BED EDGES FOR ALL EXTERIOR PLANTINGS. STAKE LOCATIONS, OUTLINE AREAS, ADJUST LOCATIONS WHEN REQUESTED, AND OBTAIN LANDSCAPE ARCHITECT'S WRITTEN ACCEPTANCE OF LAYOUT PRIOR TO PLANTING. TREES SHALL BE SITED IN THE FIELD BY THE LANDSCAPE ARCHITECT WHERE NOTED ON THE PLAN.

SEEDING / SOD PREPARATION

A. DE-COMPACT AREAS HEAVILY TRAFFICKED BY CONSTRUCTION ACTIVITIES WITH HOE OR OTHER APPROVED METHOD.
B. GRADE SURFACES TO ASSURE DRAINAGE AWAY FROM STRUCTURES AND TO PREVENT PONDING AND POCKETS OF SURFACE DRAINAGE. PROVIDE SUBGRADE FREE FROM IRREGULAR SURFACE CHANGES AND AS FOLLOWS:
   - ROUGH GRADE SHALL EQUAL PLUS / MINUS TWO TENTHS (0.20) FEET, SUBGRADE TOLERANCE SHALL BE FREE OF EXPOSED BOULDERS OR STONE EXCEEDING ONE (1) INCH IN GREATEST DIMENSION.
   - FILL IN ALL AREAS OF SETTLEMENT TO PROPER GRADE BEFORE SUBSEQUENT PLACEMENT OF TOPSOIL.
C. PLACE TOPSOIL A MINIMUM OF SIX (6) INCHES AVERAGE DEPTH.
D. GRADE AREA TO A SMOOTH, FREE DRAINING EVEN SURFACE WITH A LOOSE, MODERATELY COURSE TEXTURE. ROLL, SCARIFY, RAKE, AND LEVEL AS NECESSARY TO OBTAIN A TRUE, EVEN LAWN SURFACE AND FILL DEPRESSIONS AS REQUIRED TO DRAIN. SEED BED TO BE APPROXIMATELY ONE HALF (½) TO ONE (1) INCH BELOW ALL SIDEWALKS AND CURBS. DO NOT MOVE HEAVY OBJECTS EXCEPT NECESSARY LAWN MAKING EQUIPMENT OVER LAWN AREAS AFTER THE SOIL IS PREPARED UNLESS IT IS LOOSENED AND RE-GRADED. RESTORE PREPARED AREAS TO SPECIFIED CONDITIONS IF ERODED, SETTLED, OR OTHERWISE DISTURBED.
E. APPLY TYPE A / STARTER FERTILIZER TO INDICATED TURF AREAS AT A RATE EQUAL TO ONE (1) POUND OF ACTUAL NITROGEN PER ONE THOUSAND (1,000) SQUARE FEET OR AS OTHERWISE INDICATED. APPLY FERTILIZERS BY MECHANICAL DROP OR ROTARY DISTRIBUTOR, THOROUGHLY AND EVENING INCORPORATED WITH THE SOIL TO A DEPTH OF THREE (3) INCHES BY DICING OR OTHER APPROVED METHOD. FERTILIZE AREAS INACCESSIBLE TO POWER EQUIPMENT WITH HAND TOOLS AN INCORPORATE INTO THE SOIL
F. ACCEPTABLE SEEDING TIMES ARE AS FOLLOWS:
   - SPRING SEED PLANTING - APRIL 1 TO JUNE 1
   - FALL SEED PLANTING - AUGUST 15 TO OCTOBER 1

PLANT INSTALLATION

A. LOOSEN SUBGRADE OF PLANTING AREAS TO A DEPTH OF TWELVE (12) INCHES. REMOVE STONES LARGER THAN ONE (1) INCH IN ANY DIMENSION, STICKS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OF THE OWNER'S PROPERTY.
B. APPLY FERTILIZER DIRECTLY TO THE SUBGRADE BEFORE LOOSENING.
C. SPREAD TOPSOIL, APPLY SOIL AMENDMENTS AND FERTILIZER ON SURFACE, AND THOROUGHLY BLEND PLANTING SOIL. APPLY TURFMATRIX SOIL AMENDMENT AT THE FOLLOWING RATES (CONTACT: KENTUCKY SOLITE CORPORATION - 800.272.0441):
   FOR 2" DEEP BEDS - 450 LBS / 1000 SF
   FOR 4" DEEP BEDS - 900 LBS / 1000 SF
   FOR 6" DEEP BEDS - 1,300 LBS / 1000 SF
   FOR 8" DEEP BEDS - 1,750 LBS / 1000 SF
D. DELAY MIXING FERTILIZER WITH PLANTING SOIL IF PLANTING WILL NOT PROCEED WITHIN A FEW DAYS.
E. MIX LIME WITH DRY SOIL PRIOR TO MIXING FERTILIZER.
F. SPREAD TOPSOIL TO A DEPTH OF (6) SIX INCHES FOR LAWN OR (12) TWELVE INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLING. DO NOT SPREAD IF PLANTING SOIL IF SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
G. GRADE PLANTING AREAS TO A SMOOTH, UNIFORM, SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSION TO MEET FINISH GRADES.
H. RESTORE PLANTING AREAS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING.
I. FOR PLANTING PITS AND TRENCHES, EXCAVATE CIRCULAR PLANTING PITS WITH SIDES SLOPING INWARD AT A FORTY-FIVE (45) DEGREE ANGLE. EXCAVATIONS WITH VERTICAL SIDES ARE NOT ACCEPTABLE. TRIM PERIMETER OF BOTTOM LEAVING THE CENTER AREA OF THE BOTTOM RAISED 8" TO SUPPORT THE ROOT BALL AND ASSIST WITH DRAINAGE AWAY FROM THE CENTER. DO NOT FURTHER DISTURB THE BASE. ENSURE THAT THE ROOT BALL WILL SIT ON UNDISTURBED BASE SOIL TO PREVENT SETTLING. SCARIFY SIDES OF THE PLANTING PIT SMEARED OR SMOTHERED DURING EXCAVATION.
   - EXCAVATE APPROXIMATELY TWO (2) TIMES THE DIAMETER OF THE ROOT BALL FOR BALLED AND BURLAPPED STOCK.
   - EXCAVATE AT LEAST TWELVE (12) INCHES WIDER THAN THE ROOT SPREAD AND DEEP ENOUGH TO ACCOMMODATE VERTICAL ROOTS FOR BARE ROOT STOCK.
   - IF DRAIN TILE IS SHOWN ON DRAWINGS OR DETAILS, OR REQUIRED UNDER PLANTING AREAS, EXCAVATE TO TOP OF POROUS BACKFILL OVER TILE.
J. SUBSOIL AND TOPSOIL REMOVED FROM EXCAVATION MAY BE USED AS PLANTING SOIL PROVIDED IT IS FREE FROM ROCKS AND OTHER DELETERIOUS MATERIAL.
K. NOTIFY LANDSCAPE ARCHITECT IF UNEXPECTED ROCK OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS ARE ENCOUNTERED IN EXCAVATIONS.
L. NOTIFY LANDSCAPE ARCHITECT IF SUBSOIL CONDITIONS EVIDENCE UNEXPECTED WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PLANTING PITS.
M. FILL EXCAVATIONS WITH WATER AND ALLOW TO PERCOLATE AWAY BEFORE POSITIONING TREES AND SHRUBS.
N. INSTALL PLANTS - REFER TO TYPICAL PLANTING DETAILS FOR PLANT INSTALLATION.
O. IT IS THE CONTRACTOR'S OPTION WHETHER OR NOT TO STAKE A TREE, BUT IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT PLANTS REMAIN IN AN UPRIGHT POSITION UNTIL THE END OF THE WARRANTY PERIOD, AT WHICH POINT ANY STAKES & WIRE ARE TO BE REMOVED BY THE CONTRACTOR.
P. ALL DECIDUOUS TREES SHALL BE WRAPPED WITH STANDARD MANUFACTURER'S TREE WRAP TO PREVENT WINTER DAMAGE. TREE WRAP TO BE REMOVED AFTER THE FIRST WINTER BY THE LANDSCAPE CONTRACTOR.
Q. LANDSCAPE CONTRACTOR SHALL INSTALL GATOR BAGS, PER MANUFACTURER'S RECOMMENDATION FOR ALL TREES THAT ARE NOT OTHERWISE IRRIGATED.
R. PRIOR TO MULCHING, APPLY PRE-EMERGENT HERBICIDE (PREEN OR EQUIVALENT) PER MANUFACTURER'S RECOMMENDATION.
S. INSTALL WEED CONTROL BARRIERS BEFORE MULCHING ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. COMPLETELY COVER AREA TO BE MULCHED, OVERLAPPING EDGES A MINIMUM OF SIX (6) INCHES AND SECURE THE SEAMS WITH GALVANIZED PINS.
T. MULCH BACKFILLED SURFACES OF PLANTING AREAS AND OTHER AREAS AS INDICATED.
U. APPLY MULCH ACCORDING TO THE FOLLOWING:
   - TREES AND SHRUBS IN TURF AREAS - APPLY ORGANIC MULCH RING OF FOUR (4) INCH AVERAGE THICKNESS, WITH THIRTY-SIX (36) INCH RADIUS AROUND TRUNKS OR STEMS. DO NOT PLACE MULCH WITHIN THREE INCHES OF THE TRUNKS OR STEMS.
   - ORGANIC MULCH IN PLANTING AREAS - APPLY TWO (2) INCH AVERAGE THICKNESS OF ORGANIC MULCH EXTENDING TWELVE (12) INCHES BEYOND THE EDGES OF INDIVIDUAL PLANTING PIT OR TRENCH AND OVER THE WHOLE SURFACE OF THE PLANTING AREA, AND FINISH LEVEL WITH ADJACENT FINISH GRADES. DO NOT PLACE MULCH WITHIN THREE (3) INCHES OF TRUNKS OR STEMS.
V. THE LANDSCAPE CONTRACTOR SHALL INSTRUCT THE OWNER OR OWNER REPRESENTATIVE ON WATERING NEEDS OF INSTALLED PLANTINGS.

IRRIGATION

A. FURNISH ALL DESIGN, LABOR, MATERIALS, AND EQUIPMENT FOR THE PROPER INSTALLATION OF AN IRRIGATION SYSTEM TO SERVICE ALL LAWN AND PLANTED AREAS.
B. THE CONTRACTOR SHALL PROVIDE LAYOUT AND DESIGN COORDINATION WITH THE LANDSCAPE REQUIREMENTS OF THE PLANTING TYPES, LOCATIONS AND SHALL INCLUDE WATER SAVING PRODUCTS (LIKE EPA WATERSENSE) AND PRACTICES WHICH DEMONSTRATE THE HIGHEST LEVEL OF PERFORMANCE (WATER SAVING FEATURES).
C. SMART CONTROLLERS, HIGH-EFFICIENCY SPRAY NOZZLES, PRESSURE REGULATED HEADS, AND DRIPLINE IN BEDS MUST BE INCORPORATED. INDIVIDUAL SUB-ZONES MUST BE TAILORED TO THE WATERING REQUIREMENTS OF EACH MAJOR PLANT TYPE. UNDER NO CIRCUMSTANCES SHALL ANY TURF AREAS BE WATERED IN COMBINATION WITH PLANT BEDS. SPACING OF ALL SPRINKLER EQUIPMENT SELECTED SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS AS PUBLISHED. "HEAD TO HEAD" COVERAGE IS REQUIRED IN ALL TURF AREAS.
D. IRRIGATION CONTRACTOR SHALL PARTICIPATE IN COORDINATION MEETINGS AS REQUIRED WITH THE OWNER'S REPRESENTATIVE AND RELATED PARTIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
E. THE IRRIGATION SYSTEM IS TO BE INSTALLED BY A CONTRACTOR WHO SPECIALIZES IN IRRIGATION DESIGN AND INSTALLATION AND HAS INSTALLED AT LEAST FIVE (5) PROJECTS OF EQUAL OR COMPARATIVE SIZE AND COMPLEXITY. IRRIGATION WORK SHALL BE PERFORMED BY A SINGLE FIRM, ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND LICENSED AS A CONTRACTOR IN THE STATE WHERE THE PROJECT IS TO BE INSTALLED.
F. THE SYSTEM SHALL BE DESIGNED BY A CERTIFIED EPA WATERSENSE PARTNER, AS FOUND ON THE EPA WATERSENSE WEBSITE, OR MUST BE A MEMBER OF THE IRRIGATION ASSOCIATION (IA), FAIRFAZ, VA, AND HOLD A CID (CERTIFIED IRRIGATION DESIGNER) QUALIFICATION.
G. REFERENCED STANDARDS: AMERICAN SOCIETY FOR TESTING AND MATERIALS, ANNUAL BOOK OF ASTM STANDARDS, LATEST EDITION.
H. CODES AND STANDARDS: IRRIGATION DESIGN AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL GOVERNING AGENCY REQUIREMENTS AND TO INDUSTRY STANDARDS. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY IN WRITING OF ANY DISCREPANCIES, INCONSISTENCIES, OR CONTRADICTORY REQUIREMENTS.
I. SUBSTITUTIONS: NO SUBSTITUTIONS FROM THE INITIAL PLAN WILL BE PERMITTED WITHOUT REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE. REQUESTS MUST BE MADE TWO (2) WEEKS IN ADVANCE OF THE PROJECT START DATE. IN THE EVENT THE CONTRACTOR WISHES TO MAKE SUBSTITUTIONS OF MATERIALS, SUFFICIENT DESCRIPTIVE LITERATURE, NEW DESIGN, AND MATERIAL SAMPLES MUST BE FURNISHED TO ESTABLISH THE MATERIAL AS AN EQUAL SUBSTITUTE, AND THE DESIGN AS FUNCTIONAL. THE PROPOSED MATERIAL SUBSTITUTION MUST MEET THE ORIGINAL DESIGN INTENT AS IT PERTAINS TO WATER CONSERVATION.
J. APPROVAL AND SELECTION OF MATERIALS AND WORK: THE SELECTION OF ALL MATERIALS AND THE EXECUTION OF ALL OPERATIONS REQUIRED UNDER THIS PERFORMANCE SPECIFICATION IS SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE WHO HAS THE RIGHT TO REJECT ANY AND ALL MATERIALS AND ANY AND ALL WORK WHICH, IN THEIR OPINION, DOES NOT MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AT ANY STAGE OF THE OPERATION. REMOVE REJECTED WORK AND MATERIALS FROM PROJECT SITE AND REPLACE PROMPTLY.

WARRANTY

A. CONTRACTOR SHALL PROVIDE OWNER WITH A MINIMUM ONE YEAR WRITTEN WARRANTY FOR LABOR AND MATERIALS.
B. CONTRACTOR SHALL WARRANT EXTERIOR PLANTS AGAINST DEFECTS, INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLECT OR ABUSE BY OWNER, OR INCIDENTS THAT ARE BEYOND CONTRACTOR'S CONTROL.
C. WARRANTY SHALL INCLUDE SPECIFIC WARRANTY PERIODS FROM DATE OF ACCEPTANCE FOR TREES AND SHRUBS, GROUND COVERS, AND OTHER EXTERIOR PLANTS.
D. WARRANTY SHALL BE LIMITED TO ONE REPLACEMENT OF EACH EXTERIOR PLANT, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE OF CONTRACTOR TO COMPLY WITH REQUIREMENTS.
E. WARRANTY FOR IRRIGATION SERVICE, PLUMBING, & DRAINAGE SHALL BE GUARANTEED FOR A PERIOD OF 1 YEAR AND WILL INCLUDE START-UP, WINTERIZATION, AND SECOND SEASON START-UP. WARRANTY SHALL INCLUDE ALL LABOR, MATERIAL, TOOLS, AND EQUIPMENT AS NECESSARY TO PROVIDE A FUNCTIONING SYSTEM, FREE FROM DEFECTS AND ADJUSTED PROPERLY FOR APPROPRIATE WATER DELIVERY TO ALL PLANT MATERIAL.
F. ALL DEAD, DAMAGED OR MISSING LANDSCAPE MATERIALS WILL BE REPLACE PER THE CITY OF MASON LANDSCAPE CODE

TRAFFIC & SAFETY

A. REFER TO BID DOCUMENTS AND COMPLY WITH ALL STATE & LOCAL REQUIREMENTS REGARDING APPROVED WORK TIMES, SCHEDULING OF INSTALLATION, AND ALL OTHER REQUIREMENTS.

SEED INSTALLATION

HYDROSEED

A. LANDSCAPE CONTRACTOR SHALL SEED ALL DISTURBED AREAS. THE FINAL GRADE AND TOPSOIL WITHIN +/- .10 FEET WILL BE IN PLACE FOR SEEDING CONTRACTOR.
B. CONTRACTOR SHALL APPLY CELLULOSE FIBER MULCH AT A MINIMUM RATE OF 1500 LBS./ACRE AND FERTILIZERS: BEST 6-20-20 OR BEST 15-15-15 OR APPROVED EQUAL APPLIED AT RATE APPROPRIATE FOR PRODUCT. ORGANIC TACKIFIER SHALL BE APPLIED AT RATE OF 70 LBS./ACRE. HYDROSEED SEED MIX SHALL BE APPLIED AT THE 2,000 LBS./ACRE.
C. CONTRACTOR SHALL WATER ALL PLANT AREAS THOROUGHLY TO SATURATE UPPER LAYERS OF SOIL PRIOR TO THE HYDROSEEDING OPERATION. ALLOW THE PLANTING AREA SOIL SURFACE TO DRY OUT FOR ONE DAY ONLY PRIOR TO THE HYDROSEEDING APPLICATION.
D. CONTRACTOR SHALL APPLY THE HYDROSEEDING IN THE FORM OF A SLURRY CONSISTING OF ORGANIC SOIL AMENDMENTS, COMMERCIAL FERTILIZER, AND ANY OTHER CHEMICALS THAT ARE CALLED OUT. WHEN HYDRAULICALLY SPRAYED ONTO THE SOIL, THE MULCH SHALL FORM A BLOTTER-LIKE MATERIAL. SPRAY THE AREA WITH A UNIFORM VISIBLE COAT, USING THE DARK COLOR OF THE CELLULOSE FIBER AS A VISUAL GUIDE. THE SLURRY SHALL BE APPLIED IN A DOWNWARD DRILLING MOTION VIA A FAN STREAM NOZZLE. CONTRACTOR SHALL INSURE THAT ALL OF THE SLURRY COMPONENTS ENTER AND MIX WITH THE SOIL.
E. IF SLURRY COMPONENTS ARE LEFT FOR MORE THAN TWO HOURS IN THE MACHINE, ADD 50% MORE OF THE ORIGINALLY SPECIFIED SEED MIX TO ANY SLURRY MIXTURE WHICH HAS NOT BEEN APPLIED WITHIN THE TWO HOURS AFTER MIXING. ADD 75% MORE OF THE ORIGINAL SEED MIX TO ANY SLURRY MIXTURE WHICH HAS NOT BEEN APPLIED EIGHT (8) HOURS AFTER MIXING. ALL MIXTURES MORE THAN EIGHT (8) HOURS OLD, SHALL BE DISPOSED, OFFSITE, AT THE CONTRACTOR'S EXPENSE.
F. CONTRACTOR SHALL REMOVE ALL SLURRY SPRAYED ONTO HARDSCAPE AREAS INCLUDING CONCRETE WALKS, FENCES, WALLS, BUILDINGS, ETC. AT THE CONTRACTOR'S EXPENSE.
G. CONTRACTOR SHALL SAVE ALL SEED AND FERTILIZER TAGS AND FIBER MULCH BAGS FOR THE LANDSCAPE ARCHITECT TO VERIFY COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS.

NATIVE SEED INSTALLATION

A. NATIVE SEED INSTALLATION METHODS TO VARY ACCORDING TO THE TIME OF YEAR.
   - NOVEMBER 1 - FEBRUARY 28. SEED MUST BE PROTECTED FROM DISPLACEMENT DUE TO WATER AND WIND EROSION. PROVIDE APPROPRIATE EROSION CONTROL BLANKETS ON SLOPES STEEPER THAN 5:1, AND WITH BLOWN AND CRIMPED STRAW MULCH AT 1-1/2 TONS PER ACRE ON LESSSER SLOPES. SEED DRILLED INTO EXISTING VEGETATION OR ON FLAT GROUND NOT SUBJECT TO EROSION MAY NEED ONLY MINIMAL EROSION PROTECTION.
   - MARCH 1 - JUNE 29. SEEDING DURING THIS PERIOD APPROPRIATE BUT GERMINATION OF A PORTION OF THE SEED MAY NOT OCCUR UNTIL THE FOLLOWING SEASON DUE TO A LACK OF COLD STRATIFICATION TO BREAK SEED DORMANCY. BLOWN AND CRIMPED STRAW MULCH IS RECOMMENDED AT 1-1/2 TONS PER ACRE ON BARE SOILS. MULCH MAY NOT BE REQUIRED IF SEED IS DRILLED INTO EXISTING VEGETATION OR FLAT GROUND NOT SUBJECT TO EROSION.
   - JUNE 30 - SEPTEMBER 15. INSTALLATION OF NATIVE SEED SHOULD BE SUSPENDED UNLESS IRRIGATION CAN BE PROVIDED. ALSO, ANY ANNUAL FORBS PLANTED WITH MIXTURE DURING THIS TIME PERIOD MAY GERMINATE BUT NOT HAVE SUFFICIENT TIME TO FLOWER BEFORE FALL SENESCENCE.
   - SEPTEMBER 15 - OCTOBER 31. SEEDING ON GRADED, BARE SOIL SURFACES MUST BE PROTECTED WITH APPROPRIATE EROSION CONTROL BLANKETS ON SLOPES STEEPER THAN 3:1 AND WITH BLOWN AND CRIMPED STRAW AT 1-1/2 TONS PER ACRE ON LESSER SLOPES. SEED DRILLED ON FLAT GROUND NOT SUBJECT TO EROSION OR INTO EXISTING VEGETATION MAY NOT REQUIRE EROSION PROTECTION.
B. PROVIDE NATIVE SEED MIX FROM SOURCES WITHIN THE SAME EPA LEVEL III ECOREGION AS THE PROJECT SITE. IF THE DESIRED SPECIES ARE NOT AVAILABLE FROM THE SAME ECOREGION, SEEK MATERIALS FROM AN ADJACENT REGION; PREFERABLY FROM THE WEST OR EAST.
C. SEED AMOUNTS SHOULD BE SPECIFIED AS PLS (PURE LIVE SEED). ACTUAL AMOUNTS USED ON THE PROJECT WILL VARY WITH THE ACTUAL PERCENT OF PLS OF THE SEEDLOT. SEED SUPPLIED TO THE SISTE SHOULD BE TAGGED WITH SEED SPECIES, WEIGHTS, DOCUMENTATION OF PLS TESTING AND, IF REQUIRED, ADJUSTMENTS OF THE SEET WEIGHTS TO PROVIDE THE AMOUNT OF PURE LIVE SEED SPECIFIED.
D. SEED SUBSTITUTIONS SHOULD BE APPROVED BY THE LANDSCAPE ARCHITECT WITH INPUT FROM A RESTORATION ECOLOGIST IF NECESSARY. ALL NATIVE SEED MIXES SHOULD BE APPLIED WITH 10 LBS/Ac OF ANNUAL RYE AND 30 LBS/Ac SEED OATS AS A COVER CROP. PERENNIAL RYE OR WHEAT IS NOT TO BE USED AS A COVER CROP.
E. SEEDED AREAS SHOULD RECEIVE THE EQUIVALENT OF ONE (1) INCH OF WATER PER WEEK IF PLANTED BETWEEN MARCH TO JUNE. IN THE MIDWEST, MOST AREAS NORMALLY RECEIVE ADEQUATE RAINFALL DURING THIS PERIOD AND DO NOT REQUIRE IRRIGATION. IRRIGATION IS HIGHLY RECOMMENDED IF SEEDING IS PERFORMED DURING JULY OR AUGUST WHEN TEMPERATURES ARE HOTTER AND RAINS MORE INFREQUENT. ALL IRRIGATION SHOULD BE DONE IN SUCH A MANNER AS TO LIMIT RUNOFF AND NOT DISPLACE SEED OR SOIL.
F. PRE-TOPSOIL HERBICIDE APPLICATION - APPLY A BROAD SPECTRUM HERBICIDE TO THE ENTIRE NATIVE SEEDING AREA AT LEAST THREE (3) DAYS PRIOR TO TOPSOIL PLACEMENT. HERBICIDE AND APPLICATION RATES TO BE APPROVED BY THE LANDSCAPE ARCHITECT.
G. POST-TOPSOIL HERBICIDE APPLICATION - APPLY A BROAD SPECTRUM HERBICIDE TO THE ENTIRE NATIVE SEEDING AREA AT LEAST THREE (3) DAYS PRIOR TO INSTALLATION OF NATIVE SEED. HERBICIDE AND APPLICATION RATES TO BE APPROVED BY THE LANDSCAPE ARCHITECT.
H. BROADCAST SEEDING IS PREFERRED OVER DRILL SEEDING ON GRADED, BARE SOIL SITES. APPLY THE SEED UNIFORMLY OVER THE SURFACE USING A COMBINATION SEEDER / CULTIPACKER UNIT SUCH AS A BRILLION OR TRUAX TRILLION SEEDER. THE TRILLION SEEDER IS PREFERRED AS IT IS DESIGNED TO HANDLE NATIVE SEEDS. A CONE SEEDER OR OTHER SIMILAR BROADCASTING EQUIPMENT MAY BE USED IF THE SEED MIX DOES NOT CONTAIN FLUFFY SEEDS IN AMOUNTS SUFFICIENT TO PREVENT FREE FLOWING DISTRIBUTION WITHOUT PLUGGING. SEEDING EQUIPMENT SHOULD ENSURE COMPLETE COVERAGE OF THE ENTIRE AREA TO BE SEEDED, AND SEED MUST BE PLACED NO DEEPER THAN ONE QUARTER (¼) INCHES INTO THE SOIL.
I. NO FERTILIZER OR SOIL CONDITIONERS WILL BE REQUIRED OR ALLOWED.
J. BLOWN AND CRIMPED STRAW AT A 1-1/2 TONS PER ACRE SHOULD BE APPLIED OVER THE SEEDED AREA ACCORDING TO SEASONAL CONSIDERATIONS.
K. CONTRACTOR TO PROVIDE CONTINUING MAINTENANCE FOR UP TO THREE (3) YEARS AFTER FINAL ACCEPTANCE FOR NATIVE SEEDING. ONGOING MAINTENANCE TO INCLUDE:
   - REGULAR SITE INSPECTION AND MONITORING A MINIMUM OF THREE (3) TIMES A YEAR DURING THE MAINTENANCE PERIOD. IN ADDITION, FOR THE FIRST YEAR FOLLOWING CONSTRUCTION, ALL SEEDED AREAS MUST BE INSPECTED AFTER STORM EVENTS THAT EXCEED ONE HALF (½) INCH OF RAINFALL AND REPAIRED ACCORDINGLY
   - MOWING A MINIMUM OF TWO (2) TIMES A YEAR DURING THE FIRST GROWING SEASON AND ONE (1) TIME THE SECOND SEASON TO KEEP WEED COMPETITION AND FAST GROWING ANNUALS FROM RESEEDING. DEPENDING UPON THE HEIGHT AND GROWTH RATE OF VEGETATION, ADDITIONAL MOWING MY BE REQUIRED. MOWING HEIGHT SHALL BE BETWEEN HEIGHT (8) AND TEN (10) INCHES
   - SELECTIVE HERBICIDE APPLICATION BY TREATING INFESTATION OF INVASIVE SPECIES WITH BROADLEAF SPECIFIC HERBICIDE CONTROL IF HAND WEEDING IS IMPRACTICAL. FURNISH AND INSTALL WEED CHEMICAL CONTROL AS RECOMMENDED BY THE MANUFACTURER. HERBICIDE CONTROLS, INCLUDING RENOVATION BEFORE SEEDING OPERATIONS, SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT.
   - REPAIR, RE-WORK, OR RESEED RESPECTIVE AREAS THAT HAVE WASHED OUT, ARE ERODED, OR DID NOT CATCH.
   - SUPPLEMENTAL PLANTING
   - IN PERIODS OF DROUGHT, APPLY ONE (1) INCH OF WATER UNTIL ALL NATIVE SEEDED AREAS MEET THE PERFORMANCE STANDARDS
   - PROVIDE AND MAINTAIN EROSION CONTROL MEASURES TO SLOW WATER, IMPEDE SOIL & SEED LOSS AS REQUIRED BY THE LOCAL JURISDICTION. SEE CIVIL DETAILS.

SODDING

A. TURFGRASS SOD SHALL BE OF GOOD QUALITY, FREE OF WEEDS, DISEASE AND INSECTS AND OF GOOD COLOR AND DENSITY
B. INDIVIDUAL PIECES OF TURFGRASS SOD SHALL BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT.
C. STANDARD SIZE SECTIONS OF TURFGRASS SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY FROM A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
D. LANDSCAPE CONTRACTOR SHALL SOD ALL SPECIFIED AREAS. THE FINAL GRADE AND TOPSOIL WITHIN +/- .10 FEET WILL BE IN PLACE FOR SOD CONTRACTOR.
E. TILL AREA TO BE SODDED TO A DEPTH OF 4". RAKE TILLED AREA TO REMOVE DEBRIS 1" OR LARGER IN SIZE THAT HAS BEEN BROUGHT TO THE SURFACE DURING TILLING.
F. AFTER ALL GRADING HAS BEEN COMPLETED, THE SOIL SHALL BE IRRIGATED WITHIN 12-24 H HOURS PRIOR TO LAYING THE TURFGRASS SOD. TURFGRASS SOD SHOULD NOT BE LAID ON SOIL THAT IS DRY AND POWDERY.
G. THE FIRST ROW OF TURFGRASS SOD SHALL BE LAID IN A STRAIGHT LINE, WITH SUBSEQUENT R ROWS PLACED PARALLEL TO, AND TIGHTLY AGAINST, EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHALL BE EXERCISED TO INSURE THAT THE TURF IS NOT STRETCHED OR OVERLAPPED, AND ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE AIR-DRYING OF THE ROOTS.
H. ON SLOPING ARE WHERE EROSION MAY BE A PROBLEM, TURFGRASS SOD SHALL BE LAID WITH STAGGERED JOINTS AND SECURED BY PEGGING.
I. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING TURFGRASS SOD IMMEDIATELY DURING AND AFTER INSTALLATION TO PREVENT DRYING. IT SHALL THEN BE THOROUGHLY IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE NEW TURFGRASS SOD PAD AND SOIL IMMEDIATELY BELOW THE TURFGRASS SOD ARE THOROUGHLY WET (USUALLY 1 INCH OF WATER IS NEEDED). THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING ADEQUATE WATER AVAILABLE AT THE SITE PRIOR TO AND DURING INSTALLATION OF THE TURFGRASS SOD.
J. LANDSCAPE CONTRACTOR IS TO SET GRADE TO PROMOTE POSITIVE DRAINAGE AWAY FROM THE BUILDING AND TO DETENTION BASINS.
K. UNLESS OTHERWISE SPECIFIED, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ACCEPTED SODDED TURFGRASS AREAS UNTIL THE EFFECTIVE DATE FOR TURF MAINTENANCE OPERATIONS BEGINS. THE EFFECTIVE DATE SHALL BE SPECIFIED IN WRITTEN NOTICE FROM THE GENERAL CONTRACTOR.

REV	DATE	DESCRIPTION	BY

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L/C# 34-2068

McDonald's®

PROPOSED McDONALD'S RESTAURANT AT: RIVERS CROSSING WEST VILLAGE OF SOUTH LEBANON, WARREN COUNTY, OH

JOB NO. 19-0175

DATE: 2/7/2020

SCALE: 1"=20'

PLANTING NOTES & DETAILS

SHEET: L2.0

Plot time: Mar 12, 2020 – 5:03pm – Login Name: gregkoch
Drawing name: J:\2019\19-0175\LA\DWG\19-0175 LA.dwg – Layout Tab: L2.0