DUTCH BROS COFFEE
4347 PORTAGE STREET N.W.
PART OF SOUTHEAST QUARTER SECTION 12 (T-11, R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO
SITE IMPROVEMENT PLANS AND ABBREVIATED SWP3

STORE NO. OH1306

CONTACT INFORMATION

ZONING INSPECTOR
J. POINDEXTER
(330) 832-8032
JPOINDEXTER@JACKSONTWP.COM

HIGHWAY DEPARTMENT
R. ROHN
(330) 832-4016
RROHN@JACKSONTWP.COM

STARK COUNTY ENGINEER
KEITH A. BENNETT
(330) 477-6781

STARK COUNTY SANITARY ENGINEER
JAMES F. TROLKE, P.E.
(330) 451-2303

CITY OF NORTH CANTON WATER DEPARTMENT
(330) 742-1362

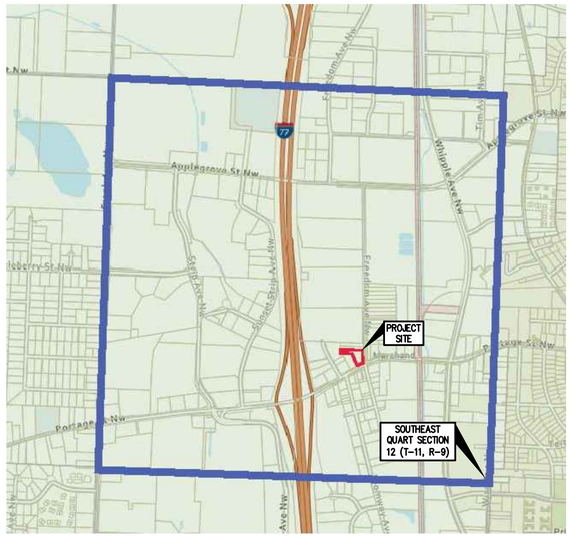
STARK COUNTY BUILDING INSPECTION DEPARTMENT
(330) 451-1770

STARK COUNTY HEALTH DEPARTMENT
KIRKLAND NORRIS
HEALTH COMMISSIONER
(330) 451-1474

FIRE DEPARTMENT
TBERCZIK@JACKSONTWP.COM
(330) 834-3950

AEP
(800) 672-2231

AT&T OHIO
(800) 288-2020



VICINITY MAP
NOT TO SCALE

INDEX OF SHEETS

TITLE SHEET	C-0.0
EXISTING CONDITIONS AND DEMOLITION PLAN	C-1.0
SITE PLAN	C-2.0
UTILITY PLAN	C-3.1
UTILITY PROFILES	C-3.2
GRADING PLAN	C-4.0
ABBREVIATED SWPPP	C-5.1
ABBREVIATED SWPPP NOTES AND DETAILS	C-5.2
ABBREVIATED SWPPP NOTES AND DETAILS	C-5.3
DRAINAGE MAPS	C-5.4
LANDSCAPE PLAN	C-6.0
CONSTRUCTION NOTES AND DETAILS	C-7.1
CONSTRUCTION NOTES AND DETAILS	C-7.2

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

SUBMITTED BY:

MICHAEL J. WOHLWEND
REG. ENGINEER NO. E-68183
WOHLWEND ENGINEERING GROUP, LTD.

11/17/2026
DATE

DEVELOPER:
ZAREMBA GROUP
14600 DETROIT AVE.
LAKEWOOD, OH 44107
(216) 221-6600

BASIS OF BEARINGS
THE BASIS FOR BEARINGS FOR THIS SURVEY IS GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD83 (2011).

BENCHMARK
TOP OPERATING NUT ON EXISTING HYDRANT LOCATED AT THE NORTHWEST CORNER OF PORTAGE STREET AND FREEDOM AVENUE.

ELEVATION = 1074.95 (NAVD88)

SURVEY PERFORMED BY:
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JACKSON TOWNSHIP, STARK COUNTY, OHIO

wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
KENT, OH 44240
(330) 673-2400

11-17-2026

PROJECT NUMBER
20260084

TITLE SHEET

C-0.0

DEMOLITION NOTES

1. PRIOR TO MAKING BID, CONTRACTOR SHALL VERIFY IF EXISTING STRUCTURES HAVE BASEMENTS AND PROVIDE COSTS IN THE THEIR BASE BID TO COVER THE BACKFILLING OF ALL BASEMENT CAVITIES FOLLOWING DEMOLITION OF STRUCTURES. REMOVE BUILDINGS IN THEIR ENTIRETY ACCORDING TO ODOT ITEM 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS. BACKFILL ANY EXCAVATIONS ACCORDING TO ODOT ITEM 203 – EXCAVATION AND EMBANKMENT WITH GRANULAR BACKFILL MEETING ODOT ITEM 304 – SUBBASE.
2. REMOVE AND ABANDON AS REQUIRED ALL EXISTING BUILDING UTILITY SERVICES (WATER SERVICE, SANITARY SERVICE, GAS SERVICE, ELECTRIC SERVICE, TELEPHONE TELEPHONE SERVICE, AND CABLE SERVICE) TO MEET LOCAL REGULATIONS OF EACH UTILITY COMPANY. REMOVAL SHALL BE MADE TO THE STREET RIGHT OF WAY LINE OR OTHER LOCATION AS SHOWN ON PLANS. THE GENERAL CONTRACTOR SHALL REMOVE AND COORDINATE THE REMOVAL OF THESE LINES WITH THE UTILITY COMPANY INVOLVED.
3. REMOVE AND ABANDON, AS REQUIRED, ALL EXISTING UTILITY SERVICES TO THE RIGHT-OF-WAY IN ACCORDANCE WITH THE LOCAL REGULATIONS OF EACH RESPECTIVE UTILITY COMPANY.
4. ANY AND ALL UTILITY MAINS THAT NEED TO BE REMOVED OR RELOCATED BY THE RESPECTIVE UTILITY COMPANIES ARE TO BE COORDINATED BY THE GENERAL CONTRACTOR.
5. THE EXISTING UNDERGROUND UTILITIES AS SHOWN ARE OBTAINED FROM A COMBINATION OF FIELD LOCATION AND RECORD INFORMATION OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES, WHERE PROVIDED. THESE UTILITIES, THEIR LOCATION AND THEIR ACTIVE OR INACTIVE STATUS, SHOULD BE VERIFIED BY CONTACTING THE OHIO UTILITY PROTECTION SERVICE (O.U.P.S.), PRIOR TO CONSTRUCTION. LOCATION, SIZE, DEPTH, AND STATUS OF USE ARE SHOWN AS ACCURATE AS POSSIBLE WITH THE AVAILABLE DATA.
6. ALL MATERIALS TO BE REMOVED SHALL BE DISPOSED OF IN A PROPER MANNER IN COMPLIANCE WITH ALL APPLICABLE CODES & LAWS.
7. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO PERFORM CONSTRUCTION, INCLUDING WORK WITHIN THE RIGHT-OF-WAY.
8. CONTRACTOR SHALL RESTORE ALL OFFSITE AREAS DISTURBED BY CONSTRUCTION TO A CONDITION THAT IS EQUAL OR BETTER THAN THE CONDITIONS THAT EXISTED PRIOR TO CONSTRUCTION.
9. ALL PAVEMENT, CURB AND SIDEWALK TO BE REMOVED SHALL BE SAW CUT FULL DEPTH AT EXISTING CONSTRUCTION JOINTS. ALL SAW CUTTING MUST BE DONE WET TO CONFORM TO THE OHIO EPA'S FUGITIVE DUST ACT.

KEYED NOTES

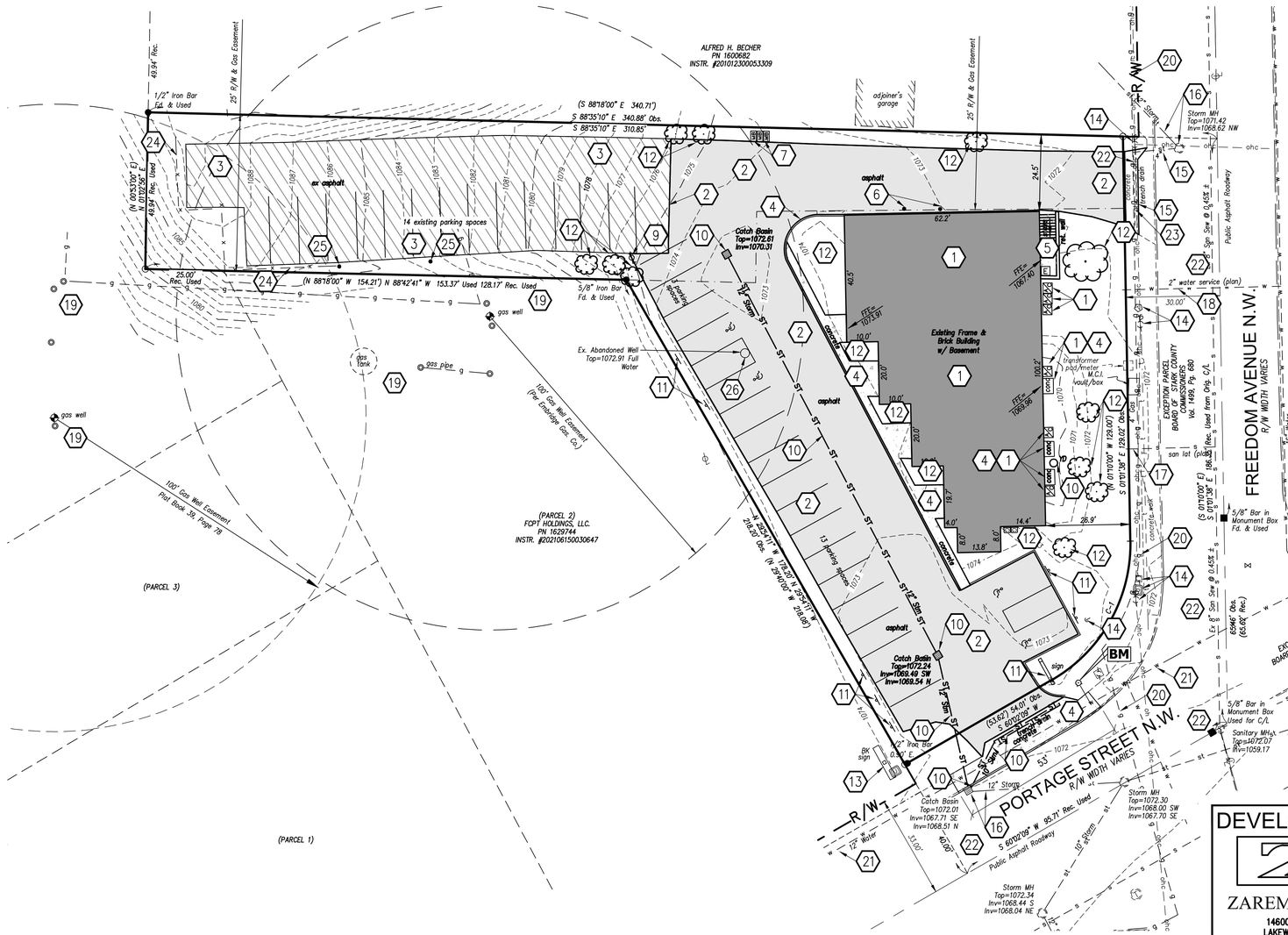
1. REMOVE EXISTING BUILDING, AIR CONDITIONERS AND ALL UTILITY CONNECTIONS PER ODOT ITEM 202. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR COORDINATION AND SPECIFIC DIRECTION.
2. REMOVE ASPHALT PAVEMENT PER ODOT ITEM 202. PROVIDE A FULL DEPTH AND STRAIGHT SAW CUT AT LIMITS OF EXISTING PAVEMENT TO BE REMOVED.
3. MILL 1-1/2" AND RESURFACE EXISTING ASPHALT PAVEMENT.
4. REMOVE CONCRETE CURB AND/OR WALK PER ODOT ITEM 202.
5. REMOVE CONCRETE STEPS, WALK AND WALL PER ODOT ITEM 202.
6. REMOVE CONCRETE BOLLARDS PER ODOT ITEM 202.
7. REMOVE MAILBOXES PER ODOT ITEM 202.
8. NOT USED.
9. REMOVE LIGHT POLES AND ALL UNDERGROUND / OVERHEAD WIRES PER ODOT ITEM 202.
10. REMOVE STORM SEWER STRUCTURES AND STORM SEWER PIPING PER ODOT ITEM 202. PLUG ANY ORIFICES SHALL HAVE WATERTIGHT PLUGS.
11. REMOVE EXISTING SIGNAGE AND ANY ELECTRICAL APPURTANCES PER ODOT ITEM 202.
12. EXISTING TREES, SHRUBS AND ANY LANDSCAPE MATERIAL TO BE REMOVED PER ODOT ITEM 201.
13. EXISTING SIGN TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
14. EXISTING UTILITY POLES, TRAFFIC POLES AND GUY ANCHORS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
15. EXISTING TRENCH DRAIN AND CONCRETE PAVEMENT TO REMAIN AND BE PROTECTED DURING CONSTRUCTION. CONTRACTOR SHALL CLEAN TRENCH DRAIN AND OUTLET PIPE TO CONFIRM FUNCTIONALITY. IF DAMAGE IS APPARENT, IT SHALL BE REPLACED.
16. EXISTING STORM SEWER TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
17. POSSIBLE EXISTING SANITARY SEWER CONNECTION, PER PLAN, TO BE LOCATED AND DEPTH CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTING INFORMATION.
18. POSSIBLE EXISTING WATER CONNECTION, PER PLAN, TO BE LOCATED AND DEPTH CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTING INFORMATION.
19. EXISTING GAS WELL FIELD AND ALL APPURTANCES TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
20. EXISTING GAS MAIN TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
21. EXISTING WATER MAIN TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
22. EXISTING PAVEMENT TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
23. CONTRACTOR SHALL CONFIRM THAT OVERHEAD WIRES ARE HIGH ENOUGH TO BRING TRUCKS UNDER PRIOR TO CONSTRUCTION.
24. EXISTING FENCE TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
25. EXISTING BOLLARD/POST TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
26. EXISTING ABANDONED WELL HEAD AND COVER TO REMAIN. PROTECT DURING CONSTRUCTION. COORDINATE ALL WORK AROUND ABANDONED GAS WELL WITH DANIEL CESAREO AT ENBRIDGE GAS OPERATIONS 330-351-1141.

REMOVAL LEGEND

- BUILDING TO BE REMOVED
- ASPHALT PAVEMENT TO BE REMOVED
- CONCRETE PAVEMENTS, WALKS, AND PATIOS TO BE REMOVED
- GRAVEL PAVEMENTS TO BE REMOVED
- MILL AND RESURFACE EXISTING ASPHALT PAVEMENT.

Legend

- Rec. – Record
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- T.P.O.B. – TRUE PLACE OF BEGINNING
- P.O.B. – PLACE OF BEGINNING
- ■ – MONUMENT BOX
- ● – MONUMENT FOUND, SIZE & TYPE AS INDICATED.
- ○ – 5/8" REBAR, 30 INCHES IN LENGTH, WITH I.D. CAP C&A SET
- △ – P.K.(MASONRY) NAIL SET
- (XX'XX"XX" XX.XX') – RECORD BEARING & Distance
- – POWER POLE
- – LIGHT POLE
- – TELEPHONE POLE
- —— x —— – FENCE
- • – POST (BOLLARD)
- – HANDICAP SPACE
- – SIGN
- R/w – RIGHT-OF-WAY
- P – PROPERTY LINE
- – CLEARING LIMITS



BASIS OF BEARINGS
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SCALE: 1"=20'

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DUTCH BROS

4347 PORTAGE STREET N.W.
PART OF SOUTH ½ LOT 5 TOWN 12 (T-11, R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
KENT, OH 44240
(330) 673-2400

11-17-2026

PROJECT NUMBER
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EXISTING CONDITIONS AND DEMOLITION PLAN

C-1.0

SITE INFORMATION	CODE SECTION	REQUIRED	PROPOSED (SHOWN)	COMPLIANCE STATUS
ZONING AUTHORITY	JACKSON TOWNSHIP			
ZONING CLASSIFICATION	ZONING MAP	I1	I1	COMPLIANT
LAND USE	411.3.3	RESTAURANT WITH DRIVE-THRU	RESTAURANT WITH DRIVE-THRU	COMPLIANT
MIN LOT AREA	411.4	20,000 SQ. FT.	31,449 SQ. FT.	COMPLIANT
MIN. LOT WIDTH	411.4	100 FT	134.7 FT	COMPLIANT
MIN. LOT DEPTH	NOT CODIFIED	NOT CODIFIED	310.9 FT	COMPLIANT
MAX. BUILDING HEIGHT	411.7 (D)	80 FT	21'-0"±	COMPLIANT
BUILDING AREA	NOT CODIFIED	NOT CODIFIED	3.14%	COMPLIANT
MAX. LOT COVERAGE	NOT CODIFIED	NOT CODIFIED	59.58%	COMPLIANT
BUILDING SETBACKS				
FRONT	411.5	50 FT	50.5 FT (EAST)	COMPLIANT
SIDE	411.5	25 FT	66.18 FT (SOUTH)	COMPLIANT
			63.69 FT (NORTH)	COMPLIANT
REAR	411.5	25 FT	41.53 FT	COMPLIANT
FLOOR AREA DEFINITION	N/A	MIN. PARKING COUNT FOR DRIVE THRU RESTAURANTS IS 4 SPACES REGARDLESS OF SIZE OF RESTAURANT		
PARKING SPACES	601.2 (4) (D)	4 SPACES	18 SPACES	COMPLIANT
ADA SPACES REQUIRED	ADA CODE	1 SPACE	1 SPACE	COMPLIANT
PARKING STALL DIMENSIONS	601.7 (A)	9 FT X 18 FT	9 FT X 18 FT	COMPLIANT
PARKING SETBACK				
FRONT	411.5	20 FT	26.0 FT	COMPLIANT
SIDE	411.5	5 FT	30.54 FT (SOUTH)	COMPLIANT
			7.38 FT (NORTH)	COMPLIANT
REAR	411.5	5 FT	5.53 FT	COMPLIANT
LOADING SPACES REQUIRED	416.18	0	0	COMPLIANT

KEYED NOTES

1. – INSTALL INTEGRAL CURB AND WALK PER DETAIL SHEET C-7.1.
2. – INSTALL INTEGRAL CURB AND WALK PER JACKSON TOWNSHIP AND STARK COUNTY ENGINEER'S DETAILS AND SPECIFICATIONS. MATCH EXISTING CURB HEIGHTS. SIDEWALK SLOPE SHALL NOT EXCEED 2% CROSS-SLOPE.
3. – INSTALL TYPE 6" X 18" CONCRETE CURB PER DETAIL SHEET C-7.1.
4. – INSTALL CONCRETE CURB TAPER FROM 6" TO 0" IN 2.50' PER DETAIL SHEET C-7.1.
5. – MILL 1-1/2" AND RESURFACE EXISTING ASPHALT PAVEMENT.
6. – INSTALL STANDARD DUTY ASPHALT PAVEMENT PER DETAIL SHEET C-7.1.
7. – INSTALL HEAVY DUTY ASPHALT PAVEMENT PER DETAIL SHEET C-7.1.
8. – INSTALL STANDARD DUTY CONCRETE PAVEMENT PER DETAIL SHEET C-7.1.
9. – INSTALL HEAVY DUTY CONCRETE PAVEMENT PER DETAIL SHEET C-7.1.
10. – PAVEMENT STRIPING – APPLY 4" WIDE WHITE STRIPE PER ODOT ITEM 642.
11. – PAVEMENT ISLAND STRIPING – APPLY A 4" WIDE WHITE PERIMETER STRIPE PER ODOT ITEM 642. APPLY ISLAND STRIPING THAT IS 4" WIDE WHITE PAINTED STRIPE AND 48" O.C. AT AN ANGLE OF 45 DEGREES WITH THE LONG DIMENSION OF THE ISLAND.
12. – INSTALL CONCRETE MENU BOARD BASE. SEE STRUCTURAL PLANS FOR DETAILS.
13. – APPLY PROPOSED WHITE PAVEMENT ARROWS PER ODOT ITEM 642.
14. – STOP BAR STRIPING – APPLY 24" WIDE WHITE STRIPE PER ODOT ITEM 642.
15. – INSTALL MASONRY DUMPSTER ENCLOSURE AND CONCRETE PAD. SEE ARCHITECTURAL PLANS FOR DETAILS.
16. – INSTALL PROPOSED PYLON SIGN (BY OTHERS). GENERAL CONTRACTOR TO INSTALL ELECTRICAL FEED TO PROPOSED SIGN.
17. – BACKFILL EXCAVATION ALONG PROPOSED PAVEMENTS PER ODOT ITEM 203 UP TO 4" BELOW FINAL GRADE. INSTALL 4" OF TOPSOIL PER ODOT ITEM 659 – TOPSOIL AND SEED AND MULCH ALL BARE AREAS PER ODOT ITEM 659 – SEEDING AND MULCHING, CLASS 1 (LAWN MIXTURE).
18. – PROPOSED LIGHT POLE, SEE ELECTRICAL PLANS FOR BASE DETAIL AND VENDOR'S PHOTOMETRIC PLAN FOR POLE AND FIXTURE DETAILS.
19. – CROSSWALK STRIPING – APPLY 12" WIDE WHITE STRIPES PER ODOT ITEM 642.
20. – EXISTING CONCRETE APRON TO REMAIN.

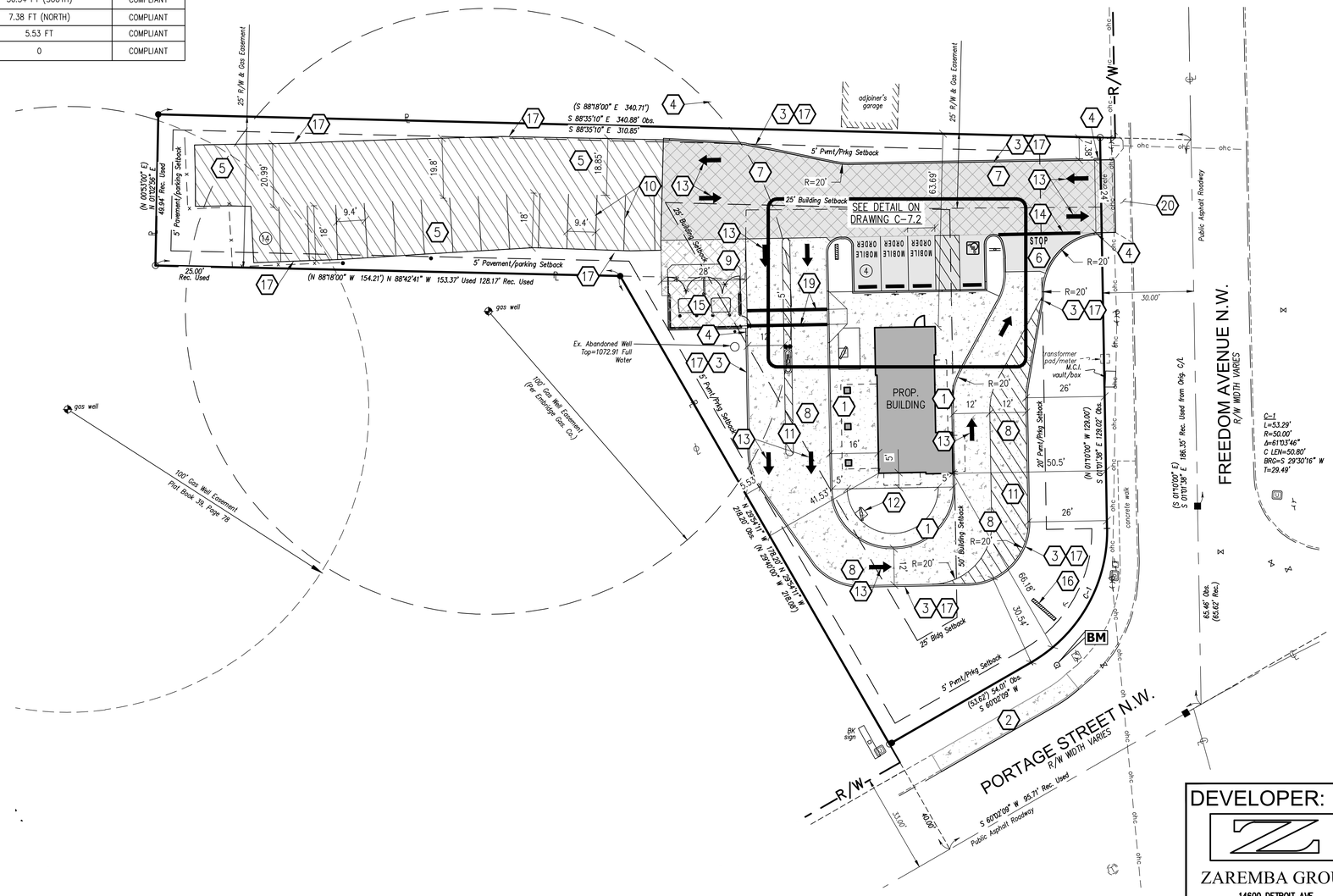
PAVEMENT LEGEND

- INSTALL STANDARD DUTY ASPHALT PAVEMENT.
- INSTALL HEAVY DUTY ASPHALT PAVEMENT.
- INSTALL STANDARD DUTY CONCRETE PAVEMENT.
- INSTALL HEAVY DUTY CONCRETE PAVEMENT.
- MILL AND RESURFACE EXISTING ASPHALT PAVEMENT.

NOTES:
1. ALL DIMENSIONS SHOWN ARE TO OUTSIDE EDGE OF STEEL BUILDING COLUMNS, FACE OF CURB, OR EDGE OF PAVEMENT, UNLESS OTHERWISE SHOWN.
2. VERIFY BUILDING DIMENSIONS WITH ARCHITECTURAL AND FOUNDATION PLAN.
3. REQUIRED PERMITS FOR ALL APPROVED WORK IN THE PUBLIC RIGHT-OF-WAY SHALL BE OBTAINED BEFORE WORK BEGINS.

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SCALE: 1"=20'

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DUTCH BROS
4347 PORTAGE STREET N.W.
LOT 1 OF SOUTHEAST CROSSING PLAT 2 (T.11 R.9)
PART OF SOUTHEAST CROSSING PLAT 1 (T.11 R.9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

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SITE PLAN

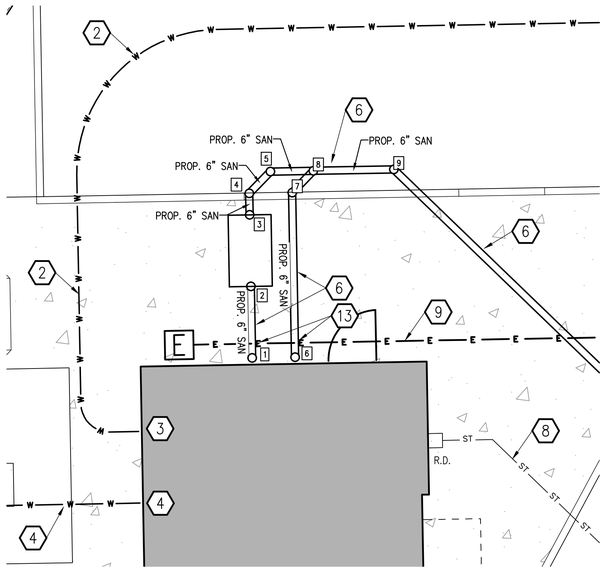
C-2.0

KEYED NOTES

1. CONTRACTOR SHALL CONFIRM DEPTH AND LOCATION OF EXISTING 2" WATER CONNECTION TO CONFIRM IT IS A VIABLE CONNECTION. CONTRACTOR SHALL INSTALL 2" TO 1" REDUCER.
2. INSTALL 110 LF OF 1" TYPE K COPPER WATER SERVICE CONNECTION, WITH 5' MINIMUM COVER, PER CITY OF NORTH CANTON WATER DEPARTMENT STANDARDS AND SPECIFICATIONS.
3. BACKFLOW PREVENTOR, VALVES AND METER SETTING TO BE LOCATED IN BUILDING. SEE INTERIOR BUILDING PLUMBING PLANS FOR DETAILS AND SPECIFICATIONS.
4. INSTALL 3/4" HDPE DR19 WATER LINE AND YARD HYDRANT. MAINTAIN 5' MINIMUM COVER. SEE PLUMBING DRAWINGS FOR YARD HYDRANT DETAILS.
5. CONTRACTOR TO CONFIRM DEPTH AND LOCATION OF EXISTING SANITARY CONNECTION AND CONNECT PROPOSED 6" LATERAL PER STARK COUNTY SANITARY ENGINEER'S STANDARDS AND SPECIFICATIONS.
6. INSTALL 6" PVC SDR 35 SANITARY SEWER LATERAL PER STARK COUNTY SANITARY ENGINEER'S STANDARDS AND SPECIFICATIONS.
7. INSTALL 10 LF (ADJUSTED AS NECESSARY) CATCH BASIN FINGER DRAINS. SEE DETAIL SHEET C-7.1.
8. INSTALL 6" PVC SDR 35 ROOF DRAIN COLLECTOR PIPE @ 1.0% MIN. SLOPE. OUTLET COLLECTOR PIPE INTO PROPOSED CATCH BASIN AS SHOWN.
9. INSTALL UNDERGROUND SERVICE BASED ON (2) 4" CONDUITS FOR ELECTRIC SERVICE AND (1) 4" CONDUIT FOR TELEPHONE SERVICE. CONTRACTOR TO INSTALL (2) 600 AMP COPPER WIRES IN ELECTRICAL CONDUITS. ENSURE CONDUITS, BENDS AND FITTINGS CONFORM TO THE NATIONAL ELECTRICAL CODE AND THE LOCAL UTILITY PROVIDER'S SPECIFICATIONS AND THE SITE ELECTRICAL PLAN.
10. PROPOSED MENU BOARD, SEE ELECTRICAL PLANS FOR DETAILS INCLUDING POWER FEED AND CONDUIT LOCATIONS.
11. PROPOSED PYLON SIGN, SEE ELECTRICAL PLANS FOR DETAILS INCLUDING POWER FEED AND CONDUIT LOCATIONS.
12. CORE DRILL EXISTING CATCH BASIN AND CONNECT PROPOSED 12" STORM USING KOR-N-SEAL FITTING PROVIDING A WATER TIGHT CONNECTION.
13. MAINTAIN THE FOLLOWING MINIMUM CLEARANCES BETWEEN CROSSING UTILITIES:
    18" BETWEEN WATER AND SANITARY/STORM SEWER PIPES;
    12" BETWEEN ALL OTHER UTILITY CROSSINGS. ADJUST UTILITIES AS NEEDED THAT ARE NOT AT A DEFINED SLOPE.
14. PROPOSED LIGHT POLE, SEE ELECTRICAL PLANS FOR BASE DETAIL AND VENDOR'S PHOTOMETRIC PLAN FOR POLE AND FIXTURE DETAILS AND LIGHT POLE POWER FEED AND CONDUITS.
15. EXISTING ABANDONED WELL HEAD AND COVER TO REMAIN. PROTECT DURING CONSTRUCTION. GAS COMPANY TO ADJUST COVER TO GRADE. COORDINATE ALL WORK AROUND ABANDONED GAS WELL WITH DANIEL CESAREO AT ENBRIDGE GAS OPERATIONS 330-351-1141.

Legend

e — EX. ELECTRIC LINE	E — PROP. ELECTRIC LINE
g — EX. GAS LINE	G — PROP. GAS LINE
ohc — EX. OVERHEAD LINE	OHE — PROP. OVERHEAD LINE
s — EX. SANITARY SEWER	PROP. 8" SAN. — PROP. SANITARY SEWER
st — EX. STORM SEWER	PROP. 12" STORM — PROP. STORM SEWER
t — EX. TELEPHONE LINE	W — PROP. WATER LINE
w — EX. WATER MAIN	PROP. FIRE HYDRANT
EX. FIRE HYDRANT	PROP. WATER VALVE
EX. WATER VALVE	PROP. FDC
EX. SAN. MANHOLE	PROP. CATCH BASINS
EX. CATCH BASIN	PROP. STORM MANHOLE
	PROP. SANITARY MANHOLE



SANITARY SEWER BLOW-UP DETAIL

SCALE: 1"=5'

GENERAL NOTES

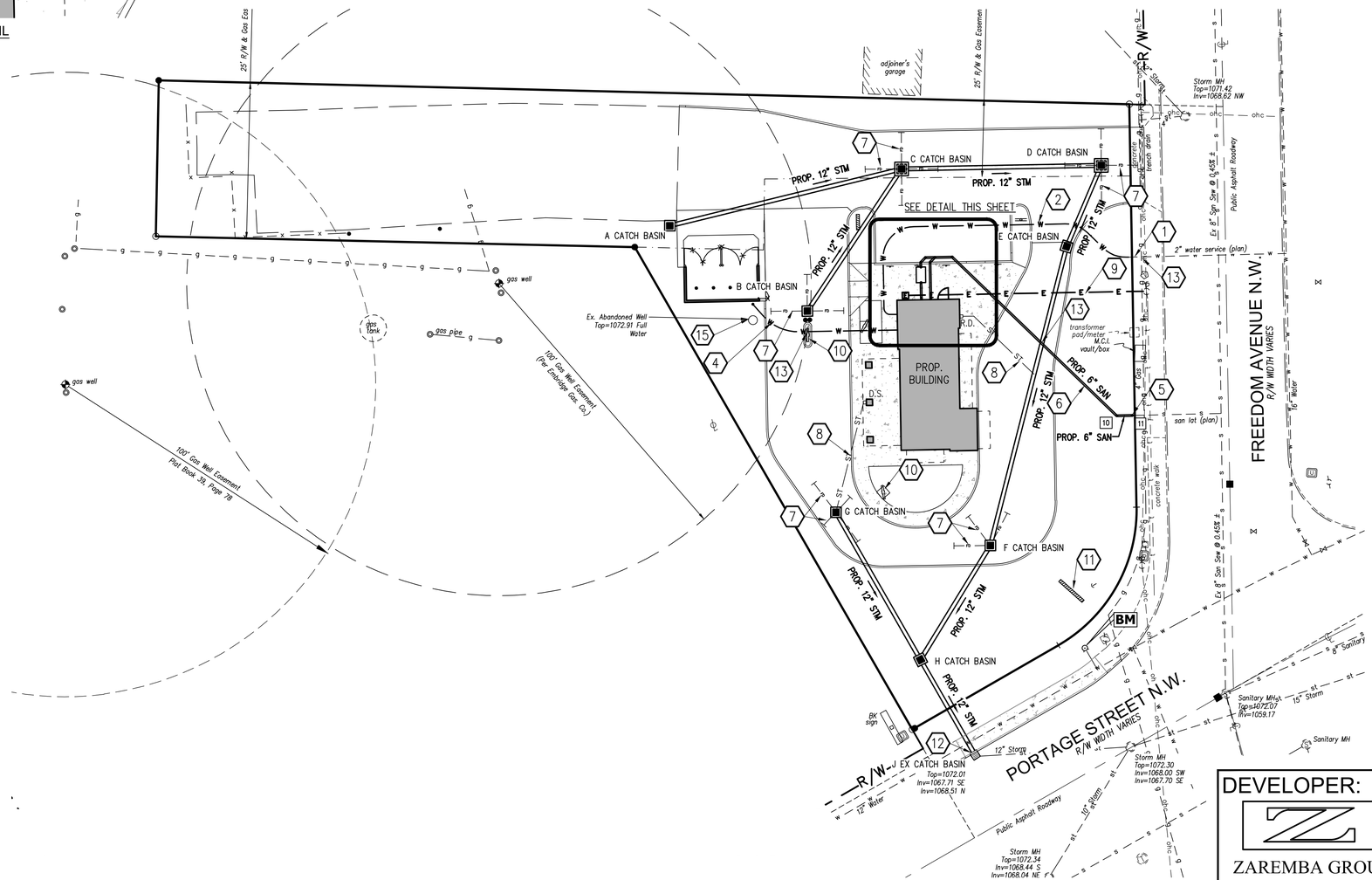
1. COORDINATE EXACT LOCATION OF ALL BUILDING UTILITY CONNECTIONS WITH BUILDING PLUMBING PLANS PRIOR TO INSTALLATION OF UTILITIES.
2. THE EXISTING UNDERGROUND UTILITIES AS SHOWN ARE OBTAINED FROM A COMBINATION OF FIELD LOCATION AND RECORD INFORMATION OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES, WHERE PROVIDED. THESE UTILITIES, THEIR LOCATION AND THEIR ACTIVE OR INACTIVE STATUS, SHALL BE VERIFIED BY THE CONTRACTOR BY CALLING THE OHIO UTILITIES PROTECTION SERVICE (O.U.P.S.), PRIOR TO CONSTRUCTION. LOCATION, SIZE, DEPTH AND STATUS OF USE ARE SHOWN AS ACCURATE AS POSSIBLE WITH THE AVAILABLE EXISTING DATA.
3. ALL PAVEMENT, CURB AND SIDEWALK TO BE REMOVED SHALL BE SAW CUT FULL DEPTH AT EXISTING CONSTRUCTION JOINTS. ALL SAW CUTTING MUST BE DONE WET, TO CONFORM TO THE OHIO EPA'S FUGITIVE DUST ACT.
4. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS INCLUDING ANY FOR WORK IN THE R/W. PERMITS ARE REQUIRED BY BOTH CITY OF STRONGSVILLE AND CITY OF NORTH ROYALTON.
5. ADJUST TO GRADE/COORD. ADJUSTMENT TO GRADE OF ALL VALVE BOXES, UTILITY COVERS, GRATES, ETC. SCHEDULED TO REMAIN.

SANITARY SEWER NOTES

1. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED ON THIS PROJECT.
2. ALL SEWERS CONSTRUCTED UNDER THIS PLAN SHALL MEET THE REQUIREMENTS OF JACKSON TOWNSHIP, STARK COUNTY SANITARY ENGINEER'S OFFICE AND ODOT ITEM 611.
3. THE MINIMUM REQUIREMENTS FOR SANITARY SEWER PIPE SHALL BE PVC PLASTIC SEWER PIPE, ASTM D-3034, SDR 35, MINIMUM SIZE 6". ALL 6" SANITARY LATERAL SHALL BE LAID AT A MINIMUM GRADE OF 1.0%.
4. MAXIMUM CLEANOUT SPACING IS 95 FEET.
5. PVC SANITARY SEWER MATERIAL SHALL CONSIST OF PVC SDR-35 MEETING ASTM D3034 WITH JOINTS CONFORMING TO ASTM D3212.

STORM SEWER NOTES

1. ALL STORM SEWER PIPES TO BE ITEM 611, CONDUIT TYPE B. BACKFILL UNDER PAVEMENT SHALL BE GRANULAR MATERIAL. PAYMENT FOR COMPACTED GRANULAR BACKFILL MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 611.
2. ALL STORM SEWER TO HAVE ODOT TYPE 2 BEDDING.
3. PROVIDE STORM SEWER JOINTS THAT ARE GASKETED AND SILT TIGHT.
4. ALL PIPE, UNLESS OTHERWISE SHOWN ON THE PLAN, ARE TO BE HDPE (ODOT 707.33) OR BETTER
5. ALL HOLES IN PROPOSED STRUCTURES, INCLUDING DOWNSPOUT AND UNDERDRAIN CONNECTIONS, SHALL BE CORED AT TIME OF PRECAST MANUFACTURE.



DEVELOPER:

ZAREMBA GROUP
14600 DETROIT AVE.
LAKEWOOD, OH 44107
(216) 221-6600

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BENCHMARK
TOP OPERATING NUT ON EXISTING HYDRANT LOCATED AT THE NORTHWEST CORNER OF PORTAGE STREET AND FREEDOM AVENUE.

ELEVATION = 1074.95 (NAVD88)

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STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DUTCH BROS
4347 PORTAGE STREET N.W.
SOUTH SIDE OF PORTAGE STREET, LOT 12 (T-11, R-9)
PART OF SOUTH 1/2 LOT 12 (T-11, R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

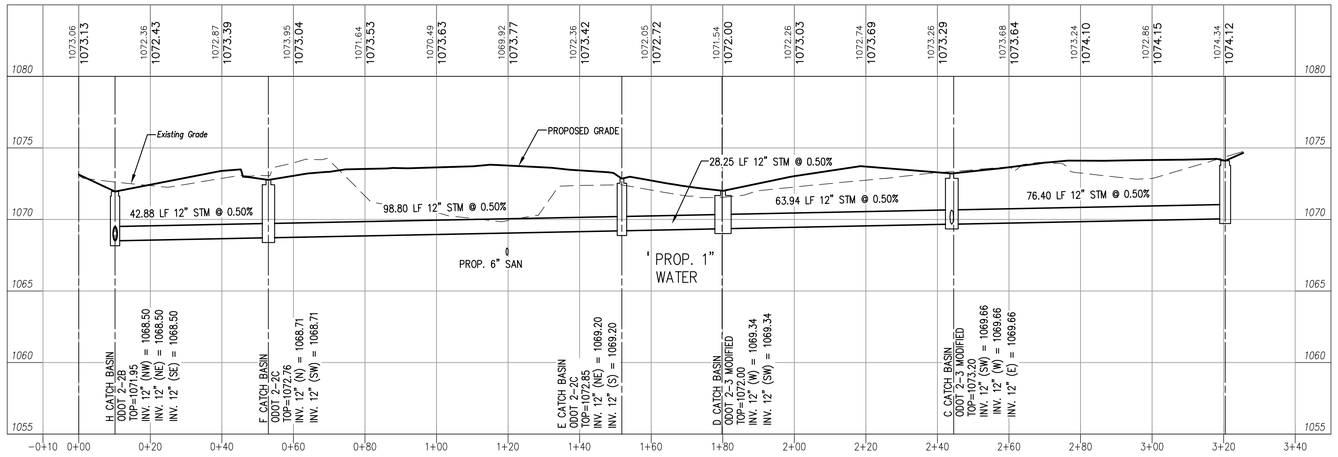
wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
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11-17-2026

PROJECT NUMBER
20260084

UTILITY PLAN

C-3.1



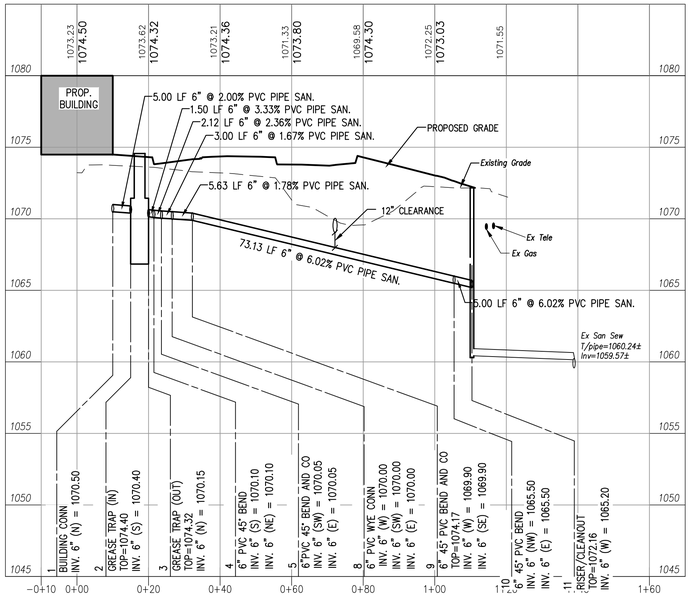
STORM SEWER (A–H) PROFILE

STORM SEWER STRUCTURE SCHEDULE

STRUCTURE ID	TOP ELEV.	INLET PIPES	OUTLET PIPE	DESCRIPTION
A CATCH BASIN	1074.10		12" (E) = 1070.04	ODOT 2-2C
B CATCH BASIN	1073.39		12" (NE) = 1070.00	ODOT 2-2C
C CATCH BASIN	1073.20	12" (SW) = 1069.66 12" (W) = 1069.66	12" (E) = 1069.66	ODOT 2-3 MODIFIED
D CATCH BASIN	1072.00	12" (W) = 1069.34	12" (SW) = 1069.34	ODOT 2-3 MODIFIED
E CATCH BASIN	1072.85	12" (NE) = 1069.20	12" (S) = 1069.20	ODOT 2-2C
F CATCH BASIN	1072.76	12" (N) = 1068.71	12" (SW) = 1068.71	ODOT 2-2C
G CATCH BASIN	1072.90		12" (SE) = 1068.77	ODOT 2-2C
H CATCH BASIN	1071.95	12" (NW) = 1068.50 12" (NE) = 1068.50	12" (SE) = 1068.50	ODOT 2-2B
J EX CATCH BASIN	1072.02	12" (NW) = 1068.32		EX CATCH BASIN

STORM SEWER PIPE SCHEDULE

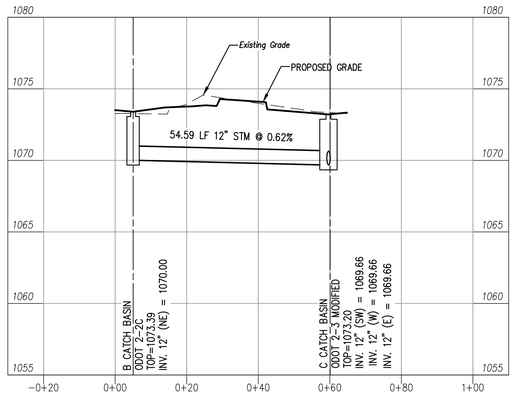
UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	UPSTREAM INVERT	DOWNSTREAM INVERT	SIZE	LENGTH	SLOPE	DESCRIPTION	Min. Cover
A CATCH BASIN	C CATCH BASIN	1070.04	1069.66	12"	76.40	0.50%	HDPE N-12 (ODOT 707.33)	2.4'
B CATCH BASIN	C CATCH BASIN	1070.00	1069.66	12"	54.59	0.62%	HDPE N-12 (ODOT 707.33)	2.3'
C CATCH BASIN	D CATCH BASIN	1069.66	1069.34	12"	63.94	0.50%	HDPE N-12 (ODOT 707.33)	1.6'
D CATCH BASIN	E CATCH BASIN	1069.34	1069.20	12"	28.25	0.50%	HDPE N-12 (ODOT 707.33)	1.6'
E CATCH BASIN	F CATCH BASIN	1069.20	1068.71	12"	98.80	0.50%	HDPE N-12 (ODOT 707.33)	2.5'
F CATCH BASIN	H CATCH BASIN	1068.71	1068.50	12"	42.88	0.50%	HDPE N-12 (ODOT 707.33)	2.4'
G CATCH BASIN	H CATCH BASIN	1068.77	1068.50	12"	54.43	0.51%	HDPE N-12 (ODOT 707.33)	2.4'
H CATCH BASIN	J EX CATCH BASIN	1068.50	1068.32	12"	35.18	0.50%	HDPE N-12 (ODOT 707.33)	2.6'



SANITARY SEWER CONNECTION PROFILE

SANITARY PIPE SCHEDULE

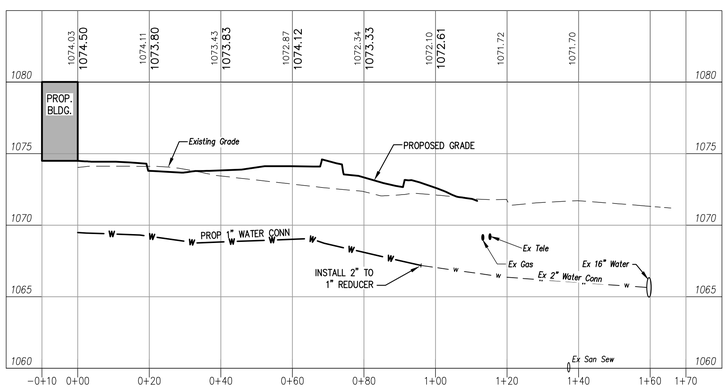
UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	UPSTREAM INVERT	DOWNSTREAM INVERT	SIZE	LENGTH	SLOPE	DESCRIPTION	MIN. COVER
1	2	1070.50	1070.40	6"	5.00	2.00%	PVC PIPE	3.5
3	4	1070.15	1070.10	6"	1.50	3.33%	PVC PIPE	3.2
4	5	1070.10	1070.05	6"	2.12	2.36%	PVC PIPE	3.2
5	8	1070.05	1070.00	6"	3.00	1.67%	PVC PIPE	3.3
6	7	1070.30	1070.05	6"	11.50	2.17%	PVC PIPE	3.4
7	8	1070.05	1070.00	6"	2.12	2.36%	PVC PIPE	3.3
8	9	1070.00	1069.90	6"	5.63	1.78%	PVC PIPE	3.5
9	10	1069.90	1065.50	6"	73.13	6.02%	PVC PIPE	3.8
10	11	1065.50	1065.20	6"	5.00	6.02%	PVC PIPE	6.2



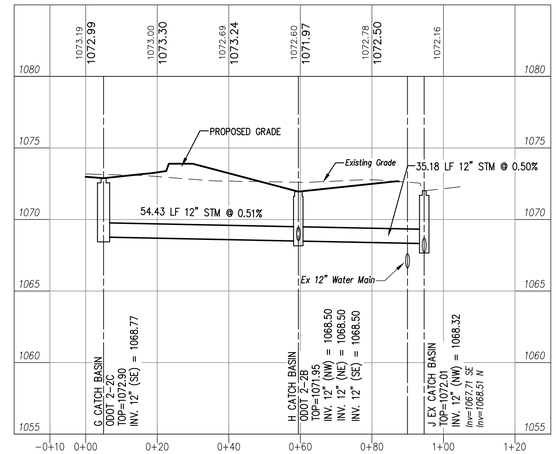
STORM SEWER (B–C) PROFILE

SANITARY STRUCTURE SCHEDULE

STRUCTURE ID	TOP ELEV.	INLET PIPES	OUTLET PIPE	DESCRIPTION
1			6" (N) = 1070.50	BUILDING CONN
2	1074.40	6" (S) = 1070.40		GREASE TRAP (IN)
3	1074.32		6" (N) = 1070.15	GREASE TRAP (OUT)
4		6" (S) = 1070.10	6" (NE) = 1070.10	6" PVC 45° BEND
5		6" (SW) = 1070.05	6" (E) = 1070.05	6"PVC 45° BEND AND CO
6			6" (N) = 1070.30	BLDG CONN
7		6" (S) = 1070.05	6" (NE) = 1070.05	6" PVC 45° BEND
8		6" (W) = 1070.00 6" (SW) = 1070.00	6" (E) = 1070.00	6" PVC WYE CONN
9	1074.17	6" (W) = 1069.90	6" (SE) = 1069.90	6" 45° PVC BEND AND CO
10	1[illegible]4	6" (NW) = 1065.50	6" (E) = 1065.50	6" 45° PVC BEND
11	1072.16	6" (W) = 1065.20	Ex 8" San Sew Inv=1059.57±	RISER/CLEANOUT



WATER CONNECTION PROFILE



D CATCH BASIN THRU J EXISTING CATCH BASIN PROFILE

DEVELOPER:

ZAREMBA GROUP
14600 DETROIT AVE.
LAKEWOOD, OH 44107
(216) 221-6600

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(Non-members must be called directly)

SCALE:
HORZ: 1"=20'; VERT: 1"=5'

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DUTCH BROS
4347 PORTAGE STREET N.W.
PART OF SOUTHWEST QUARTER SECTION 12 (T-11, R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
KENT, OH 44240
(330) 673-2400

11-17-2026

PROJECT NUMBER
20260084

UTILITY PROFILES

C-3.2

LEGEND

- 609 – EXISTING CONTOUR (MINOR)
- 610 – EXISTING CONTOUR (MAJOR)
- 609 – PROPOSED CONTOUR (MINOR)
- 610 – PROPOSED CONTOUR (MAJOR)
- 78.50 / 76.00 – PROP. TOP/BACK OF CURB / PROP. BOTTOM/FACE OF CURB
- 678.00 – PROP. ELEVATION

MILL AND RESURFACE EXISTING ASPHALT PAVEMENT.

KEYED NOTES

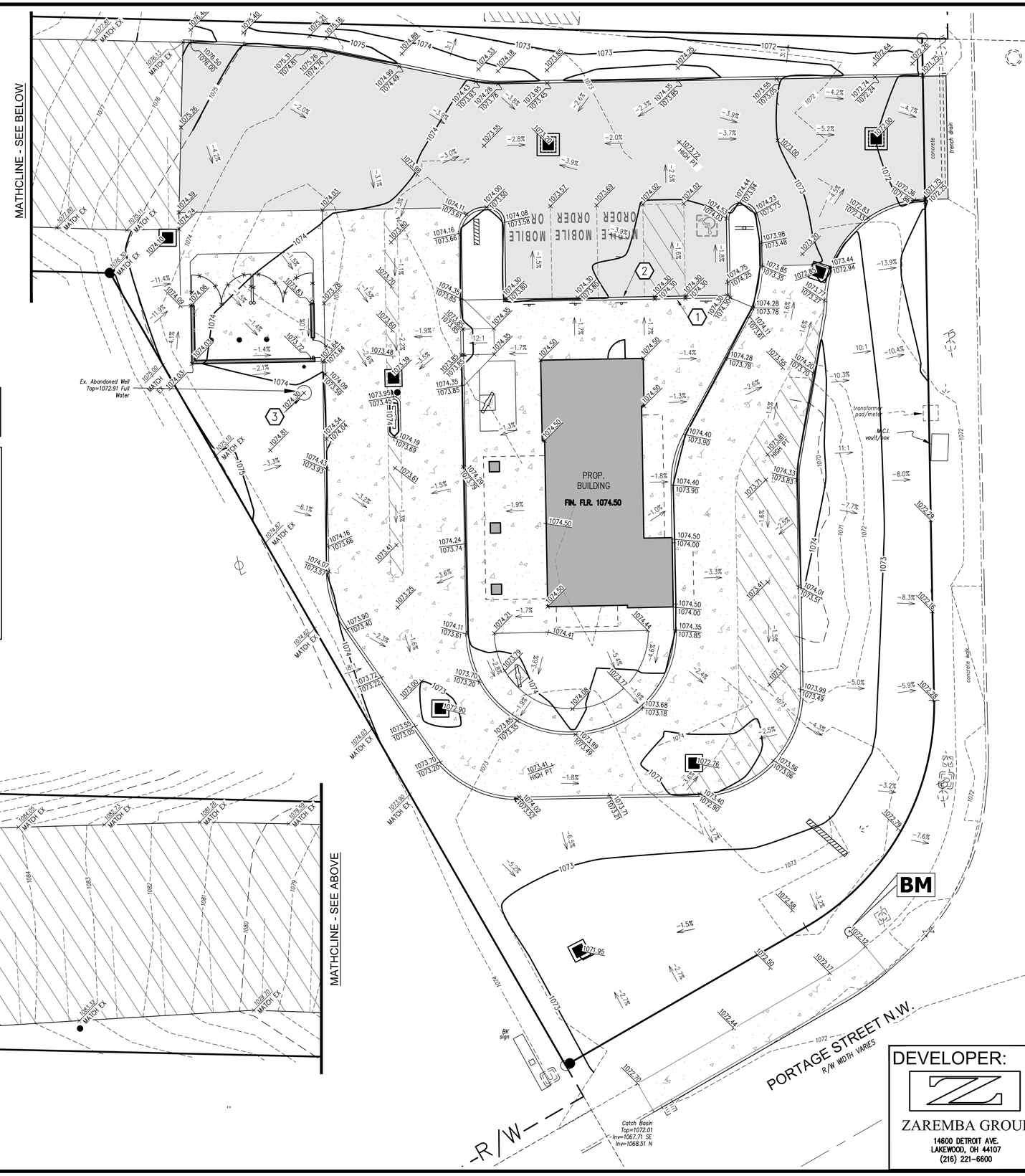
1. – PAVEMENT, CURB AND WALK TO BE FLUSH.
2. – TAPER PAVEMENT FROM 0" REVEAL TO 6" REVEAL IN 15'–0".
3. – EXISTING ABANDONED WELL HEAD AND COVER TO REMAIN. PROTECT DURING CONSTRUCTION. GAS COMPANY TO ADJUST COVER TO GRADE. COORDINATE ALL WORK AROUND ABANDONED GAS WELL WITH DANIEL CESAREO AT ENBRIDGE GAS OPERATIONS 330–351–1141.

ADA COMPLIANCE NOTE

WITHIN 48 HOURS OF PLACEMENT, ALL ACCESSIBLE PARKING AREAS AND ASSOCIATED SIDEWALKS AND RAMPS MUST BE SURVEYED BY A LICENSED SURVEYOR AND PROVIDED TO OWNER/ENGINEER. ANY NONCOMPLIANT AREAS SHALL BE REWORKED AND RESURVEYED UNTIL THEY ARE COMPLIANT WITH THE CONSTRUCTION PLAN.

GRADING NOTES

1. ALL EARTHWORK TO CONFORM TO ODOT ITEM 203 AND TO BE PERFORMED IN STRICT ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS REPORT BY *TERRACON, PROJECT NO. 1000058291, DATED OCTOBER 19, 2026.* ALL EARTHWORK IN AREAS BEARING THE PROPOSED BUILDING TO BE SUPERVISED AND DIRECTED BY A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF OHIO. CONTRACTOR SHALL REVIEW GEOTECHNICAL REPORT TO ASCERTAIN THE AMOUNT OF ANY UNDERCUTTING REQUIRED TO CONSTRUCT THE SITE.
2. ADJUST TO GRADE/COORD. ADJUSTMENT TO GRADE OF ALL COVERS, GRATES, UTILITY BOXES ETC. TO REMAIN.
3. ALL SIDEWALKS SHALL HAVE A MAX. LONGITUDINAL SLOPE OF NOT MORE THAN 5% AND A MAX. CROSS–SLOPE OF NOT MORE THAN 2%.
4. IF IMPORT MATERIAL IS REQUIRED, IT MUST COME FROM A PERMITTED SITE. IF MATERIAL MUST BE HAUL–OFF, IT MUST BE DELIVERED TO A PERMITTED SITE. A "PERMITTED SITE" IS A SITE COVERED BY AN OHIO EPA NPDES PHASE II PERMIT.
5. CONTRACTOR SHALL ENSURE ALL DISTURBED AND LAWN AREAS OF THE PROJECT SITE AND RIGHT–OF–WAY ARE COVERED WITH A MINIMUM OF 6" OF TOP SOIL PLACED PER ODOT ITEM 659 – TOPSOIL TO FINAL GRADE. PROVIDE SEED AND MULCH PER PERMANENT SEEDING SPECIFICATIONS ON SHEET C–6.2, EXCEPT IN PROJECT AREAS DESIGNATED FOR SOD. ALL TOPSOIL AND LAWN AREAS TO BE PREPARED AND STABILIZED TO THE OWNER'S SATISFACTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTROL DUST FROM AFFECTING ANYTHING OFF–SITE.



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LAKEWOOD, OH 44107
(216) 221–6600

SCALE: 1"=10'

STATE OF OHIO
MICHAEL J. WOHLWEND
E–68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DUTCH BROS
4347 PORTAGE STREET N.W.
NORTH CANTON, OHIO 12 (T-11, R-9)
PART OF SOUTH HALF OF SECTION 12 (T-11, R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
KENT, OH 44240
(330) 673-2400

11–17–2026

PROJECT NUMBER
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GRADING PLAN

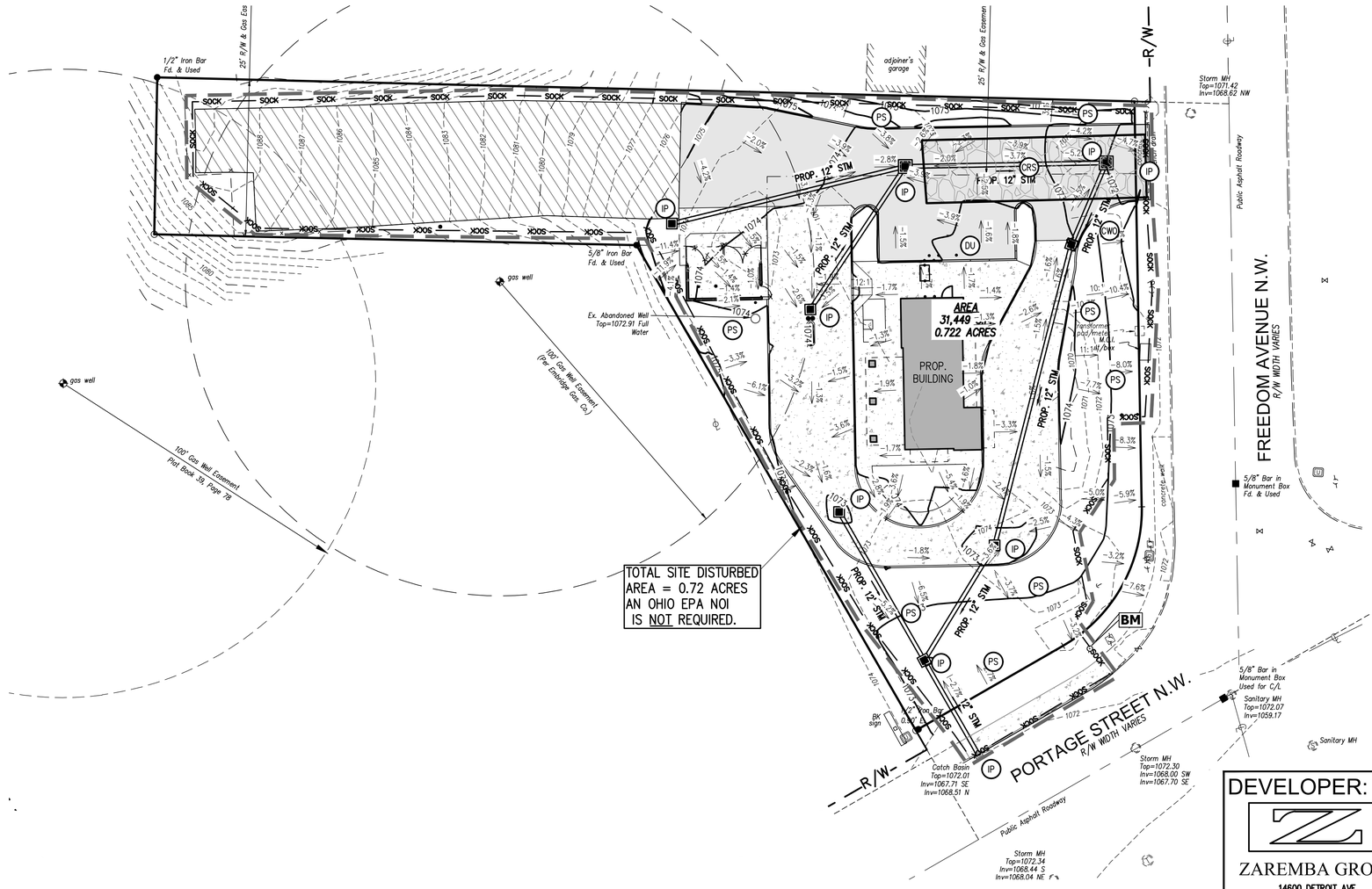
C–4.0

SEQUENCE OF CONSTRUCTION

1. WORK ON THIS PROJECT IS ESTIMATED TO START ON MARCH 1, 2027 AND EXTEND TO AUGUST 1, 2027.
2. CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PRE-CONSTRUCTION MEETINGS ARE SCHEDULED AND HELD WITH THE VARIOUS REQUIRED ENTITIES PRIOR TO ANY CONSTRUCTION.
3. INSTALL CONSTRUCTION DRIVE, FILTER SOCK AND CATCH BASIN PROTECTION FOR EXISTING CATCH BASINS.
4. BEGIN CLEARING AND GRUBBING OF PROJECT AREA.
5. ESTABLISH REFUELING AREA, IF REQUIRED.
6. BEGIN ROUGH GRADING.
7. CONSTRUCT CONCRETE WASHOUT AREA.
8. CONSTRUCT STORM SEWER & INSTALL PROPOSED UTILITIES. INSTALL PROPOSED CATCH BASIN PROTECTION AS EACH CATCH BASIN IS INSTALLED AND PLACED INTO SERVICE.
9. BEGIN CONSTRUCTION OF PROPOSED BUILDING.
10. FINISH REMAINING SITE WORK AND STABILIZE THE SITE.
11. REMOVE REMAINING EROSION CONTROL MEASURES.

SWP3 LEGEND

- 1076 — PROPOSED CONTOUR
- 1076 — EXISTING CONTOUR
- SOCK — FILTER SOCK
- (IP) – INLET PROTECTION
- (CWO) – TEMPORARY CONCRETE WASH OUT
- (CRS) – CONSTRUCTION ENTRANCE.
- (PS) – PERMANENT STABILIZATION
- (DU) – TEMPORARY CONSTRUCTION DUMPSTER
- – LIMITS OF EARTH DISTURBING ACTIVITIES



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PART OF SOUTH 1/2 OF LOT 12 (T-11, R-9)
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ABBREVIATED SWPPP

C-5.1

TEMPORARY SEEDING

Table 5.5.1 Recommended temporary seeding species, seeding rates, and seeding dates. (adapted from USDA–NRCS, Ohio)

Annual Plant Species	Pure Live Seeding Rate (lb/ac)	Seeding Dates	Seed Depth
Annual Rye Grass (Lolium multiflorum)	100	March 1 to May 1 August 1 to October 1	½ inch
Spring Oats (Avena sativa)	128	March 1 to August 1	1 inch
Winter (Cereal) Rye (Secale cereale)	100	March 1 to November 1	1 inch
Oats (Avena sativa) Sorghum Sudangrass (Sorghum ×drummondii)	64 40	June 1 to August 1	1 inch ¼ inch
Pearl Millet (Pennisetum glaucum)	20	June 1 to August 1	¼ inch
Winter Wheat (Triticum aestivum)	100	October 1 to November 1	1 inch

Seed and Seeding

1. Select the plant species appropriate for the length of time the area will be idle and the season in which temporary cover is needed. Table 5.5.1 provides guidance on recommended annual species. Equivalent mixes recommended by the Natural Resource Conservation Service – Ohio, Ohio Department of Natural Resources, or Ohio State University's Cooperative Extension may also be used.
2. Seed must be labeled according to Ohio Department of Agriculture regulations and Ohio Revised Code section 907.03.
3. Complete temporary seeding prior to November 1. Between November 1 and March 1 use mulch temporary stabilization. Mulch temporary stabilization over winter has limited effectiveness at an increased cost.
4. Thoroughly mix all seed and sow evenly over 100 percent of the prepared areas at the required rates. Apply the seed mix with a mechanical seeder, hydroseed, or broadcast onto loose soil and in a manner that will result in good seed–to–soil contact. Broadcast seed shall be covered by raking or dragging the soil or using a cultipacker. Note that broadcast seeding may not sufficiently bury annual grains such as oats, wheat, and rye. Annual grains are likely best planted with a seed drill.

Mulching

1. Mulch material shall be applied immediately following the temporary seeding. Apply the mulch material by hand or mechanically so 75 to 90 percent of the soil surface is uniformly covered. Additional protective measures may be necessary to keep soil and seed from washing away on temporarily seeded slopes.
2. Mulch shall be unrotten cereal grain straw applied at the rate of two tons per acre, woodchips with a minimum particle size of ¼ inches applied to a minimum depth of two inches, wood–fiber hydraulic mulch applied to the manufacturer's specifications at a rate of 1,500 to 2,000 pounds/acre with a tackifier, or rolled erosion control matting applied according to manufacturer's specifications.
   a. Wood fiber hydraulic mulches are typically short–lived (less than 3 months) and only relied upon to establish vegetation. Do not apply hydraulic mulches to shallow vegetated channels unless used with an erosion control blanket or to saturated soils.
   b. Woodchips must be manufactured expressly from clean raw wood and be free of contaminants. Do not use woodchips where flowing water could wash them away.
   c. Do not use grass clippings or other materials with carbon to nitrogen (C:N) ratios less than 20:1. These materials may release nitrate–nitrogen that could cause water quality impairments.
3. Mulch shall be anchored immediately after placement to hold it in place. The following are acceptable methods for anchoring mulch.
   a. A straw crimper or similar coulter–like implement may be used to punch straw mulch into the soil. Soil penetration should be about three to four inches. Crimped straw shall generally be longer than six inches (finely chopped straw cannot be crimped). On sloping land where equipment can operate safely, the crimp along the contour.
   b. Cotton, jute, or synthetic nettings may be used according to the manufacturer's specifications. Pin or staple netting per the manufacturer's recommendations. Biodegradable netting is recommended.
   c. Polymeric emulsion blend or organic tackifiers (guar, psyllium, starch, and pitch and rosin emulsions) may be applied at the manufacturer's recommended application rates if weather conditions are compatible with the manufacturer's recommendations. Apply synthetic or organic binders in such a manner that will not result in direct contact with waters of the state. Follow weather forecasts and the product's required drying time to ensure the binders will not be washed into waters of the state. Binders must be physiologically harmless and not result in a phytotoxic effect or impede the growth of turfgrass. Petroleum–based binders are prohibited.

   Remove and properly dispose of all non–organic or non–biodegradable mulch and anchoring materials when the practice is terminated.

Irrigation

1. Water temporary seedings performed during summer months or periods of drought at a rate of one–half inch per week until 70% cover is established.
2. Irrigate at a rate and method that will not erode soil or dislodge mulch cover.

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s)
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

MULCH TEMPORARY STABILIZATION

Scope

1. Apply mulch temporary stabilization to:
   a. any disturbed areas within 50 feet of surface waters of the state and not at final grade within two days of the most recent disturbance if the area will remain idle for more than 14 days,
   b. any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a waters of the state within seven days of the most recent disturbance within the area,
   c. disturbed areas that will be idle over winter prior to the onset of winter weather, and
   at least seven days prior to the transfer of permit coverage for the individual residential lot(s).

Installation

1. Apply the mulch material by hand or mechanically so that 100 percent of the disturbed soil surface is uniformly covered.
2. Mulch shall be:
   a. unrotten cereal grain straw applied at a rate of four tons per acre,
   b. erosion control blankets with a 12–month functional longevity applied according to manufacturer's specifications, or
   c. bonded fiber matrix (BFM) hydraulically with a cover factor (C) less than 0.01 applied at a rate of at least 3,500 pounds per acre. Do not apply BFM immediately before, during, or after a rain event. It must have the opportunity to dry for up to 24 hours after installation.
3. Straw mulch shall be anchored immediately after placement to hold it in place. The following are acceptable methods for anchoring mulch.
   a. Use a straw crimper or similar coulter–like implement to punch the straw mulch into the soil. Soil penetration should be about three to four inches. Crimped straw shall be generally longer than six inches (finely chopped straw cannot be crimped). On sloping land where equipment can operate safely, crimp along the contour.
   b. Cotton, jute, or synthetic netting may be used according to the manufacturer's specifications. Pin or staple netting per the manufacturer's recommendations. Degradable netting is recommended for areas to be mowed.
   c. High polymer synthetic emulsions or organic binders may be used at the manufacturer's recommended application rates if weather conditions are compatible with the manufacturer's recommendations. Apply synthetic or organic binders in such a manner that will not result in direct contact with waters of the state. Follow weather forecasts and the product's required drying time to ensure the binders will not be washed into waters of the state. Binders must be physiologically harmless and not result in a phytotoxic effect or impede vegetation growth. Petroleum–based binders are prohibited.
4. Remove and properly dispose of any non–organic or non–biodegradable mulch and anchoring materials when no longer necessary.Disturbance to the stream shall be kept to a minimum. Preserve all streambank vegetation to the maximum extent practical and make the stream crossing as narrow as practical. Clearing shall be done by cutting NOT grubbing except in the case of stream fords where approaches may require more grading. Leave roots and stumps in place to help stabilize the banks and accelerate re–vegetation.

PERMANENT SEEDING

Table 5.7.1 Ohio Seeding Dates (adapted from USDA-NRCS Ohio, 2019)

March 15 to May 31[1]	Spring permanent seeding window
June 1 to July 31	Permanent seeding with irrigation until 70% cover is established[2]
August 1 to September 15[3]	Fall permanent seeding window
September 16 to October 15	Permanent seeding with an additional 30 lb/ac of cereal rye[2]
October 15 to December 1	Permanent seeding is not recommended as seeds are likely to germinate but not be able to survive the winter. Use temporary stabilization until the spring window.
December 1 to March 14	Dormant permanent seeding coupled with mulch temporary stabilization[2,3]

Footnotes:
1- Spring and fall seeding dates may be extended two weeks beyond the date range listed based on a site-specific evaluation of the site and the local weather conditions at the time.
2- Seeding must be evaluated for adequate establishment after the following spring or fall seeding window.
3- Increase seeding rates by 50% for dormant seeding and follow mulch temporary stabilization specification

	Mix Use	Plant Species	Pure Live Seeding Rate (lb/ac)[2,3]	Percent of Mix
1	Multipurpose Lawn	Turf Type Fescue (Festuca arundinadea)	40	47
		Kentucky Bluegrass (Poa pratensis)	20	23
		Perennial Ryegrass (Lolium perenne)	25	30
			85 lb/ac total PLS rate	
2	Quick Cover	Kentucky Bluegrass (Poa pratensis)	15	41
		Creeping Red Fescue (Festuca rubra)	16.5	27
		Annual Ryegrass (Lolium multiflorum)	1.5	2
		Perennial Ryegrass (Lolium perenne)	19	30
			52lb/ac total PLS rate	
3	Secondary Wildlife Benefits Cover	Kentucky Bluegrass (Poa pratensis)	11	18
		Orchardgrass (Dactylis glomereta)	22.5	37
		Annual Ryegrass (Lolium multiflorum)	1.5	10
		Perennial Ryegrass (Lolium perenne)	19	31
		Red Clover (Trifolium partum)	2	4
			56 lb/ac total PLS rate	
4	Steep Slopes	Hard Fescue (Festuca longifolia)	55	55
		Creeping Red Fescue (Festuca rubra)	35	35
		Annual Ryegrass (Lolium multiflorum)	10	10
			100 lb/ac total PLS rate	
5	Meadow / Conservation Area[4]	New England Aster (Symphyotrichum novae-angliae), Partridge Pea (Chamaecrista fasciculata), Purple Coneflower (Echinacea purpurea), Rattlesnake Master (Eryngium yuccifolium), Ox-Eye Sunflower (Heliopsis helianthoides), Bergamot (Monarda fistulosa), Grey-Headed Coneflower (Ratibida pinnata), Orange Coneflower (Rudbeckia fulgida), Prairie Dock (Silphium terebinthinaceum), Whorled Rosinweed (Silphium trifoliatum), Stiff Goldenrod (Solidago rigida) (a mixture of 5 to 12 species with any one not to exceed 5% of the mix)	15	25
		Big Blue Stem (Andropogan gerardii)	2	3
		Little Blue Stem (Schizachyrium scoparium)	3	5
		Indian Grass (Sorghastrumnutans)	1	2
		Annual Ryegrass (Lolium multiflorum)	40	65
			61 lb/ac total PLS rate	

Footnotes:
1. Small variations within the seeding rates listed within the planned mix are acceptable so long as the mix includes all the listed species, and the total proportion of the seed mixture is 100% or more.
2. The seeding rates used in this document assume the seed used is all viable. All rates listed in this document are listed as Pure Live Seed (PLS). This PLS rate must be adjusted to account for the quality of the seed being used.
3. PLS seeding rates are to be increased by 20% if the method of seeding does not result in good soil seed contact included to account for the increased risk of poor emergence. For example, if the planned method involves broadcast seeding with no additional activities to improve seed-to-soil contact.
4. This is a general mix. Ecoregion-specific seed mixes are recommended where feasible

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Other areas at final grade	Within seven days of reaching final grade within that area

Timing

1. Permanent seed areas within 50 feet of surface waters of the state within two days of reaching final grade and all other areas within seven days of reaching final grade. Do not delay permanent seeding of any portion of the site at final grade, including stormwater basins, while construction on another portion of the site is being completed. Complete permanent seeding in phases, if necessary.
2. Permanent seed any areas that will lie dormant for one year or more within seven days of the most recent disturbance.
3. Conduct permanent seeding according to the timeframes in Table 5.7.1.

Seedbed Preparation, Fertilizer, and Lime

1. Prior to the start of seeding operations, perform soil tests to determine site–specific application rates for both lime and fertilizer. Soil samples taken for engineering purposes or soil restoration may also be used for chemical analyses.
2. The soil being seeded must be of sufficient tilth with adequate nutrients and water–holding capacity to support vegetation. The seedbed should be firm and rough with small clods, moist at the surface, and free of weeds and competing vegetation.
   a. If the soil has become compacted or crusted, loosen it to a depth of three to five inches with a suitable agricultural or construction implement, such as a disc harrow, tine harrow, chisel plow, or ripper. Leave the seedbed in loose condition until after fertilization and seeding. If necessary, firm it with a cultipacker.
   b. Track walk sloped areas (greater than 3:1) leaving the surface in an irregular condition with ridges running parallel to the contour of the slope. (see Chapter 5.4 Soil Roughening)
3. Apply starter fertilizer and lime as recommended by a soil test and work into loose soil. If fertilizer is not incorporated, apply one–half the rate described above during seedbed preparation and repeat another one–half rate application of the same fertilizer within three to five weeks after seeding.
   When not specified by a soil test, apply standard commercial fertilizer 10–20–10 evenly over the surface at a standard dry application rate of 20 pounds per 1,000 square feet. Other commercial fertilizer mixture ratios may be applied at the application rate specific for that ratio to provide an equivalent quantity of nutrients. All dry or liquid fertilizers must be fully labeled, delivered, and stored per applicable laws and registered with the Ohio Department of Agriculture (ODA) in accordance with Ohio Revised Code (ORC) section 905.33.
   When not specified by a soil test, apply two tons of pulverized agricultural–grade lime per acre to develop a slightly acidic growing environment. Equivalent liming materials described in Bulletin 472, *Ohio Agronomy Guide*, published by the Ohio State University Cooperative Extension Service (OSU Extension) may also be used. Liming material must be from a manufacturer licensed by ODA in accordance with ORC section 905.52.

Seed

1. Select a seed mix from Table 5.7.2 or an equivalent mixture recommended by the Natural Resource Conservation Service – Ohio, Ohio Department of Natural Resources, or OSU Extension.
2. Seed must be labeled according to ODA regulations and Ohio Revised Code section 907.03.
3. Legume seed must be properly inoculated with nitrogen–fixing bacteria specifically prepared for the species prior to seeding and should be applied at a rate of two pounds of inoculant per 100 pounds of seed. Use four times the recommended rate when hydroseeding.

Seeding Methods

1. Thoroughly mix all seed and evenly sow the seed over 100 percent of the prepared areas at the required rates. Seed may be applied by dry seeding, a mechanized seeder, or hydroseeding.
2. Dry seeding may be performed with a conventional drop or cyclone seeder. Seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of one–quarter inch by raking or dragging or with a cultipacker or similar implement to assure good seed–to–soil contact. Seed may also be covered with compost or engineered soil media applied to a minimum depth of ¼ inch over the prepared areas. Where feasible, apply seed in two directions perpendicular to each other using half the seeding rate in each direction. After seeding, firm the soil with cultipacker or similar implement
3. Mechanized seeders may be used to bury the seed at least ¼ inches. Where practical, apply seed in two directions perpendicular to each other, using one–half of the seeding rate in each direction. On sloping land, operate seeding equipment on the contour where feasible.
4. Hydroseeding should follow a two–step process to ensure the seed is in direct contact with the soil. First seed and fertilize with 25 to 30 percent mulch and tackifier onto soil in the first lift. Place the remaining 70 to 75 percent of the mulch and tackifier over the first lift in a second application. If seed, fertilizer, and mulch are applied in a single step, the seed rates in Table 5.7.2 should be increased by 50 percent to compensate for seeds not having direct contact with the soil. Hydroseeding alone does not provide adequate erosion control.

Mulching

1. Mulch material shall be applied immediately following permanent seeding. Apply the mulch material by hand or mechanically so 85 to 90 percent of the soil surface is uniformly covered.
2. Mulch shall be unrotten cereal grain straw applied at the rate of two tons per acre, woodchips with a minimum particle size of ¼ inches applied to a minimum depth of two inches, wood–fiber hydraulic mulch applied to the manufacturer's specifications at a rate of 1,500 to 2,000 pounds/acre with a tackifier, or rolled erosion control matting applied according to manufacturer's specifications.
   Wood fiber hydraulic mulches are generally short–lived (less than 3 months) and should only be used during the spring and fall seeding window. Do not apply hydraulic mulches to shallow vegetated channels unless used with an erosion control blanket or to saturated soils.
   Woodchips must be manufactured expressly from clean raw wood and be free of contaminants. Do not use woodchips where flowing water could wash them away.
   Organic mulch materials with carbon to nitrogen (C:N) ratios of less than 20:1 such as grass clippings will release nitrate–nitrogen that could cause water quality impairments and should be avoided.
3. Mulch shall be anchored immediately after placement to hold it in place. The following are acceptable methods for anchoring mulch.
   a. Use a straw crimper or similar coulter–like implement to punch the straw mulch into the soil. Soil penetration should be about three to four inches. Crimped straw shall generally be longer than six inches (finely chopped straw cannot be crimped). On sloping land where equipment can operate safely, the operation should be on the contour.
   b. Cotton, jute, or synthetic netting may be used according to the manufacturer's specifications. Pin or staple netting per the manufacturer's recommendations. Degradable netting is recommended for areas to be mowed.
   c. High polymer synthetic emulsions or organic binders may be used at the manufacturer's recommended application rates if weather conditions are compatible with the manufacturer's recommendations. All applications of synthetic or organic binders must be conducted in such a manner that there is no direct contact with waters of the state. Weather forecasts must be considered to ensure the binders will not be washed into waters of the state. Binders must be physiologically harmless and not result in a phytotoxic effect or impede vegetation growth.
   d. All non–organic or non–biodegradable mulch and anchoring materials shall be removed and properly disposed of when the practice is terminated.

Irrigation

1. Thoroughly water permanent seeded areas after seed germination. Apply a total rate of 300 gallons per 1,000 square feet in at least two applications spread over seven days. Perform a secondary water application seven and ten days after the primary applications. If a one–half inch or greater of rainfall occurs within the irrigation period, watering may be omitted. Irrigation seedings performed between June 1 and July 31 at a rate of one–half inch per week until 70% cover is established.
2. Irrigate at a rate and method that will not erode soil or dislodge mulch cover.

Dormant Seeding

1. Dormant seeding may occur if soil moisture conditions allow access for seeding.
2. Increase all seeding rates by 50 percent when dormant seeding.
3. Dormant seeding shall be mulched so that 100 percent of the ground surface is uniformly covered with cereal grain straw applied at the rate of three to four tons per acre or bonded fiber matrix hydraulically applied at a rate of 3,500 to 4,000 pounds per acre. Hydroseed and standard hydraulic fiber mulch do sufficiently protect dormant seeded ground from erosion.

GENERAL NOTES

GENERAL

- SEDIMENT PONDS/TRAPS AND PERIMETER CONTROLS SHALL BE IMPLEMENTED AS A FIRST STEP OF GRADING WITHIN 7 DAYS FROM THE START OF GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS HAVE BEEN STABILIZED.
- DITCHES WITH GRADES GREATER THAN 1.5% SHALL HAVE EROSION CONTROL BLANKETS/MATTING INSTALLED AS PART OF STABILIZATION MEASURES.
- EROSION CONTROL BLANKETS SHALL BE USED TO AID IN VEGETATION ESTABLISHMENT ON ALL DISTURBED SLOPES GREATER THAN 6%.
- SLOPES OF THE ROADS AND DRIVES SHALL BE SEEDED AND BLANKETED IMMEDIATELY UPON THEIR COMPLETION.
- OFF–SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD(S) NOTED ON PLAN.
- ALL EROSION AND SEDIMENTATION CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF THE OHIO'S RAINWATER AND LAND DEVELOPMENT MANUAL (2006 EDITION).
- OTHER EROSION AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.
- EROSION AND SEDIMENT CONTROL PRACTICES NOT ALREADY SPECIFIED ON THIS PLAN MAY BE NECESSARY DUE TO UNFORESEEN ENVIRONMENTAL CONDITIONS AND/OR CHANGES IN DRAINAGE PATTERN CAUSED BY EARTH–MOVING ACTIVITY.
- A FULL LOT SEEDING AND MULCHING SHALL BE APPLIED TO ALL BARE AREAS IMMEDIATELY AFTER THE CONSTRUCTION OF THE STREETS ARE COMPLETED.
- NOTICE OF INTENT (NOI) MUST BE SUBMITTED TO OHIO EPA FOR NPDES PERMIT 45 DAYS PRIOR TO THE START OF CLEARING AND OR GRADING.
- CONSTRUCTION MUST COMPLY WITH ALL LOCAL EROSION AND SEDIMENT CONTROL REGULATIONS.
- NO SOLID OR LIQUID WASTE SHOULD BE DISCHARGED STORM WATER RUNOFF.
- SWPPP MUST SHOW COMPLIANCE WITH LOCAL WASTE DISPOSAL, SANITARY, AND HEALTH REGULATIONS.
- IF MUD, SOIL, OR OTHER DEBRIS IS DEPOSITED ON ADJACENT STREETS, ROADS OR OTHER PROPERTY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SUCH AS DIRECTED BY THE CITY OR ITS ENGINEER AT THE END OF EACH WORK DAY.
- DISTURBED AREAS ARE NOT CONSIDERED STABILIZED UNTIL VEGETATIVE GROWTH IS AT LEAST 70% OR EQUIVALENT.
- TRENCH DEWATERING MUST PASS THROUGH A FILTER BAG.

MAINTENANCE AND INSPECTION

ALL INSPECTIONS ARE TO BE MADE BY QUALIFIED INSPECTION PERSONNEL.

PERMANENT RECORDS OF MAINTENANCE AND INSPECTION MUST BE MAINTAINED A MINIMUM OF ONCE EVERY SEVEN DAYS AND AFTER STORM EVENTS GREATER THAN 0.5 INCH IN A 24 HOUR PERIOD. NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, CERTIFICATION OF COMPLIANCE, CORRECTIVE MEASURES TAKEN. RECORDS MUST BE MAINTAINED FOR 3 YEARS AFTER NOTICE OF TERMINATION PER OHIO EPA NPDES PERMIT.

REPAIRS

ANY EROSION CONTROL MEASURES, STRUCTURES, DEVICES, OR RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN 3 DAYS OF THE INSPECTION IN WHICH THE DAMAGED BMP WAS NOTED.

WINTERIZATION

ANY DISTURBED AREA THAT IS NOT GOING TO BE WORKED FOR 14 DAYS OR MORE MUST BE SEEDED AND MULCHED BY NOVEMBER 1 OR MUST HAVE DORMANT SEEDING OR MULCH COVER APPLIED BETWEEN NOVEMBER 1 AND MARCH 1.

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 TO BE USED IT SHALL BE UNROTTED SMALL–GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/AC. OR 90 LB./1000 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 1000 SQ.FT. SECTIONS AND SPREAD TWO 45 LB. BALES OF STRAW IN IN EACH SECTION.
   - HYDROSEEDERS – IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2000 LB./AC. OR 46 LB./1000 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 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 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), DCA–70, PETROSET TERRA TACK, OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
   - WOOD CELLULOSE FIBER – WOOD CELLULOSE FIBER 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.

PERMANENT SEEDING

1. DISTURBED AREAS REMAINING DORMANT FOR OVER A YEAR AND AT FINAL GRADE SHALL HAVE THE PERMANENT LANDSCAPING COVER INSTALLED PER LANDSCAPING PLAN.
2. DISTURBED AREAS WITHIN 50 FEET OF A STREAM MUST HAVE A PERMANENT COVER APPLIED WITHIN 2 DAYS OF REACHING FINAL GRADE.

EXCAVATION DEWATERING

ALL WATER PUMPED FROM UTILITY TRENCHES DURING CONSTRUCTION SHALL BE PASSED THROUGH A FILTER BAG THAT IS ATTACHED TO THE OUTLET HOSE OF THE PUMP AND PLACED ON A GRASS OR GRAVEL SURFACE.

NON–SEDIMENT POLLUTANT CONTROLS

1. CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION WASTES:
   DO'S
   – PREVENT SPILLS
   – USE PRODUCTS UP
   – FOLLOW LABEL DIRECTIONS FOR DISPOSAL
   – REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
   – RECYCLE WASTES WHENEVER POSSIBLE
   DON'TS
   – DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND
   – DON'T POUR DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
   – DON'T BURY CHEMICALS OR CONTAINERS
   – DON'T BURN CHEMICALS OR CONTAINERS
   – DON'T MIX CHEMICALS TOGETHER

2. CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS USED ON–SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION DEMOLITION AND DEBRIS (CD&D) WASTE MUST BE DISPOSED OF AT AN OHIO EPA APPROVED CD&D LANDFILL.

3. NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED ON–SITE. BY EXCEPTION, CLEAN FILL (BRICKS, HARDENED CONCRETE, SOIL) MAY BE UTILIZED IN A WAY WHICH DOES NOT ENDANGER UPON NATURAL WETLANDS, STREAMS OR FLOODPLAINS OR RESULT IN THE CONTAMINATION OF WATERS OF THE STATE.

4. HANDLING CONSTRUCTION CHEMICALS. MIXING, PUMPING, TRANSFERRING OR OTHER HANDLING OF CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.

5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HRS. OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER. SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS MAY APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVE GROUND TANK OF 660 GALLONS OR MORE, ACCUMULATIVE ABOVE GROUND STORAGE OF 1330 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. CONTAMINATED SOILS MUST BE DISPOSED OF IN ACCORDANCE WITH ITEM 8.

6. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT WITH NO POTENTIAL FOR DISCHARGE SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER. FIELD TILE OR OTHER SUBSURFACE DRAINAGE STRUCTURES WITHIN 10 FT. OF THE SUMP SHALL BE CUT AND PLUGGED. FOR SMALL PROJECTS, TRUCK CHUTES MAY BE RINSED AWAY FROM ANY WATER CONVEYANCES.

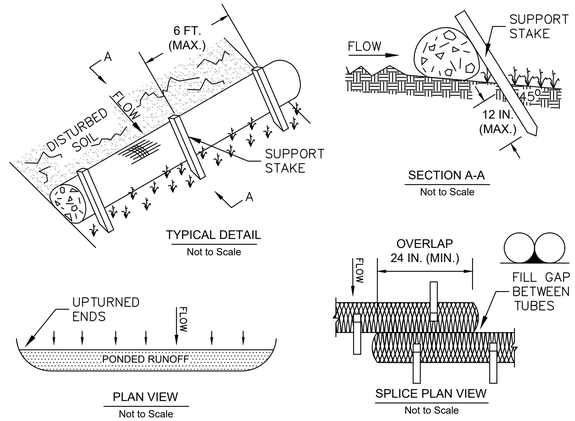
7. SPILL REPORTING REQUIREMENTS: SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL–BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO OHIO EPA (1–800–282–9378). SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE. ALL SPILLS WHICH CONTACT WATERS OF THE STATE MUST BE REPORTED TO OHIO EPA.

8. CONTAMINATED SOILS. IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY. (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). NOTE THAT STORM WATER RUN OFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT BE AUTHORIZED UNDER OHIO EPA'S GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

9. OPEN BURNING. NO MATERIALS CONTAINING RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS, SUCH AS TIRES, AUTOPARTS, PLASTICS OR PLASTIC COATED WIRE MAY BE BURNED (OAC 3745–19). OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS, WHICH ARE DEFINED AS: 1) WITHIN CORPORATION LIMITS; 2) WITHIN 1000 FEET OUTSIDE A MUNICIPAL CORPORATION HAVING A POPULATION OF 1000 TO 10,000; AND 3) A ONE MILE ZONE OUTSIDE OF A CORPORATION OF 10,000 OR MORE. OUTSIDE OF RESTRICTED AREAS, NO OPEN BURNING IS ALLOWED WITHIN A 1000 FEET OF AN INHABITED BUILDING ON ANOTHER PROPERTY. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR: HEATING TAR, WELDING, SMUDGE POTS AND SIMILAR OCCUPATIONAL NEEDS, AND HEATING FOR WARMTH OR OUTDOOR BARBEQUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE OR LAND–CLEARING WASTES (PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM OHIO EPA), AND AGRICULTURAL WASTES, EXCLUDING BUILDINGS.

10. DUST CONTROL OR DUST SUPPRESSANTS SHALL BE USED TO PREVENT NUISANCE CONDITIONS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IN A MANNER, WHICH PREVENT A DISCHARGE TO WATERS OF THE STATE. SUFFICIENT DISTANCE MUST BE PROVIDED BETWEEN APPLICATIONS AND NEARBY BRIDGES, CATCH BASINS, AND OTHER WATERWAYS. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN RAIN IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.

11. OTHER AIR PERMITTING REQUIREMENTS: CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS INCLUDING BUT NOT LIMITED TO: MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC. THESE ACTIVITIES WILL REQUIRE SPECIFIC OHIO EPA AIR PERMITS FOR INSTALLATION AND OPERATION. OPERATORS MUST SEEK AUTHORIZATION FROM THE CORRESPONDING DISTRICT OF OHIO EP



TYPICAL DETAIL
Not to Scale

SECTION A-A
Not to Scale

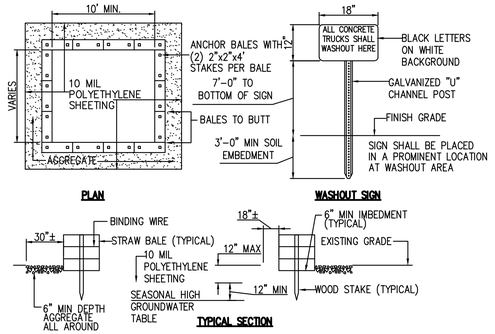
PLAN VIEW
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SPLICE PLAN VIEW
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MANUFACTURED FILTER SOCK

NOT TO SCALE

SOCK

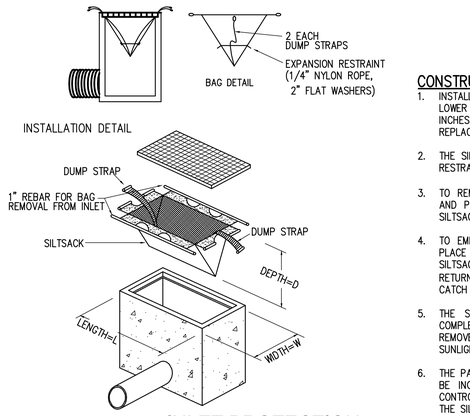


NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT AREA

NOT TO SCALE

CWO



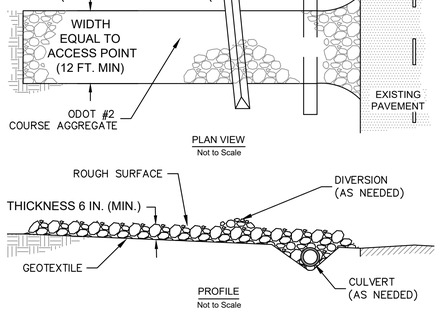
INLET PROTECTION

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IP

CONSTRUCTION SEQUENCE

1. INSTALL THE SILTSACK IN A CATCH BASIN, REMOVE THE GRATE AND LOWER THE SILTSACK INTO THE OPENING. LEAVE APPROXIMATELY SIX INCHES ABOVE THE FRAME. THIS IS THE AREA OF THE LIFTING LOOPS. REPLACE THE GRATE TO HOLD THE SILTSACK IN PLACE.
2. THE SILTSACK IS CONSIDERED FULL AND SHOULD BE EMPTIED WHEN THE RESTRAINING STRAP IS NO LONGER VISIBLE.
3. TO REMOVE THE SILTSACK, TAKE TWO PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON THE LONG SIDE OF THE SILTSACK. ATTACH LIFTING CABLES TO THE REBAR AND LIFT OUT.
4. TO EMPTY THE SILTSACK, PLACE IT WHERE YOU WANT THE SEDIMENT. PLACE THE LIFTING REBAR THROUGH THE DUMP STRAPS AND TURN THE SILTSACK INSIDE OUT. CLEANS WITH A SHOVEL OR RINSE THE FABRIC. RETURN THE SILTSACK TO IT'S ORIGINAL SHAPE AND REINSTALL IN THE CATCH BASIN.
5. THE SILTSACK IS REUSABLE. ONCE THE CONSTRUCTION PROJECT IS COMPLETE AND IT IS NO LONGER NEEDED FOR SEDIMENT CONTROL, REMOVE THE SILTSACK FROM THE CATCH BASIN AND STORE OUT OF THE SUNLIGHT UNTIL NEEDED ON THE NEXT PROJECT.
6. THE PAYMENT FOR ANY SILTSACK USED DURING THE CONSTRUCTION IS TO BE INCLUDED IN THE BID OF THE OVERALL EROSION AND SEDIMENT CONTROL PLAN UNLESS A UNIT PRICE IS REQUESTED. MAINTENANCE OF THE SILTSACK IS ALSO INCLUDED IN THIS PRICE.



Scope
Furnish all materials, labor, and equipment necessary for constructing construction entrance stabilization in accordance with the construction drawings and these specifications.

Timing
The stabilized construction entrance shall be installed as soon as practicable and before major grading activities commence. It shall remain in place and functional until all disturbed areas are stabilized or replaced with a permanent roadway.

Materials
1. Stone aggregate shall meet the gradation requirements for #2 (1.5 – 2.5 inch) coarse aggregate in Table 703.01 of the current Ohio Department of Transportation (ODOT) Construction and Material Specification (CMS) Specification 703, or equivalent. Poorly graded aggregate develops an abrasive surface and is preferred.
2. Geotextile shall be polymeric fibers formed into a woven or non-woven fabric that meets the current ODOT CMS specification 712.09 for Type D: Subgrade-Base Separation or Stabilization, or equivalent.
3. Abrasive manufactured mats may be used as an alternative. They must be installed to the same dimensions as stone stabilization and in accordance with the manufacturer's specifications, including allowable loads, anchoring, and connections.

Installation
1. Remove and stockpile all topsoil. Lay geotextile over the entire subgrade prior to placing the stone layer.
2. The construction entrance shall be not less than 70 feet long (30 feet on an individual residence lot less than 1 acre) and not less than the full width of the ingress or egress point with a minimum width of 12 feet.
3. The stone layer shall be a minimum of 6 inches thick (at least 10 inches is recommended for heavy use). The stone surface should be above the adjoining ground surface to prevent run-on.
4. The stone surface should be rough or abrasive, do not compact or roll the surface smooth.
5. Divert stormwater from up-slope areas away from the entrance. Construct a water bar or mountable berm where necessary to prevent runoff from flowing down the length of the construction entrance. Construct a culvert under the stone where necessary to prevent surface water from flowing across the entrance. Convey sediment-laden runoff to sediment control practices.

Maintenance and Removal
1. Periodically top dress with additional stone or reworking existing stone to maintain abrasiveness.
2. Routinely remove mud from the aggregate surface. This may be accomplished with a street sweeper, broom attachment, or raking the stone.
3. Do NOT wash the entrance unless the wash water can be contained, collected, and treated before disposal.
4. Remove and properly dispose of all aggregate and geotextile at the end of use.

CONSTRUCTION ENTRANCE DRIVE

NOT TO SCALE

CWO

DEVELOPER:

ZAREMBA GROUP
14600 DETROIT AVE.
LAKEWOOD, OH 44107
(216) 221-6600

BASIS OF BEARINGS
THE BASIS FOR BEARINGS FOR THIS SURVEY IS GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD83 (2011).

BENCHMARK
TOP OPERATING NUT ON EXISTING HYDRANT LOCATED AT THE NORTHWEST CORNER OF PORTAGE STREET AND FREEDOM AVENUE.

ELEVATION = 1074.95 (NAVD88)

SURVEY PERFORMED BY:
CAMPBELL & ASSOCIATES, INC.
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3485 Fortuna Drive Suite 100
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(Non-members must be called directly)

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DUTCH BROS
4347 PORTAGE STREET N.W.
NORTH CANTON, OHIO 44720
PART OF SOUTH ½ OF LOT 12 (T-11, R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

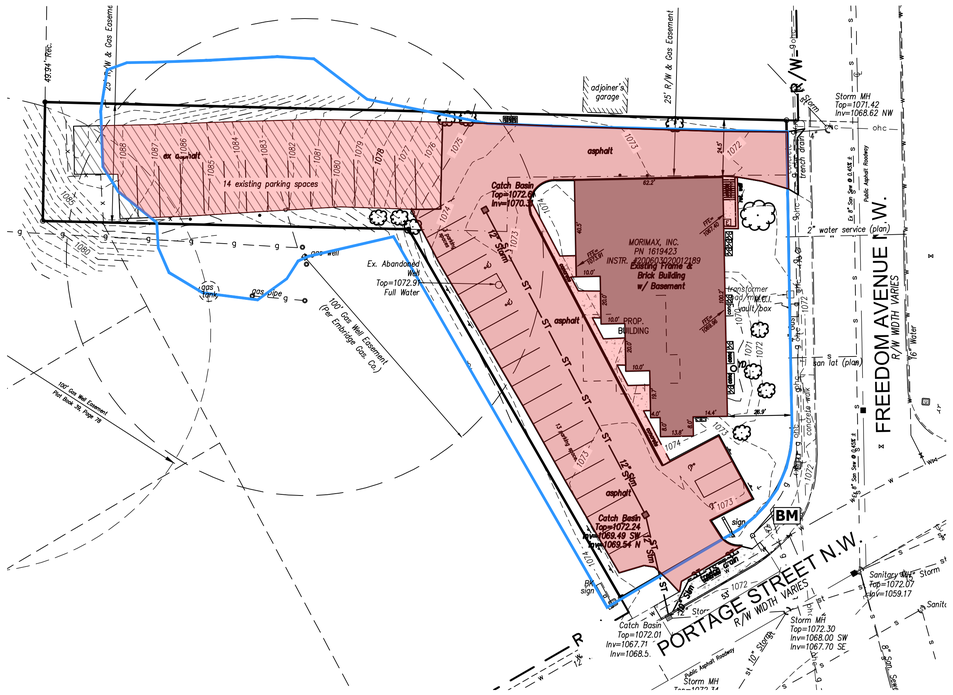
wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
KENT, OH 44240
(330) 673-2400

11-17-2026

PROJECT NUMBER
20260084

ABBREVIATED SWPPP NOTES AND DETAILS

C-5.3

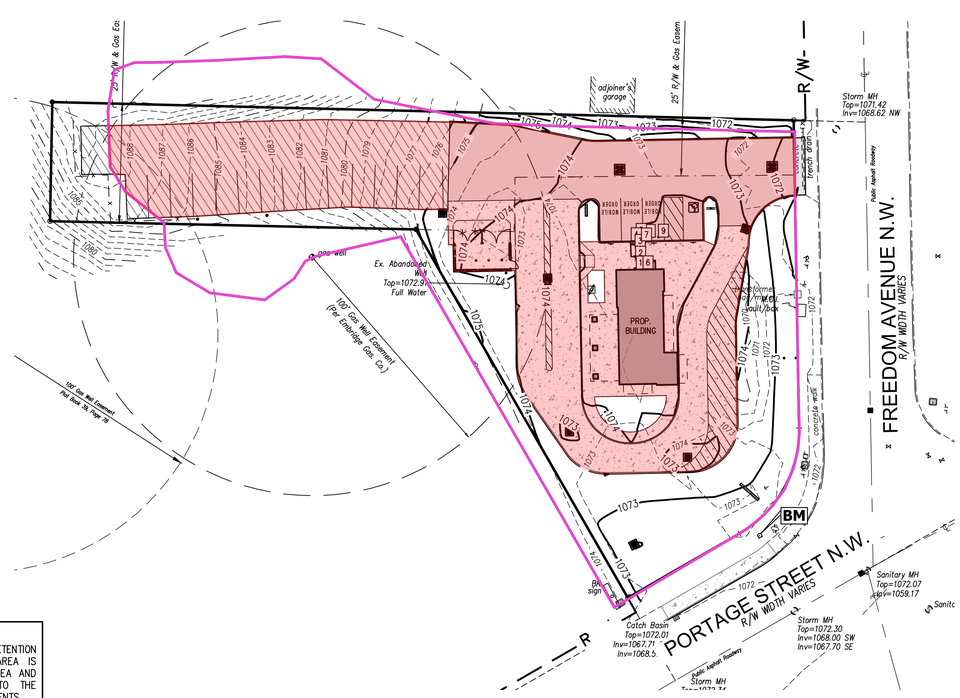


EXISTING CONDITIONS

EXISTING DRAINAGE AREA			
	AREA	%	C
OPEN / GRASS AREA	0.26 Ac.	32.9	0.30
BUILDING AREA	0.12 Ac.	15.2	0.95
CONCRETE AREA	0.02 Ac.	2.5	0.95
ASPHALT AREA TO BE REMOVED	0.26 Ac.	32.9	0.95
ASPHALT AREA TO BE MILLED	0.13 Ac.	16.5	0.95
TOTALS / AVERAGE C	0.79 Ac.	100.0	0.74

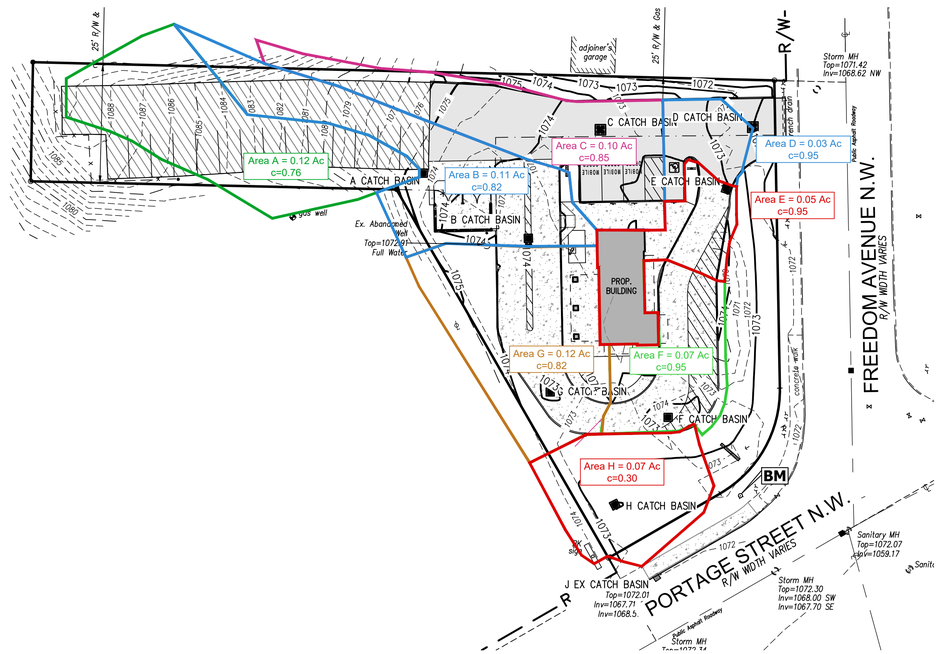
PROJECT SYNOPSIS

THIS PROJECT WILL NOT REQUIRE DETENTION BECAUSE THE PROPOSED IMPERVIOUS AREA IS LESS THAN THE EXISTING IMPERVIOUS AREA AND THUS REDUCES STORMWATER FLOWS TO THE EXISTING STORM SEWER ON ALL STORM EVENTS.



PROPOSED CONDITIONS

PROPOSED DETENTION AREA			
	AREA	%	C
OPEN / GRASS AREA	0.34 Ac.	43.0	0.30
BUILDING AREA	0.02 Ac.	2.5	0.95
ASPHALT AREA	0.11 Ac.	13.9	0.95
ASPHALT AREA TO BE MILLED	0.13 Ac.	16.5	0.95
CONCRETE AREA	0.19 Ac.	24.1	0.95
TOTALS / AVERAGE C	0.79 Ac.	100.0	0.67



STORM SEWER MAP

BASIS OF BEARINGS

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BENCHMARK

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DEVELOPER:
ZAREMBA GROUP
14600 DETROIT AVE.
LAKEWOOD, OH 44107
(216) 221-6600

SCALE: 1"=30'

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DUTCH BROS
4347 PORTAGE STREET N.W.
LOT 5 OF SOUTH CANTON 12 (T-11, R-9)
PART OF SOUTH CANTON 12 (T-11, R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
KENT, OH 44240
(330) 673-2400

11-17-2026

PROJECT NUMBER
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DRAINAGE MAPS

C-5.4

LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL ALL MATERIAL AND PLANTS SHOWN ON THE PLAN.
2. ALL NURSERY STOCK TO BE WELL BRANCHED, HEALTHY, FULL, PRE-INNOCULATED, AND FERTILIZED. DECIDUOUS TREES TO BE FREE OF FRESH SCARS AND BRANCHES TO A HEIGHT OF 5' ABOVE THE ROOTBALL. TRUNKS SHALL BE WRAPPED (IF NECESSARY) TO PREVENT SUN SCALD AND INSECT DAMAGE. THE LANDSCAPER SHALL REMOVE SAID WRAP AT THE PROPER TIME AS A PART OF HIS CONTRACT.
3. ALL NURSERY STOCK SHALL BE GUARANTEED FOR SIX MONTHS BEYOND NEXT FULL GROWING SEASON.
4. CLEAN FRIABLE EARTH 24" MINIMUM DEPTH INCLUDING 4" MINIMUM THICKNESS OF ORGANIC TOPSOIL IN ALL PLANTING AREAS SHALL BE PROVIDED AND GRADED BY THE GENERAL CONTRACTOR SUBJECT TO OWNER'S APPROVAL.
5. ALTERNATES MAY ONLY BE USED IN THE EVENT OF UNAVAILABILITY OF THE SELECTED SPECIE WITHIN A REASONABLE DISTANCE OR DUE TO SEASON. PROOF MAY BE REQUESTED BY THE OWNER.
6. EVERGREEN TREES SHALL NOT BE PLANTED DURING JUNE, JULY, OR AUGUST.
7. MULCH SHALL BE 3" MINIMUM THICKNESS SHREDDED HARDWOOD BARK OR AS INDICATED ON THE PLAN FOR EACH AREA. MULCH SHALL NOT CONTAIN ANY FARM OR OTHER WASTES.
8. LANDSCAPE WEED SCREEN SHALL BE USED IN ALL MULCH BEDS WITH 8" MINIMUM OVERLAPS.
9. LAWN AND PLANTING AREAS SHALL BE SEPARATED BY A 6" WIDE BLACK VINYL EDGING NAILED TO 2 x 2 x 18" TREATED STAKES @ 4' INTERVALS OR EDGED AS PER PLAN. EDGING TO HAVE 1" EXPOSURE ABOVE LAID SOD. STAKES TO BE COVERED BY MULCH.

IRRIGATION NOTES

1. ALL LAWN AND LANDSCAPE AREAS ARE TO BE IRRIGATED. CONTRACTOR TO PROVIDE A DESIGN-BUILD DESIGN FOR APPROVAL PRIOR TO INSTALLATION. AREAS TO BE SEEDED SHALL NOT BE IRRIGATED.
2. ALL IRRIGATION LATERAL AND SUPPLY LINES SHALL BE CLASS 200 PVC, SIZED FLOW VELOCITIES OF 5 FT./SEC. OR LESS.
3. PROVIDE TWO 3/4" QUICK COUPLING VALVES ON SUPPLY LINE.
4. PROVIDE AUTOMATIC DRAIN VALVES AT ALL LOW POINTS ON SUPPLY AND LATERAL LINES.
5. PROVIDE TWO PLASTIC SUPPLY LINE MANUAL DRAIN VALVES.
6. ACCEPTABLE COMPONENTS:
   a. SYSTEM CONTROLLER : HUNTER X-CORE SERIES, TORO TMC-212 SERIES, RAIN BIRD RZX SERIES
   b. ZONE CONTROL VALVES: HUNTER PGV SERIES, TORO 250/260 SERIES, RAIN BIRD DV/DVF SERIES
   c. SPRINKLER HEADS (SOD AREAS): HUNTER SRM AND PRO SPRAY SERIES, TORO 570Z AND 300 SERIES, RAIN BIRD 1800 AND 3500 SERIES.
   d. SUBSURFACE DRIP (BED AREAS): NETAFIM TECHLINE, HUNTER PLD, RAIN BIRD XFS. LATERAL AND EMITTERS SHALL BE PLACED 24" O.C.

PAVEMENT LEGEND

PROPOSED ASPHALT PAVEMENT.

PROPOSED CONCRETE PAVEMENT, PATIOS AND WALKS.

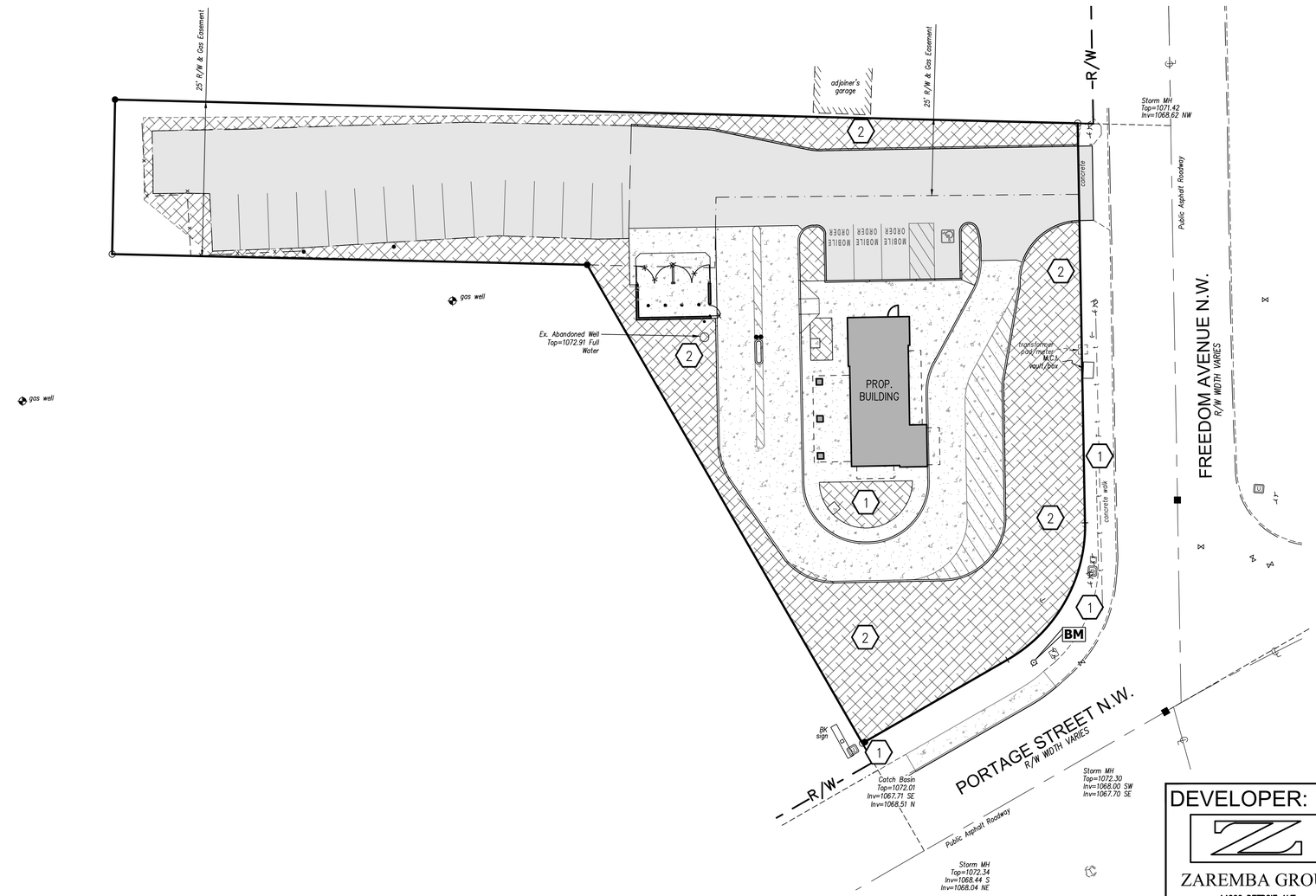
GROUND COVER LEGEND

– TOPSOIL AND HYDROSEED AREAS.

KEYED NOTES

1 – FOR ALL BAREN OR OTHERWISE DISTURBED AREAS OF THE PUBLIC RIGHT-OF-WAY, PROVIDE 4" OF TOPSOIL PER ODOT ITEM 659 – TOPSOIL AND SEED AND MULCH PER ODOT ITEM 659 – SEEDING AND MULCH, CLASS 1 (LAWN MIX)

2 – CONTRACTOR SHALL ENSURE ALL DISTURBED AND BARREN AREAS OF THE PROJECT SITE ARE COVERED WITH A MINIMUM OF 4" OF TOP SOIL PLACED PER ODOT ITEM 659 – TOPSOIL. HYDROSEED ENTIRE LAWN AREA OF PROJECT SITE USING LAWN MIX SPECIFIED ON SHEET C-6.2.



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SCALE: 1"=20'

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E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

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LANDSCAPE PLAN

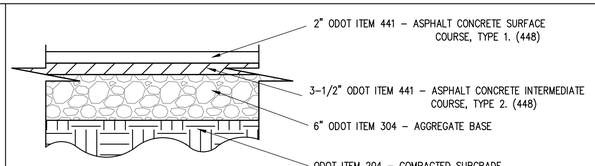
C-6.0

GENERAL NOTES

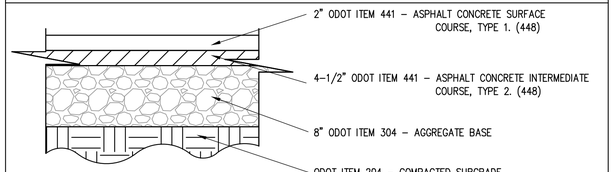
1. LOCAL GOVERNMENT REQUIREMENTS TOGETHER WITH THE LATEST EDITION OF THE STATE OF OHIO, DEPT. OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED. IF THERE ARE ANY DISCREPANCIES, THE CITY REQUIREMENTS SHALL GOVERN. ALL FIELD TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (MATERIAL COMPOSITION, MATERIAL COMPACTION, CONCRETE TESTING, ETC.).
2. ANY MODIFICATION TO THE SPECIFICATIONS OR CHANGES TO THE WORK AS SHOWN ON THESE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
3. THE CONTRACTOR AND SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.
4. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, PRIOR TO CONSTRUCTION.
6. EXISTING UTILITIES SHOWN ARE FROM BEST AVAILABLE RECORDS AND FIELD INVESTIGATION, AND ARE NOT NECESSARILY COMPLETE OR EXACT. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED CONSTRUCTION, AND SHALL MAKE ADJUSTMENTS IN ELEVATIONS TO PROVIDE SUFFICIENT CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES. THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) THREE WORKING DAYS PRIOR TO WORK.
7. ANY PROPERTY CORNER PINS OR PERMANENT SURVEY MARKINGS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A REGISTERED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
8. THE TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON STREETS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE CONTRACTOR FAILS TO KEEP THE WORK AREA CLEAN OF DEBRIS, OR FAILS TO CLEAN MUD OR DIRT OFF OF STREETS, THE CITY MAY TAKE ACTION AND ASSESS THE DEVELOPER FOR THE COSTS THAT ARE INCURRED.
9. NO NON-RUBBER TIRE VEHICLE SHALL BE MOVED ON STREETS; EXCEPTIONS MAY BE GRANTED WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. GRANTING OF EXCEPTIONS MUST BE IN WRITING AND ANY RESULTING DAMAGE MUST BE REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING MAIL SERVICE IN THE CONSTRUCTION AREA.
11. ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SAME SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS RELATED ITEMS.
12. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN THE VICINITY OF EXISTING TREES TO REMAIN, TAKING ALL MEASURES POSSIBLE TO PROTECT AND PRESERVE THEM. THE CONTRACTOR SHALL BE GOVERNED BY THE PROVISIONS OF HIS CONTRACT WITH THE OWNER.
13. ALL FIELD TILE BROKEN DURING EXCAVATION SHALL BE REPLACED TO ITS ORIGINAL CONDITION OR CONNECTED TO THE STORM SEWER SYSTEM AS DIRECTED BY THE CITY ENGINEER.
14. APPROVAL OF THESE PLANS IS CONTINGENT ON ALL EASEMENTS REQUIRED FOR THE CONSTRUCTION OF THE WORK BEING SECURED AND SUBMITTED TO THE CITY FOR RECORDING PRIOR TO COMMENCEMENT OF THE WORK, AND NO WORK WHICH REQUIRES AN EASEMENT WILL BE ALLOWED TO PROCEED UNTIL THIS HAS BEEN DONE.
15. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PART 7 CONSTRUCTION AND MAINTENANCE OPERATIONS, COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC, 25 SOUTH FRONT STREET, COLUMBUS, OHIO 43215.
16. STEADY-BURNING, TYPE "C" LIGHTS SHALL BE REQUIRED ON ALL BARRICADES DRUMS AND SIMILAR TRAFFIC DEVICES IN USE AT NIGHT. CONES ARE NOT PERMITTED TO BE USED FOR NIGHT WORK.
17. ALL TRENCHES SHALL BE BACKFILLED OR SECURELY PLATED DURING NON WORKING HOURS.
18. ACCESS TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
19. ALL AREAS WITHIN THE PUBLIC RIGHT-OF-WAY THAT ARE DISTURBED BY THIS PROJECT SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION, PER CMS ITEM 659 (SEEDING AND MULCHING) OR OTHER APPLICABLE SPECIFICATIONS.
20. AT ALL UTILITY CROSSINGS WHERE THE EXISTING UTILITY IS EXPOSED IN THE TRENCH, THE BACKFILL SHALL CONSIST OF COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH CMS ITEM 603 BETWEEN THE DEEPER AND SHALLOWER PIPE. WHERE PROPOSED UTILITIES OR SERVICES CROSS PROPOSED OR EXISTING PAVEMENT AREAS, BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH CMS ITEM 603 EXTENDING AT LEAST 3 FEET BEYOND THE BACK OF CURB OR EDGE OF PAVEMENT. COST IS TO BE INCLUDED IN THE PRICE BID FOR RELATED PIPE.
21. IN THE EVENT EXCAVATION FOR THE STREET IS FROM 0" TO 6" BELOW THAT CALLED FOR ON THE PLANS, THE CONTRACTOR SHALL REPLACE THIS EXCESS EXCAVATED MATERIAL WITH ITEM 304 AGGREGATE, AND SHALL BE PAID FOR BY THE CONTRACTOR.
22. CURB INLETS, MANHOLES, AND CATCH BASINS SHALL BE CHANNELED AS DIRECTED.
23. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY BARRICADE THE STREET IN THE VICINITY OF ALL EXPANSION JOINTS UNTIL SUCH TIME AS THE STREET IS OPEN TO TRAFFIC.
24. WHERE NECESSARY TO DISTURB PAVEMENTS OR DRIVES, THE PAVEMENT SHALL BE SAW CUT IN NEAT, STRAIGHT LINES. THE DEPTH OF SAW CUT SHALL BE AT LEAST 2 INCHES.
25. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR CONSEQUENCES OF CONSTRUCTION THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR SAFETY ON THE JOB SITE, OR FOR FAILURE BY THE CONTRACTOR TO PERFORM WORK ACCORDING TO CONTRACT DOCUMENTS.
26. THE CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY AND AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS.
27. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAT EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATER COURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS SECTIONS THAT EXISTED BEFORE CONSTRUCTION.
28. ALL SIGNS, LANDSCAPING, STRUCTURES, OR OTHER APPURTENANCES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE COST OF SUCH WORK SHALL BE PAID FOR BY THE CONTRACTOR.
29. PERMITS TO CONSTRUCT IN THE RIGHT-OF-WAY OF EXISTING STREETS MUST BE OBTAINED FROM THE CITY BEFORE COMMENCING CONSTRUCTION. WHEN OPEN-CUTTING OF EXISTING PAVEMENT IS PERMITTED, CONTROLLED DENSITY BACKFILL MAY BE USED IN PLACE OF COMPACTED GRANULAR BACKFILL. ASPHALT SURFACES SHALL BE HEAT WELDED.
30. WHEN UNKNOWN OR INCORRECTLY LOCATED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE CITY ENGINEER.
31. BEFORE RELOCATING ANY MAILBOXES, THE CONTRACTOR SHALL CONTACT THE U.S. POSTAL SERVICE AND RELOCATE MAILBOXES ACCORDING TO THE REQUIREMENTS OF THE POSTAL SERVICE.
32. ALL BENCHMARKS ARE BASED ON UNITED STATES GEOLOGICAL SURVEY (USGS) DATUM.
33. CONTRACTOR AND OWNER SHALL ENSURE FIRE DEPARTMENT ACCESS AND WATER SUPPLY TO THE TEMPORARY AND PERMANENT FACILITIES AT ALL TIMES DURING CONSTRUCTION.

PAVEMENT DETAILS

ASPHALTIC PAVEMENT

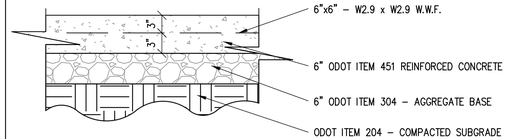


STANDARD DUTY ASPHALT DETAIL
NOT TO SCALE

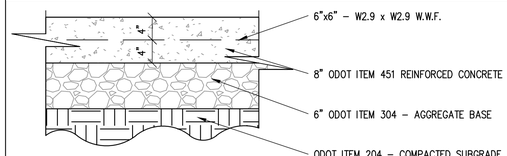


HEAVY DUTY ASPHALT DETAIL
NOT TO SCALE

CONCRETE PAVEMENT



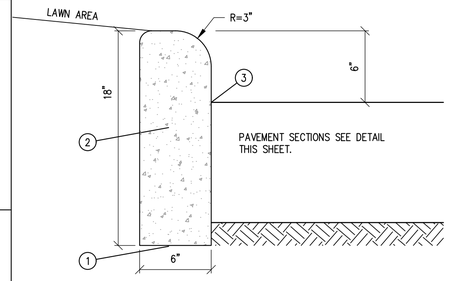
STANDARD DUTY CONCRETE DETAIL
NOT TO SCALE



HEAVY DUTY CONCRETE DETAIL
NOT TO SCALE

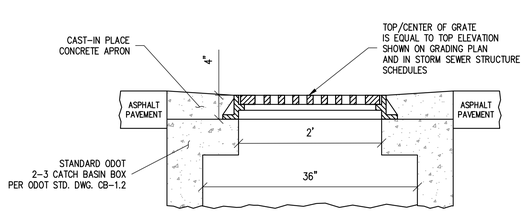
PAVEMENT DESIGN NOTES

PROPOSED PAVEMENT SECTIONS SHOWN ARE FOR REFERENCE ONLY. THE PAVEMENT BUILDUP DESIGNS WERE PREPARED BY *TERRACON, TERRACON PROJECT NO. 1000058291 DATED OCTOBER 19, 2026.*



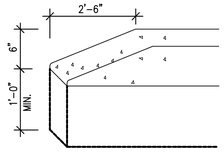
ODOT ITEM	DESCRIPTION
1 – 204	COMPACTED SUBGRADE
2 – 609	CONCRETE CURB TYPE 6 PER ODOT STD DWG BP-5.1.
3 – 1/2"	EXPANSION MATERIAL IF PAVEMENT SECTION IS CONCRETE.

6"x18" CONCRETE CURB DETAIL
NOT TO SCALE



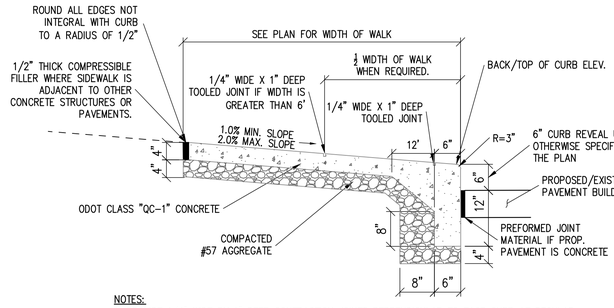
CONSTRUCT THE ODOT 2-3 CATCH BASINS PER ODOT STANDARD DRAWING CB-1.2 EXCEPT PROVIDE EAST JORDAN IRON WORKS (EJIW) FRAME AND GRATE V-5622 AND CONSTRUCT BASIN TOPS PER DETAIL ABOVE.

ODOT 2-3 CATCH BASIN MODIFIED
NOT TO SCALE



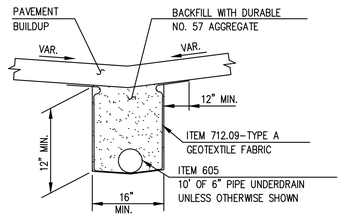
NOTES:
1. PROVIDE \" EXPANSION JOINTS AT 20'-0" O.C.
2. ALL EXPOSED SURFACES SHALL BE TROWLED W/ CURB EDGING RUBBED SMOOTH

CURB TRANSITION
NOT TO SCALE

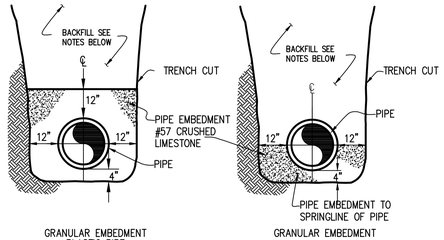


NOTES:
1. PROVIDE 1/4" WIDE BY 1" DEEP CONTRACTION JOINTS PERPENDICULAR TO FACE CURB AT REGULAR 6' SPACING. ADJUST SPACING OF JOINTS AT END OF SIDEWALK RUN TO CREATE A UNIFORM APPEARANCE IN JOINT SPACING.
2. PROVIDE SIDEWALK SURFACES WITH A TEXTURED BROOM FINISH APPLIED PERPENDICULAR TO FACE OF CURB. FINISH CURBED PORTION WITH A SMOOTH FLOAT FINISH.

INTEGRAL CONCRETE CURB AND WALK DETAIL
NOT TO SCALE

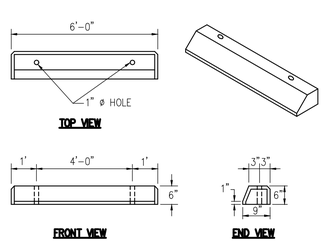


CATCH BASIN FINGER DRAIN DETAIL
NOT TO SCALE

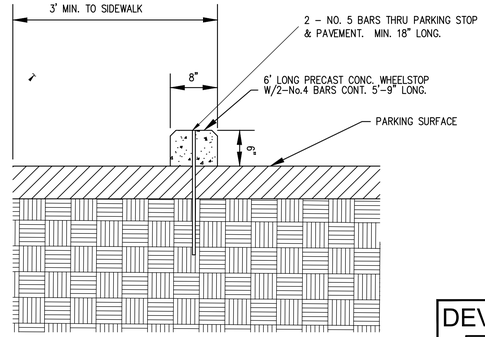


BACKFILL NOTES:
1. BACKFILL UNDER PAVEMENTS SHALL BE ODOT 304 AGGREGATE BASE UP TO THE TOP OF SUBGRADE.
2. BACKFILL UNDER NON-PAVEMENT AREAS SHALL CONFORM TO ODOT ITEM 203. MATERIAL EXCAVATED FROM TRENCHES MAY BE USED PROVIDED IT CONFORMED TO ODOT ITEM 203.

SEWER TRENCH DETAIL
NOT TO SCALE



NOTES:
1. THE TOP AND ALL EXPOSED FACE SURFACES TO 1" BELOW GUTTER LINE SHALL HAVE A SPONGE FLOAT SURFACE.
2. ALL EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER
3. PRECUTS CONCRETE CAR STOPS INCLUDE FURNISHING AND DRIVING 3/4"x 18" STEEL RODS.



CONCRETE PARKING STOP DETAIL
NOT TO SCALE

BASIS OF BEARINGS
THE BASIS FOR BEARINGS FOR THIS SURVEY IS GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD83 (2011).

BENCHMARK
TOP OPERATING NUT ON EXISTING HYDRANT LOCATED AT THE NORTHWEST CORNER OF PORTAGE STREET AND FREEDOM AVENUE.

ELEVATION = 1074.95 (NAVD88)

DEVELOPER:
ZAREMBA GROUP
14600 DETROIT AVE.
LAKEWOOD, OH 44107
(216) 221-6600

SURVEY PERFORMED BY:
CAMPBELL & ASSOCIATES, INC.
Surveying • Engineering
3485 Fortune Drive Suite 100
Akron, Ohio 44312
(330) 945-4117
www.campbellsurvey.com

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DutchBros

4347 PORTAGE STREET N.W.
NORTH CANTON, OHIO 44720
PART OF SOUTHEAST 1/4 SECTION 12 (T.11, R.9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

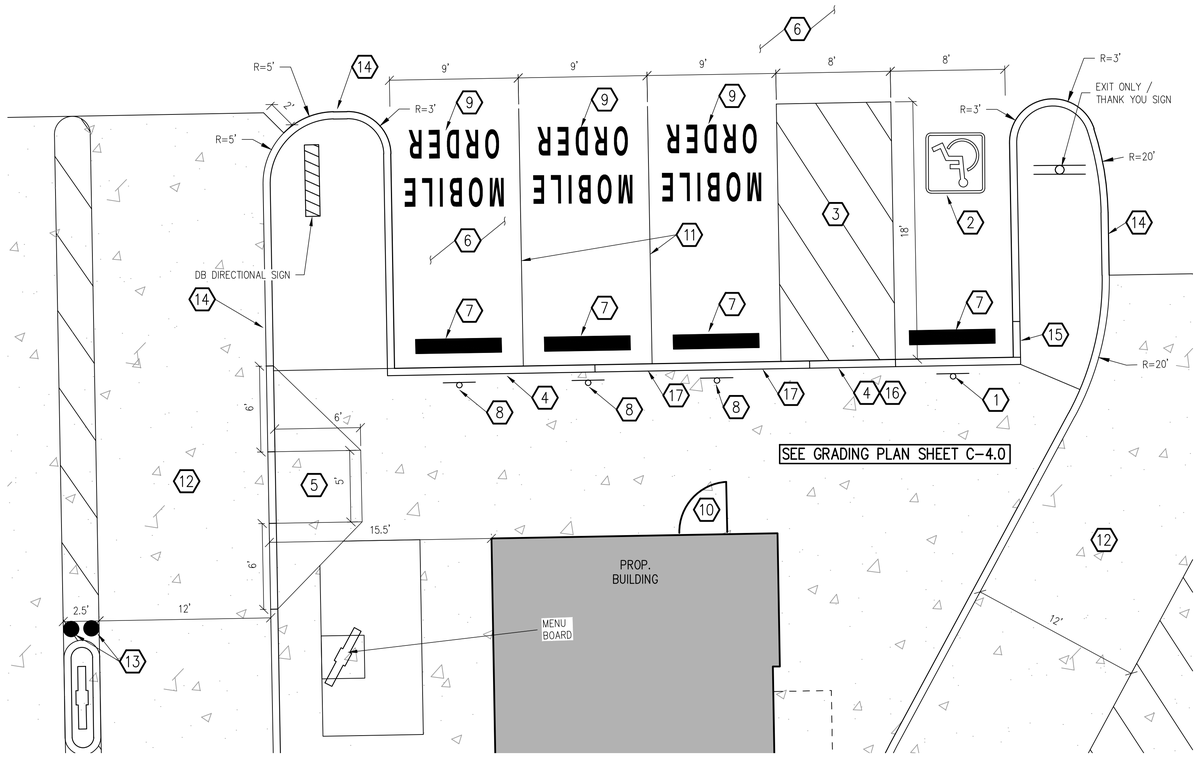
wohlwend engineering group
4547 MOGADORE ROAD, SUITE W
KENT, OH 44240
(330) 673-2400

11-17-2026

PROJECT NUMBER
20260084

CONSTRUCTION NOTES AND DETAILS

C-7.1



KEYED NOTES

1. INSTALL HANDICAP WITH VAN ACCESSIBLE SIGN. SEE DETAIL THIS SHEET. FACE OF BOLLARD TO BE 9" FROM BACK OF CURB TO ALLOW CLEARANCE FOR WALL FOUNDATION/FROST SLAB.
2. INSTALL HANDICAP PAVEMENT MARKING, PER ODOT ITEM 642. SEE DETAIL THIS SHEET.
3. PAVEMENT ISLAND STRIPING – APPLY A 4" WIDE WHITE PERIMETER STRIPE PER ODOT ITEM 642. APPLY ISLAND STRIPING THAT IS 4" WIDE WHITE PAINTED STRIPE AND 48" O.C. AT AN ANGLE OF 45 DEGREES WITH THE LONG DIMENSION OF THE ISLAND.
4. INSTALL INTEGRAL CURB AND WALK PER DETAIL SHEET C-7.1.
5. INSTALL ADA RAMP, TYPE A1, WITH CURB/WALK TAPERING FROM 6" TO 0" REVEAL. SEE DETAIL THIS SHEET AND GRADES PER GRADING PLAN SHEET C-4.0.
6. INSTALL STANDARD DUTY ASPHALT PAVEMENT WITHIN PARKING AREAS PER DETAIL SHEET C-7.1.
7. INSTALL PROPOSED CONCRETE PARKING STOP PER DETAIL SHEET C-7.1
8. INSTALL DUTCH BROS MOBILE ORDERING SIGNS PER ODOT 630.
9. PAVEMENT MARKING AS SHOWN ON PLAN PER ODOT ITEM 642, EXCEPT FOR PROVIDE COLOR AND TYPE – SHERWIN WILLIAMS PRO MAR TRAFFIC MARKING PAINT YELLOW TM5495.
10. FROST SLAB TO BE INSTALLED AT DOOR OPENING. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR SIZE AND DETAILS.
11. PAVEMENT ISLAND STRIPING – APPLY A 4" WIDE WHITE PERIMETER STRIPE PER ODOT ITEM 642. APPLY ISLAND STRIPING THAT IS 4" WIDE WHITE PAINTED STRIPE AND 48" O.C. AT AN ANGLE OF 45 DEGREES WITH THE LONG DIMENSION OF THE ISLAND.
12. INSTALL STANDARD DUTY CONCRETE PAVEMENT PER DETAIL SHEET C-7.1.
13. INSTALL PROPOSED BOLLARDS (2) PER DETAIL ON SHEET C-7.1.
14. INSTALL TYPE 6" X 18" CONCRETE CURB PER DETAIL SHEET C-7.1.
15. INSTALL CONCRETE CURB TAPER FROM 6" TO 0" IN 2.50' PER DETAIL SHEET C-7.1.
16. PAVEMENT, CURB AND WALK TO BE FLUSH.
17. TAPER PAVEMENT FROM 0" REVEAL TO 6" REVEAL IN 15'-0".

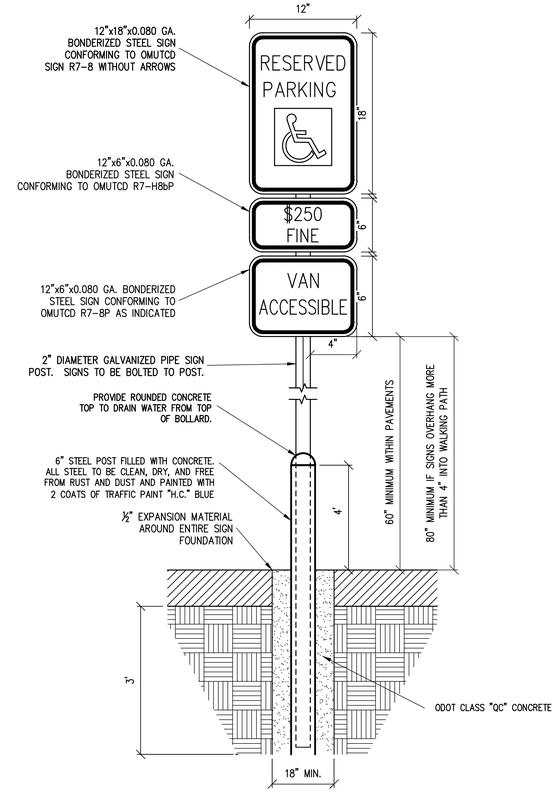
ADA COMPLIANCE NOTE

WITHIN 48 HOURS OF PLACEMENT, ALL ACCESSIBLE PARKING AREAS AND ASSOCIATED SIDEWALKS AND RAMPS MUST BE SURVEYED BY A LICENSED SURVEYOR AND PROVIDED TO OWNER/ENGINEER. ANY NONCOMPLIANT AREAS SHALL BE REWORKED AND RESURVEYED UNTIL THEY ARE COMPLIANT WITH THE CONSTRUCTION PLAN.

0' 5' 10' 15'

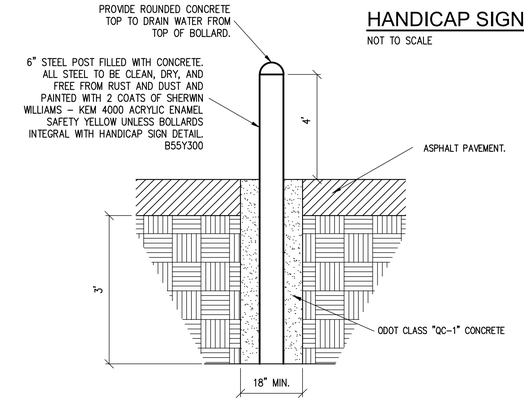
Scale: 1"=5'

ADA PARKING AREA



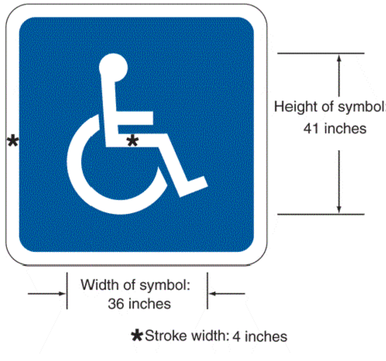
HANDICAP SIGN DETAIL

NOT TO SCALE



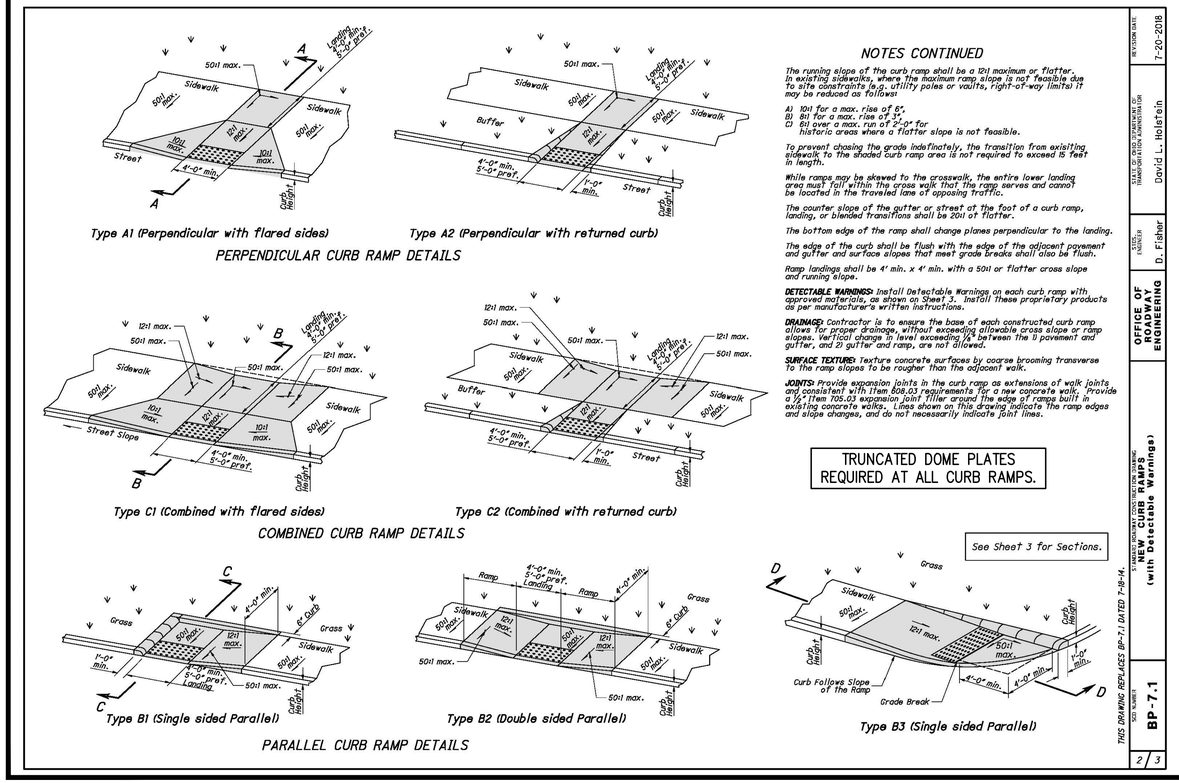
6" STANDARD BOLLARD DETAIL

NOT TO SCALE



HANDICAP PARKING SYMBOL

NOT TO SCALE



NOTES CONTINUED

The running slope of the curb ramp shall be a 12:1 maximum or flatter. In existing sidewalks, where the maximum ramp slope is not feasible due to site constraints (e.g. utility poles or vaults, right-of-way limits) it may be reduced as follows:

A) 10:1 for a max. rise of 6".
B) 8:1 for a max. rise of 3".
C) 6:1 over a max. run of 2'-0" for historic areas where a flatter slope is not feasible.

To prevent chasing the grade indefinately, the transition from exisiting sidewalk to the shaded curb ramp area is not required to exceed 15 feet in length.

While ramps may be skewed to the crosswalk, the entire lower landing area must fall within the cross walk that the ramp serves and cannot be located in the traveled lane of opposing traffic.

The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transitions shall be 20:1 or flatter.

The bottom edge of the ramp shall change planes perpendicular to the landing.

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.

Ramp landings shall be 4' min. x 4' min. with a 50:1 or flatter cross slope and running slope.

DETECTABLE WARNINGS: *Install Detectable Warnings on each curb ramp with approved materials, as shown on Sheet 3. Install these proprietary products as per manufacturer's written instructions.*

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 ¼" between the 'l' pavement and gutter, and 2l gutter and ramp, are not allowed.*

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

JOINTS: *Provide expansion joints in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. Provide a ½" Item 705.03 expansion joint filler around the edge of ramps built in existing concrete walks. Lines shown on this drawing indicate the ramp edges and slope changes, and do not necessarily indicate joint lines.*

TRUNCATED DOME PLATES REQUIRED AT ALL CURB RAMPS.

See Sheet 3 for Sections.

SHEET TITLE: NEW CURB RAMPS (with Detectable Warnings)

SHEET NUMBER: BP-7.1

THIS DRAWING REPLACES BP-7.1 DATED 7-19-18.

REVISION DATE	DESIGNED	DRAWN	CHECKED
7-20-2018	DAVID L. HOLESTEIN	D. FISHER	

OFFICE OF CHIEF ENGINEER

2 / 3

STATE OF OHIO
MICHAEL J. WOHLWEND
E-68183
REGISTERED
PROFESSIONAL ENGINEER

ISSUES AND REVISIONS

DutchBros

4347 PORTAGE STREET N.W.
NEW DUTCH BROS DRIVE-THRU
PART OF SOUTHEAST QUARTER, TOWNSHIP 12 (T.11 R-9)
JACKSON TOWNSHIP, STARK COUNTY, OHIO

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CONSTRUCTION NOTES AND DETAILS

C-7.2