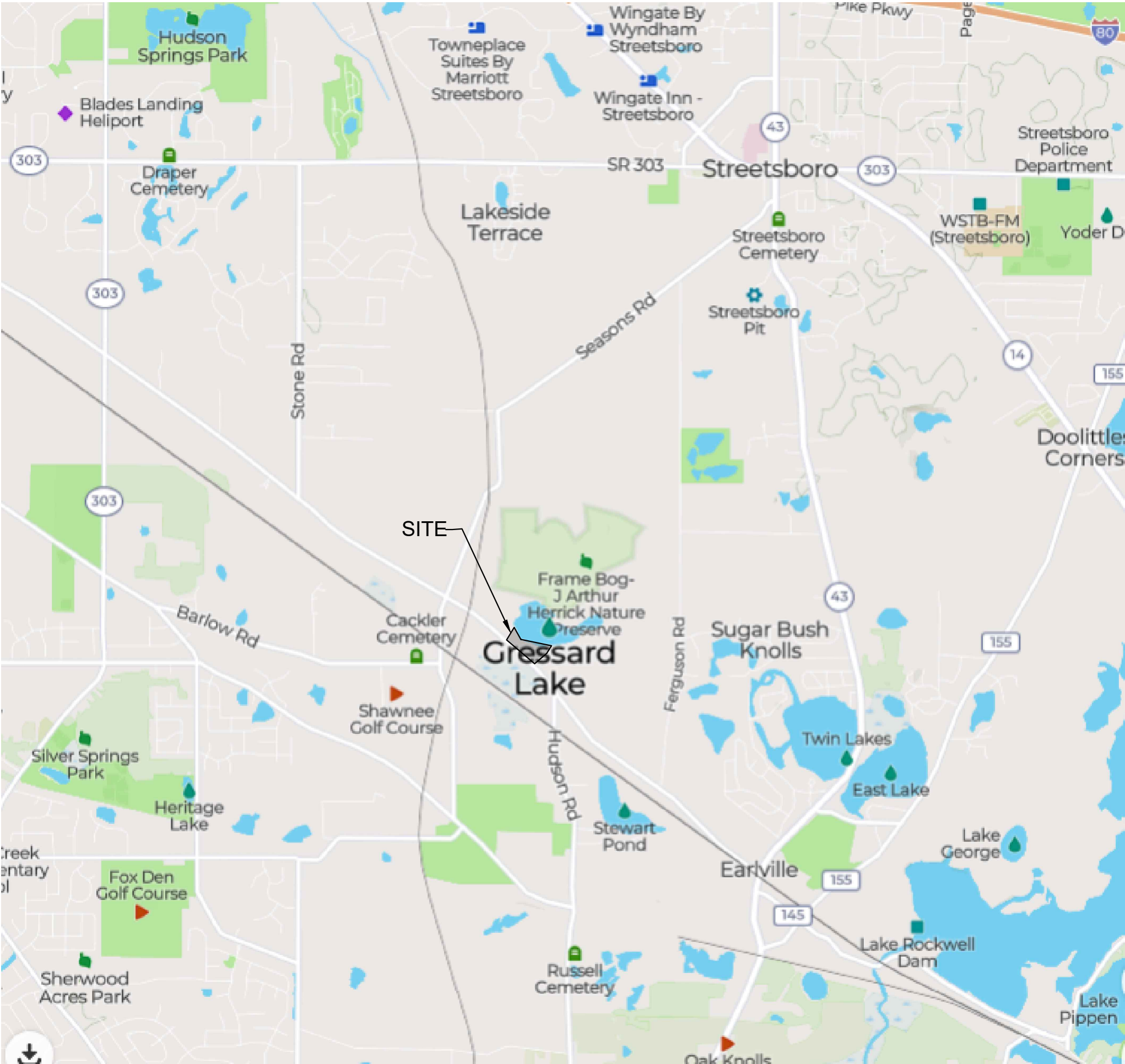




TRAIL LAKE PARK PARKING LOT AND DRIVE STREETSBORO, OHIO



VICINITY MAP
- NO SCALE

EXECUTIVE DIRECTOR: CHRISTINE CRAYCROFT

PARK COMMISSIONERS:
SCOTT McKINNEY
ALLAN ORASHAN
THOMAS HRDY
CHARLES ENGELHART

APPROVED _____
DATE _____ JOHN H. CIESZKOWSKI, JR., AICP
PLANNING DIRECTOR

APPROVED _____
DATE _____ JOSEPH CIUNI, PE
STREETSBORO ENGINEER

INDEX OF SHEETS

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k

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ENGINEERING

3135 EUCLID AVENUE
CLEVELAND, OH 44115

P 216.391.3700
W karpinskieng.com

STATE OF OHIO
PROFESSIONAL ENGINEERS
CHRISTOPHER J. BEDNAR
E-68297
9/06/2019

PROJECT NAME		
TRAIL LAKE PARK PARKING LOT AND DRIVE		
CLIENT NAME		
PORTAGE PARK DISTRICT		
1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019
REV. NO.	DESCRIPTION	DATE
PROJECT NO: 20190070		
DRAWN BY: CDG		
APPROVED BY: CJB		
DATE: 09/06/2019		
SCALE:	NTS	
SHEET TITLE		
COVER SHEET		
SHEET NUMBER		
C1.00		

OHIO
Utilities Protection
SERVICE

Click, Call or Tap Before You Dig
TOLL FREE
1-(800)-362-2764

1.

SCOPE OF WORK

THE FOLLOWING IS INTENDED TO CONVEY A GENERAL DESCRIPTION OF THE WORK TO BE PERFORMED FOR THIS PROJECT:

THE CONTRACTOR'S RESPONSIBILITIES INCLUDE, BUT ARE NOT LIMITED TO, CONSTRUCTION PROCEDURES, MATERIALS, INSTALLATION SEQUENCE, AND COORDINATION WITH THE OWNER.

THE CONTRACTOR SHALL SECURE AND PAY FOR ANY AND ALL LICENSES, GOVERNMENT FEES, AND PERMITS THAT MAY BE REQUIRED TO PROPERLY EXECUTE AND COMPLETE THE WORK. COMPLY WITH ALL APPLICABLE CODES, RULES, ORDINANCES AND OTHER LEGAL REQUIREMENTS.

CONTRACTOR SHALL IMMEDIATELY LOCATE ALL REFERENCE POINTS, LAYOUT WORK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND OTHER WORK TO BE EXECUTED UNDER THE CONTRACT. VERIFY ALL FIGURES SHOWN ON THE PLANS, VERIFY ALL DIMENSIONS OF ANY EXISTING AND NEW WORK, BE RESPONSIBLE FOR THEIR ACCURACY AND SUBMIT ANY DIFFERENCES FOUND TO THE OWNER BEFORE PROCEEDING WITH THE WORK, NO EXTRA COMPENSATION WILL BE PERMITTED BECAUSE OF DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND MEASUREMENTS INDICATED ON THE DRAWINGS.
2.

STANDARDS & SPECIFICATIONS

CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND / OR MATERIAL INSIDE OR OUTSIDE CONTRACT LIMIT / PROPERTY LINE DUE TO CONSTRUCTION. ALL WORK MUST BE IN ACCORDANCE WITH LOCAL AND / OR STATE CODES AND REGULATIONS. CONTRACTOR IS TO COMPLY WITH ODOT ITEM 107.10. WORK IS TO BE SATISFACTORY TO THE PROPERTY OWNER.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS OF THE CITY, AND THE LATEST EDITION OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. IN THE CASE OF A CONFLICT BETWEEN CITY AND ODOT REQUIREMENTS, THE CITY REQUIREMENTS WILL TAKE PRECEDENCE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3.

PLAN DISCREPANCIES

ANY DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY SO THAT APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND / OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION.

FAILURE BY THE CONTRACTOR TO VERIFY AND / OR DETERMINE EXISTING INFORMATION AS INDICATED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.
4.

PLAN MODIFICATION

ANY MODIFICATIONS TO THE NOTES, OR CHANGES TO THE WORK AS SHOWN ON THESE PLANS MUST HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
5.

SAFETY

IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF THE RESIDENTS (INCLUDING EMPLOYEES), WORKERS, GENERAL PUBLIC AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

THE CONTRACTOR SHALL PROPERLY SUPPORT AND / OR MAINTAIN ALL EXCAVATIONS PER. APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL OSHA REGULATIONS. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER OF THE PROJECT'S ASSIGNED "COMPETENT PERSON" IN OSHA EXCAVATION STANDARDS.

PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES.

THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
6.

BASE MAPPING

SURVEY INFORMATION HAS BEEN PROVIDED BY DEMPSEY SURVEYING IN JUNE 2019. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR. BENCHMARKS SHOWN ON PLAN ESTABLISHED BY OR FOUND BY DEMPSEY SURVEYING. CONDITION OF BENCHMARK MUST BE VERIFIED PRIOR TO CONSTRUCTION.
7.

EXISTING UTILITIES

VIEW THE SITE AND COORDINATE WITH THE OWNER REGARDING LOCATION OF EXISTING FACILITIES AND ANY POSSIBLE UTILITY SERVICE INTERRUPTION OR RELOCATION. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE, BUT ARE NOT LIMITED TO, THE INVESTIGATION, VERIFICATION OF EXISTING UTILITY DIMENSIONS AND LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT.

THE CONTRACTOR SHALL NOTIFY THE OHIO UTILITY PROTECTION SERVICE (OUPS) AT 1-800-362-2764, THE CITY ENGINEER, AND ALL PRIVATE UTILITY OWNERS A MINIMUM OF 48 HOURS PRIOR TO ANY EARTH DISTURBING ACTIVITY.

ALL UTILITY INFORMATION SHOWN ON THESE PLANS IS BASED UPON THE SURVEY COMPLETED BY DEMPSEY SURVEYING, AND RECORD DRAWINGS, AND IS PROVIDED AS A REFERENCE ONLY. IT IS BELIEVED THAT THESE LOCATIONS ARE ESSENTIALLY CORRECT. HOWEVER, THE OWNER AND ENGINEER DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THESE EXISTING UTILITIES. CONTRACTOR MAY DIG TEST PITS AT THEIR OWN EXPENSE.
8.

EXISTING MONUMENTATION

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS AND / OR ANY TYPE OF LAND MONUMENT. ALL MONUMENTS IN THE PROXIMITY OF THE WORK SHALL BE REFERENCED. THE CONTRACTOR SHALL REPLACE / RESET ANY DISTURBED OR DAMAGED MONUMENTS, AND SHALL FURNISH A CERTIFICATION BY A REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED TO THEIR ORIGINAL STATE.
9.

DEWATERING OPERATIONS

WHEN DEEMED NECESSARY, THE CONTRACTOR MAY PLAN AND INSTALL DEWATERING EQUIPMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND PLANS FOR THE INSTALLATION AND SUBSEQUENT REMOVAL OF DEWATERING EQUIPMENT AS MAY BE NECESSARY PER STATE AND LOCAL GOVERNING AGENCIES.
10.

INSPECTION

ALL WORK REQUIRED FOR THIS IMPROVEMENT PLAN SHALL BE SUBJECT TO INSPECTION BY THE CITY OR THEIR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL GIVE A 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY AND THE OWNER INFORMED OF HIS / HER CONSTRUCTION SCHEDULE. NO WORK SHALL BE PERFORMED AND / OR BURIED UNLESS AN AUTHORIZED INSPECTOR IS PRESENT.
11.

CONSTRUCTION NOISE

CONSTRUCTION NOISE ASSOCIATED WITH ANY IMPROVEMENT PROJECT, SHALL BE LIMITED TO LEVELS COMMENSURABLE WITH ADJOINING LAND AND THEIR ASSOCIATED USAGE AS DETERMINED BY THE CITY ENGINEER, IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 P.M. AND 8:00 A.M., UNLESS AUTHORIZED BY THE OWNER AND CITY ENGINEER.

CONSTRUCTION HOURS AND ACCEPTABLE NOISE LEVELS ARE TO BE APPROVED BY THE OWNER.
12.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE OWNER AND / OR CITY ENGINEER. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL.
13.

MAINTENANCE OF TRAFFIC

THE CONTRACTOR IS TO MAINTAIN ACCESS ALONG RAVENNA ROAD AT ALL TIMES. THE CONTRACTOR MUST SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE OWNER AND CITY (IF APPLICABLE) FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

USE SIGNS, BARRICADES, FLAGMEN OR GUARDS AS REQUIRED DURING CONSTRUCTION ACTIVITIES TO ENSURE THE SAFETY FOR ALL VEHICULAR AND PEDESTRIAN TRAFFIC. NO UNMANNED EXCAVATION SHALL BE LEFT UNPROTECTED. ALL TEMPORARY TRAFFIC CONTROL / FLAGGING ARE TO BE IN ACCORDANCE WITH ODOT ITEM 614, AS WELL AS OHIO REVISED CODE SECTION 4571.09.
14.

DIMENSION

ALL DIMENSIONS ARE TO EDGE OF PAVEMENT, FACE OF CURB, AND FACE OF BUILDING, UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REGULATIONS AND RELATIONS TO OTHER WORK BEFORE FABRICATION AND / OR INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT OF WORK.
15.

CONSTRUCTION AREA

CONFINE OPERATIONS TO AREAS BEING CONSTRUCTED OR REPAIRED. DO NOT UNREASONABLY ENCUMBER THE SITE WITH MATERIALS OR EQUIPMENT. COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER.

TAKE ALL PRECAUTIONS TO PREVENT INTERFERENCE WITH NORMAL OPERATIONS OF THE OWNER. DO NOT BLOCK OR INTERFERE WITH REQUIRED LEGAL EXITING.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER THAT LOCAL TRAFFIC SHALL HAVE ACCESS THROUGHOUT THE PROJECT IN A MANNER APPROVED BY THE CITY ENGINEER.

NO TRENCH OR EXCAVATION SHALL BE LEFT OPEN OVERNIGHT. OPEN AREAS ARE TO BE BACKFILLED OR STEEL PLATED. IN CASE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH SHALL BE BACKFILLED OR STEEL PLATED AT THE DIRECTION OF THE ENGINEER OR THE AUTHORITY HAVING JURISDICTION NO TRENCH MAY BE BACKFILLED WITHOUT INSTALLED UTILITIES BEING REVIEWED BY ASSOCIATED INSPECTOR(S).

THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE SITE CLEAN AT ALL TIMES. TAKE RESPONSIBILITY FOR FINAL CLEANING, AND REMOVAL OF ALL TOOLS, EQUIPMENT AND SURPLUS MATERIALS FROM THE SITE AT COMPLETION OF THE WORK. DO NOT STOCKPILE ANY EXCESS CUT MATERIAL THAT IS NOT TO BE USED FOR ON-SITE FILL. HAUL AWAY AND PROPERLY DISPOSE OF ALL EXCESS CUT MATERIAL AT NO ADDITIONAL EXPENSE TO THE OWNER.
16.

GENERAL

THE CONTRACTOR SHALL FURNISH A CERTIFICATE FROM A REGISTERED PROFESSIONAL SURVEYOR STATING THAT ALL HORIZONTAL AND VERTICAL CONTROL MONUMENTS AFFECTED BY THE PROJECT WERE REMOVED AND REPLACED TO THEIR ORIGINAL REFERENCE LOCATIONS AND ELEVATIONS.

ALL ROAD SURFACES, UTILITIES, BUILDINGS, STRUCTURES, SITE CONDITIONS, OR RIGHT-OF-WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT ARE TO BE RESTORED COMPLETELY TO THE BEFORE CONSTRUCTION CONDITION. ALL ITEMS ARE INCLUDED IN THE PAY ITEMS.

ALL EXISTING SITE PAVEMENT MATERIAL REMOVED AS PART OF THIS IMPROVEMENT SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR.

ALL DISTURBED SIGNS, GUARDRAIL, MAIL AND / OR PAPER BOXES, DRIVES AND DRIVE CULVERTS SHALL BE REPAIRED AND / OR REPLACED AS DIRECTED BY THE ENGINEER.

ALL DISTURBED AND / OR DAMAGED STORM SEWER PIPES, STORM SEWER APPURTENANCES, PAVEMENTS, BERMS AND DITCHES SHALL BE REPAIRED AND / OR REPLACED AS DIRECTED BY THE ENGINEER.

ANY DEFECTS IN CONSTRUCTION INCLUDING MATERIALS OR WORKMANSHIP SHALL BE REPLACED OR CORRECTED BY REMOVAL AND REPLACEMENT OR OTHER APPROVED METHOD PRIOR TO ACCEPTANCE BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.

THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT AND PERFORM SUB-GRADE PREPARATION WORK ACCORDING TO THE GEOTECHNICAL ENGINEER'S REQUIREMENTS AND FIELD DIRECTION. ACTUAL FIELD CONDITIONS MAY REQUIRE DECISIONS ON MATERIAL HANDLING AND USAGE. THE CONTRACTOR SHALL CONTINUALLY MONITOR AND MAINTAIN OVERALL SITE BALANCE AND COORDINATE ANY REVISIONS WITH THE OWNER AND ENGINEER. ANY EXCESS TOPSOIL OR ORGANIC MATERIAL MAY BE SPOILED ON-SITE IF APPROVED BY THE OWNER.

BEFORE ACCEPTANCE OF THE SUB-GRADE BY THE ENGINEER, PROOF-ROLLING SHALL BE REQUIRED ON ALL AREAS TO BE PAVED PER ODOT ITEM 204.06 CMS (LATEST EDITION). IN ADDITION, FOR ANY FILL IN EXCESS OF TWO (2) FEET, NUCLEAR COMPACTION TESTS SHALL BE PERFORMED BY AN APPROVED ODOT COMPANY AS PER ODOT ITEM 203. THESE TESTS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY PAVEMENT CONSTRUCTION.

FOR ODOT ITEMS 301 - ASPHALT CONCRETE BASE, 304 - AGGREGATE BASE, 441 - ASPHALT CONCRETE, 451 - REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, AND 452 - NON-REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A JOB MIX FORMULA FOR REVIEW AND APPROVAL PRIOR TO THE PRE-CONSTRUCTION MEETING. ALL MATERIALS USED MUST BE OBTAINED FROM A SOURCE APPROVED BY ODOT.

THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO PERFORM THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS.

EXISTING CONDITIONS NOTES

UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER KARPINSKI ENGINEERING OR DEMPSEY SURVEYING NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION BY CALLING 811.

CIVIL LINE TYPE LEGEND		
DESCRIPTION	EXISTING	PROPOSED
APPROXIMATE LIMIT OF CONST.	— — LOCN — —	— — LOCN — —
CABLE TELEVISION (UG)	— — CATV — —	— — CATV — —
CENTER LINE	— — ☿ — —	— — ☿ — —
COMBINATION SEWER LINE	— — COMB — —	— — COMB — —
COMMUNICATION LINE (UG)	— — COMM — —	— — COMM — —
CONTOUR (MAJOR)	— — XXX — —	— — XXX — —
CONTOUR (MINOR)	— — XXX — —	— — XXX — —
FENCE	— — X — —	— — X — —
FILTER SOCK	— — FS — —	— — FS — —
FIRE LINE	— — F — —	— — F — —
FORCE MAIN	— — FM — —	— — FM — —
GAS LINE	— — G — —	— — G — —
IRRIGATION	— — IRRG — —	— — IRRG — —
ORANGE CONSTRUCTION FENCE	— — OCF — —	— — OCF — —
POWER LINE (OVH)	— — OH — —	— — OH — —
POWER LINE (UG)	— — E — —	— — E — —
PROPERTY LINE	— — ☿ — —	— — ☿ — —
RIGHT-OF-WAY LINE	— — R/W — —	— — R / W — —
LEASE LINE	— — — —	— — LL — —
SILT FENCE	— — SF — —	— — SF — —
STEAM LINE	— — STEAM — —	— — STEAM — —
STORM LINE	— — ST — —	— — ST — —
SANITARY LINE	— — SAN — —	— — SAN — —
WATER LINE	— — W — —	— — W — —

CIVIL SYMBOL LEGEND		
DESCRIPTION	EXISTING	PROPOSED
BUILDING		
SIGN		
CURB STOP		
TREE OR SHRUB		
PIPE BOLLARD		
GAS LINE MARKER	G.L.M.	
MONITORING WELL		
GAS METER		
GAS VALVE		
WOOD LIGHT POLE		
POWER POLE WITH LIGHT		
POWER POLE		
PARKING LOT / PEDESTRIAN LIGHT POLE		
TELEPHONE POLE		
GUY WIRE		
TRAFFIC SIGNAL POLE		
HEADWALL / ENDWALL		
SANITARY & STORM MANHOLE		
CATCH BASIN / CURB INLET		
CLEANOUT		
FIRE HYDRANT		
POST INDICATOR VALVE		
FIRE DEPARTMENT CONNECTION (FDC)		
WATER CURB STOP		
WATER METER VAULT		
WATER VALVE		
TRAFFIC MANHOLE		
ELECTRIC TRANSFORMER		

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3135 EUCLID AVENUE

CLEVELAND, OH 44115

P 216.391.3700

W karpinskieng.com

STATE OF OHIO

PROFESSIONAL ENGINEERS

CHRISTOPHER J. BEDNAR

E-68297

9/06/2019

PROJECT NAME

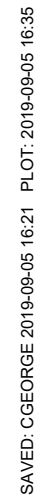
TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME

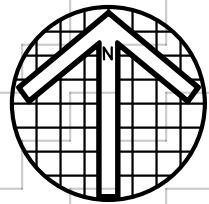
PORTAGE

PARK DISTRICT

1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019
REV. NO.	DESCRIPTION	DATE
PROJECT NO: 20190070		
DRAWN BY: CDG		
APPROVED BY: CJB		
DATE: 09/06/2019		
SCALE: NTS		
SHEET TITLE		
SITE GENERAL NOTES		
SHEET NUMBER		
C1.01		



CONTRACTOR SHALL STORE ALL EXTRA EXCAVATED MATERIAL TO REMAIN ON SITE. FINAL LOCATION TO BE DETERMINED BY OWNER DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE PERMANENT SEEDING ON ALL STOCKPILES.



SCALE: 1" = 30'-0"

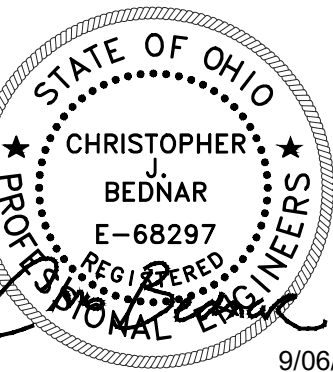
GRESSARD LAKE

APPROXIMATE LOCATION OF GAS LINE BASED OFF MARKERS FOUND IN THE FIELD. PLANS NOT AVAILABLE FOR DISTRIBUTION BY DIVERSIFIED OIL & GAS.

LEGEND

- 1066.18
1066.18
1067.40
PROPOSED SPOT EL
EXISTING SPOT EL
- 1063
PROPOSED SPOT EL
- 1063
EXISTING CONTOUR
- 1072
PROPOSED CONTOUR

TAPER DEPTH OF 304 BASE FROM 8" AT EDGE OF HEAVY DUTY PAVEMENT TO STANDARD 6" DEPTH AT EDGE OF PARKING LOT TO ALLOW FOR POSITIVE DRAINAGE OF BASE COURSE TO NEW UNDERDRAIN.



PROJECT NAME

TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME



1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019

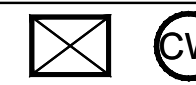
REV. NO.	DESCRIPTION	DATE
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PROJECT NO: 20190070
DRAWN BY: CDG
APPROVED BY: CJB
DATE: 09/06/2019
SCALE: 1" = 30'
SHEET TITLE

SITE GRADING PLAN

SHEET NUMBER

C1.03

SWPPP LEGEND		BMPs UTILIZED ON THIS PROJECT "X"
	IP STORM DRAIN INLET PROTECTION	X
	TS TEMPORARY SEEDING	X
	PS PERMANENT SEEDING	X
	DC DUST CONTROL	X
	CW CONCRETE WASHOUT	X
X 	CF 8'-0" CHAIN-LINK FENCE	
FS 	FS FILTER SOCK	X
SF 	SF SILT FENCE	X
	CD CONSTRUCTION DEBRIS DUMPSTER	X
	FC FUEL CONTAINMENT DYKE	X
	CE CONSTRUCTION ENTRANCE MAY USE EX ASPHALT IN PLACE	X

SITE LOCATION

CITY: STREETSBORO

COUNTY: PORTAGE

STATE: OHIO

LATITUDE: 41° 12' 18"

LONGITUDE: 81° 22' 24"

SITE ADDRESS: SITE ADDRESS:

OWNER ADDRESS: PORTAGE PARK DISTRICT
705 OAKWOOD STREETM SUITE G-4
RAVENNA, OHIO 44266

CONTACT: CHRISTINE CRAYCROFT

PHONE: 330 297-7728

SITE DESCRIPTION

(MARK ONE)

SUBDIVISION () _____

COMMERCIAL () _____

RESIDENTIAL () _____

P.U.D. () _____

ROADWAY () _____

OTHER (X) PARK

TOTAL SITE AREA 130 ACRES

DISTURBED AREA 1.87 ACRES

PRE DEVELOPMENT PERVIOUS AREA 1.87 ACRES

PRE DEVELOPMENT IMPERVIOUS AREA 0 ACRES

TOTAL PRE DEVELOPMENT AREA 1.87 ACRES

PRE DEVELOPMENT RUNOFF COEFFICIENT 86 & 90

POST DEVELOPMENT PERVIOUS AREA 1.10 ACRES

POST DEVELOPMENT IMPERVIOUS AREA 0.77 ACRES

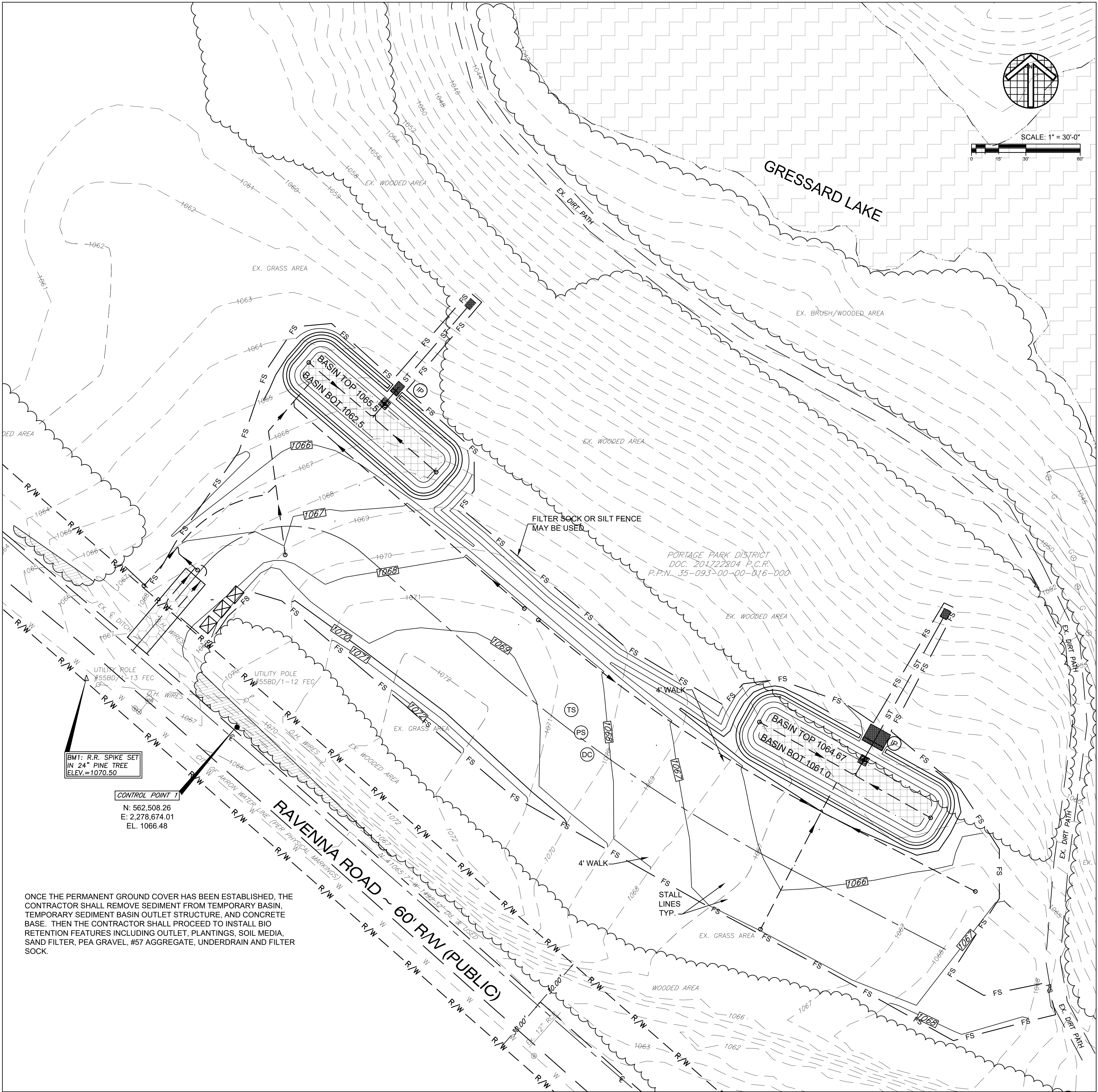
TOTAL POST DEVELOPMENT AREA 1.87 ACRES

POST DEVELOPMENT RUNOFF COEFFICIENT 88 & 90

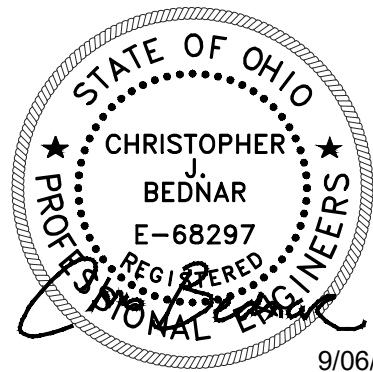
SOILS

SOILS ELLSWORTH SILT LOAM (EIC2)

HYDRAULIC GROUP C PREDEVELOPMENT D POST CONSTRUCTION



ONCE THE PERMANENT GROUND COVER HAS BEEN ESTABLISHED, THE CONTRACTOR SHALL REMOVE SEDIMENT FROM TEMPORARY BASIN, TEMPORARY SEDIMENT BASIN OUTLET STRUCTURE, AND CONCRETE BASE. THEN THE CONTRACTOR SHALL PROCEED TO INSTALL BIO RETENTION FEATURES INCLUDING OUTLET, PLANTINGS, SOIL MEDIA, SAND FILTER, PEA GRAVEL, #57 AGGREGATE, UNDERDRAIN AND FILTER SOCK.



PROJECT NAME

TRAIL LAKE PARK PARKING LOT AND DRIVE

CLIENT NAME



1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019

REV. NO.	DESCRIPTION	DATE
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PROJECT NO: 20190070
DRAWN BY: CDG
APPROVED BY: CJB
DATE: 09/06/2019

SCALE: 1" = 30'

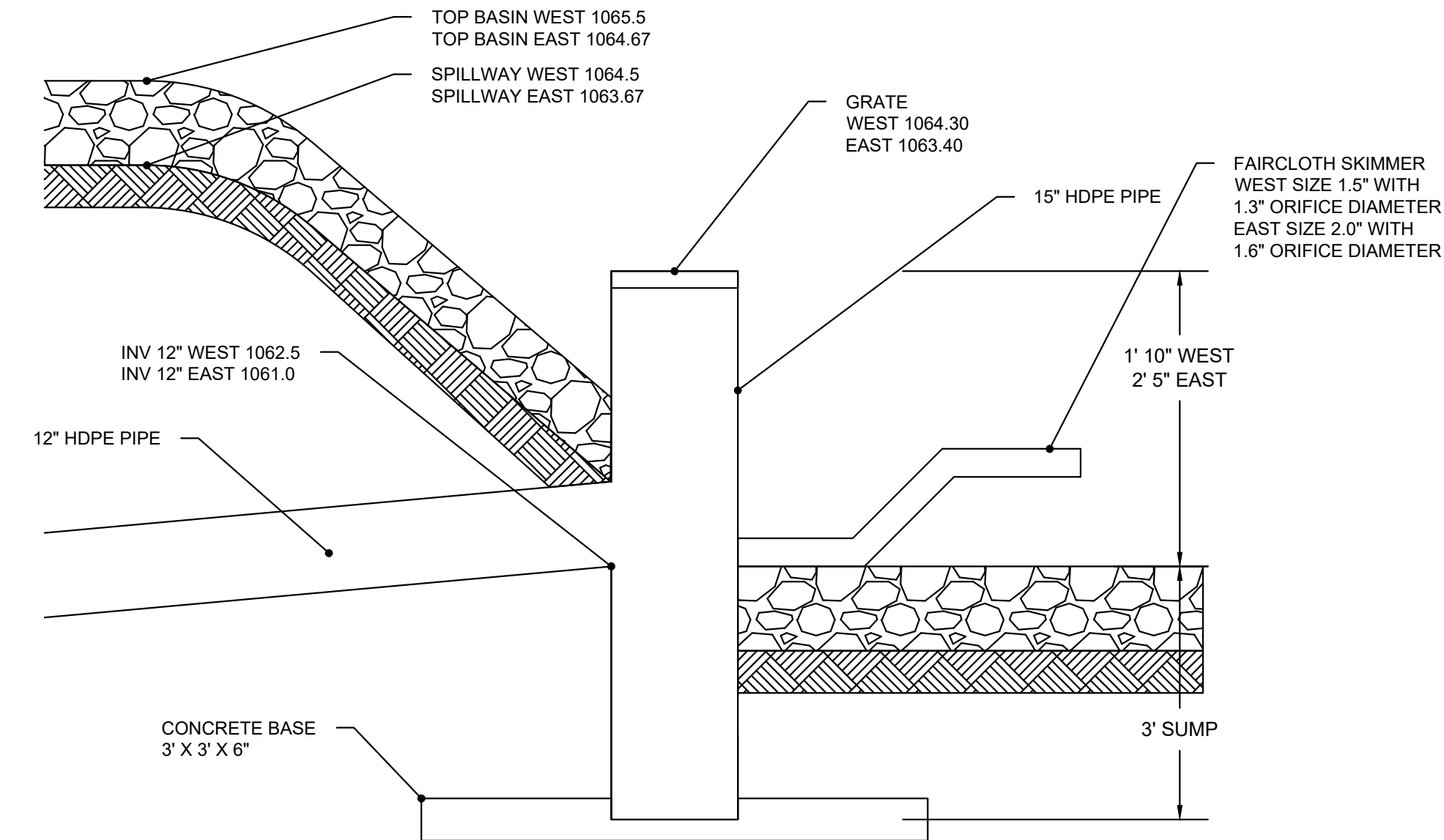
SHEET TITLE

STORM WATER POLLUTION PREVENTION PLAN

SHEET NUMBER

C1.04

ONCE THE PERMANENT GROUND COVER HAS BEEN ESTABLISHED, THE CONTRACTOR SHALL REMOVE SEDIMENT FROM TEMPORARY BASIN, TEMPORARY SEDIMENT BASIN OUTLET STRUCTURE, AND CONCRETE BASE. THEN THE CONTRACTOR SHALL PROCEED TO INSTALL BIO RETENTION FEATURES INCLUDING OUTLET, SOIL MEDIA, SAND FILTER, PEA GRAVEL, #57 AGGREGATE, UNDERDRAIN AND FILTER SOCK.

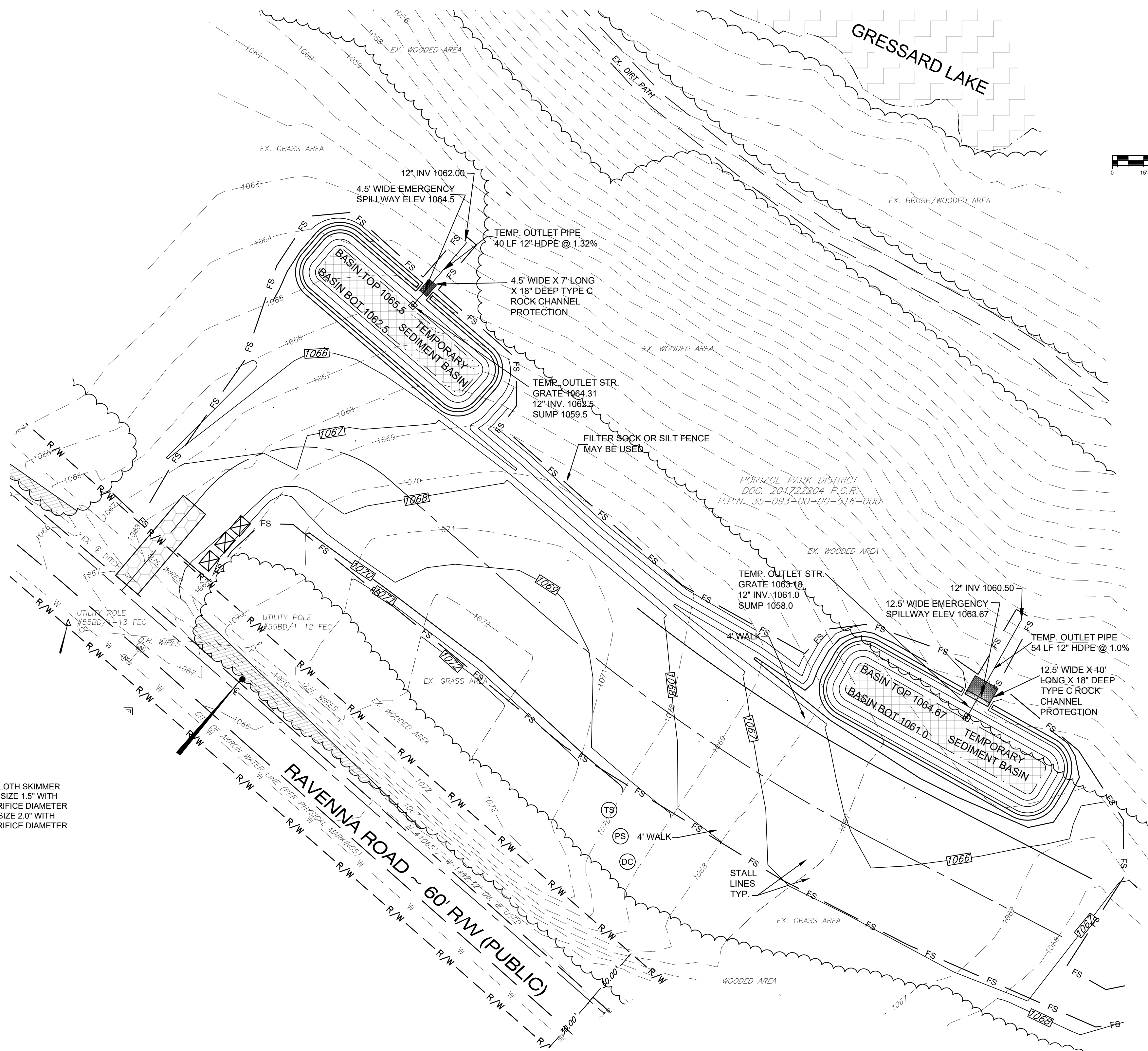


TEMPORARY SEDIMENT BASIN OUTLET STRUCTURE

SCALE: NONE

NOTES:

- CORE PROPOSED INVERT INTO STRUCTURE AND THEN SEAL AROUND THE OPENING ON THE INTERIOR AND EXTERIOR OF THE STRUCTURE.
- CONTRACTOR SHALL REMOVE BASIN SEDIMENT, TEMPORARY SEDIMENT OUTLET STRUCTURE AND CONCRETE BASE, ONCE THE PERMANENT GROUND COVERING HAS BEEN ESTABLISHED. ONLY THEN SHALL THE CONTRACTOR PROCEED TO INSTALL BIO RETENTION FEATURES INCLUDING OUTLET, PLANTINGS, SOIL MEDIA, SAND FILTER, PEA GRAVEL, #57 STONE, UNDERDRAIN AND FILTER SOCK.



TEMPORARY SEDIMENT POND VOLUME

SEDIMENT STORAGE VOLUME

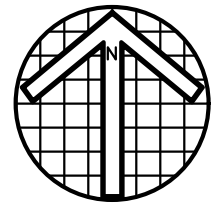
DISTURBED AREA = 0.71 ACRES WEST BASIN 1.16 ACRES EAST BASIN

SEDIMENT STORAGE WEST = 37 CY/AC X 0.71 AC = 26.3 CY. OR 709 C.F.
SEDIMENT STORAGE EAST = 37 CY/AC X 1.16 AC = 42.9 CY. OR 1159 C.F.

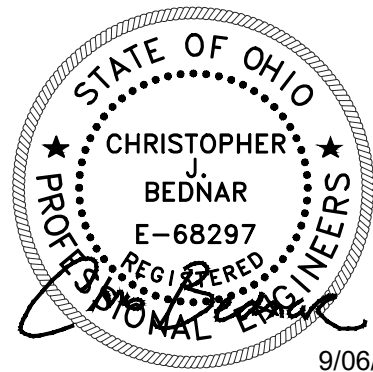
DEWATERING ZONE VOLUME

DEWATERING VOLUME WEST = 67 CY/AC X 0.71 AC = 47.6 C.Y. OR 1,284 C.F.
DEWATERING VOLUME EAST = 67 CY/AC X 1.16 AC = 77.7 C.Y. OR 2,098 C.F.

TOTAL REQUIRED VOLUME WEST = 1,284 C.F. / 3,065 C.F. PROVIDED
TOTAL REQUIRED VOLUME EAST = 2,098 C.F. / 5,740 C.F. PROVIDED



SCALE: 1" = 30'-0"



PROJECT NAME

TRAIL LAKE PARK PARKING LOT AND DRIVE

CLIENT NAME



1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019

REV. NO.	DESCRIPTION	DATE
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PROJECT NO: 20190070

DRAWN BY: CDG

APPROVED BY: CJB

DATE: 09/06/2019

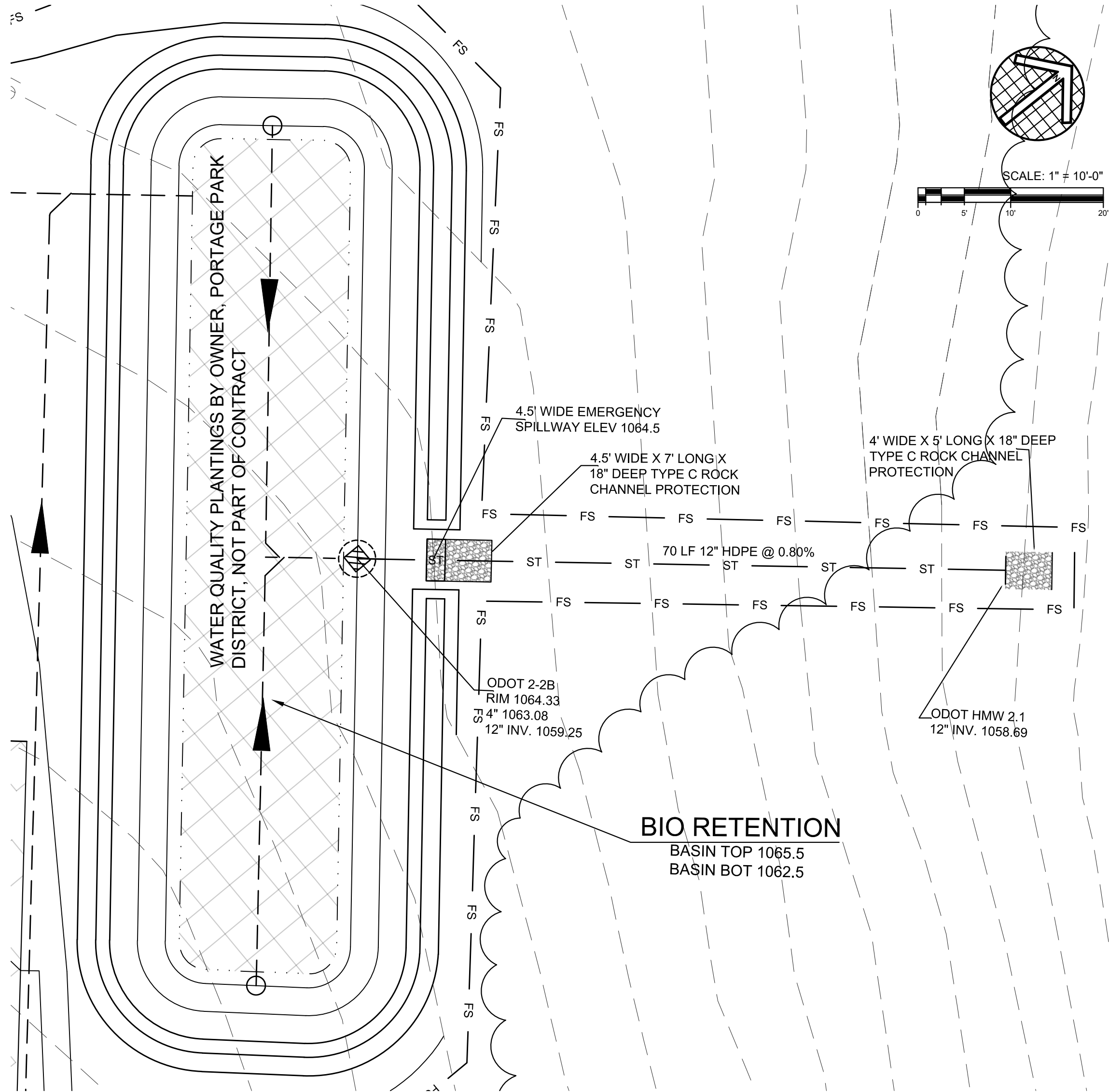
SCALE: 1" = 30'

SHEET TITLE

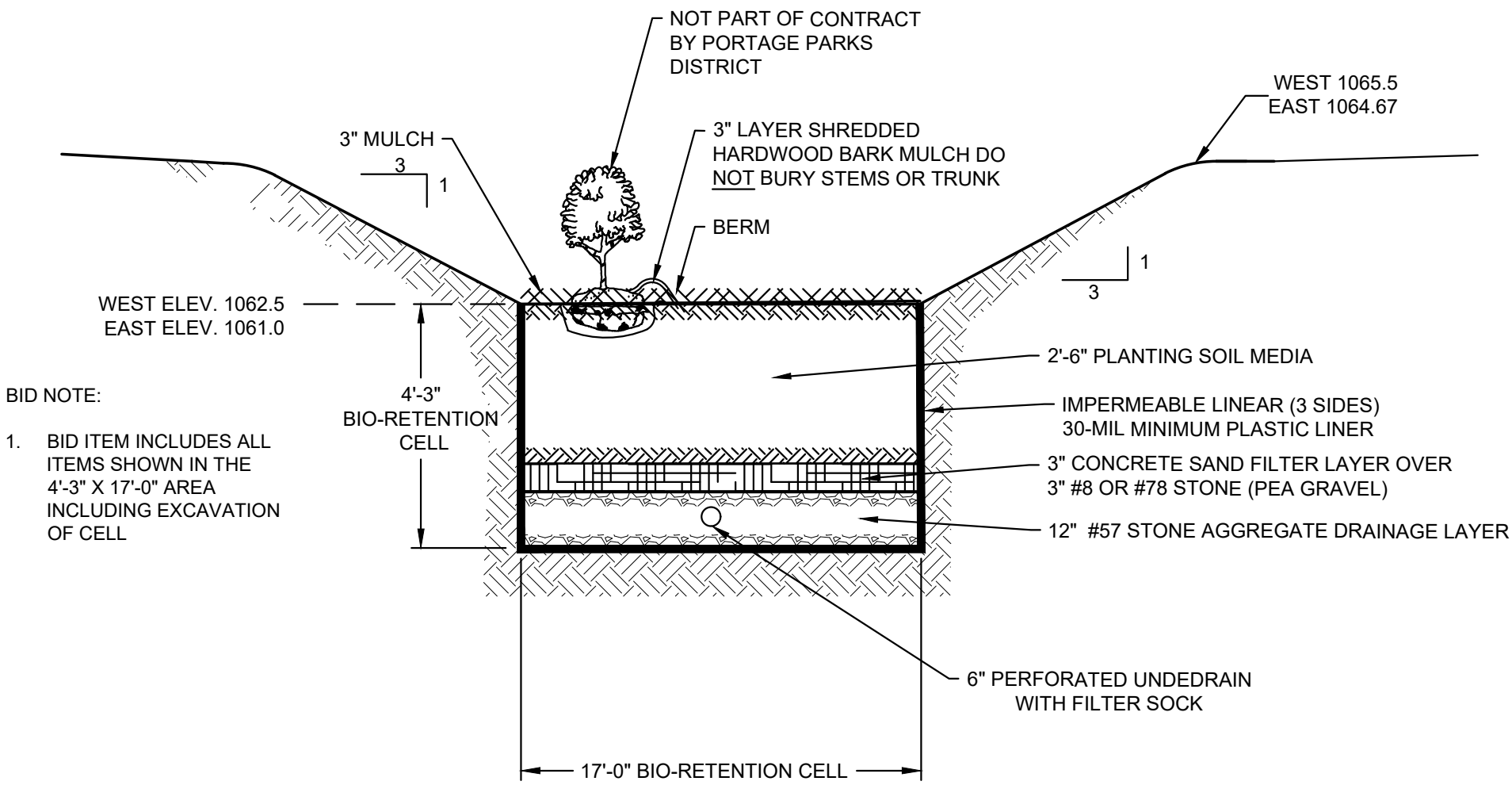
SWPPP - TEMPORARY SEDIMENT BASINS

SHEET NUMBER

C1.05



WEST BASIN 1" = 10'



BIO RETENTION SECTION A-A DETAIL
LOOKING EAST

SCALE: NONE

NOTES:

1. TEXTURE CLASS: LOAMY SAND, HAVING NO LESS THAN 80% SAND AND NO GREATER THAN 10% CLAY CONSIDERING ONLY THE MINERAL FRACTION OF THE SOIL.
2. PH RANGE: 5.2 - 8.0
3. SOLUBLE SALTS: 500 PPM MAXIMUM.
4. DECOMPOSED ORGANIC MATTER: 3-5% BY WEIGHT [NOTE: THIS TRANSLATES TO 8-20%]
5. ORGANIC MATTER BY VOLUME. SEE NOTE ON "CREATING A SUITABLE SOIL MEDIA" BELOW.]
6. PHOSPHORUS: PHOSPHORUS OF THE PLANTING MEDIA SHOULD FALL BETWEEN 15 AND 60 MG/KG (PPM) AS DETERMINED BY THE MEHLICH III TEST. FOR SITES IN WATERSHEDS WITH A PHOS- PHORUS TMOL OR SITES WITH HIGH PHOSPHORUS LOADS, THE PHOSPHORUS CONTENT OF THE PLANTING MEDIA SHOULD FALL BETWEEN 10 AND 30 MG/KG AS DETERMINED BY THE MEHLICH III TEST.
7. SAND ADDED SHALL BE CLEAN AND MEET AASHTO M-6 OR ASTM C-33 WITH A GRAIN SIZE OF 0.02-0.04" INCHES.

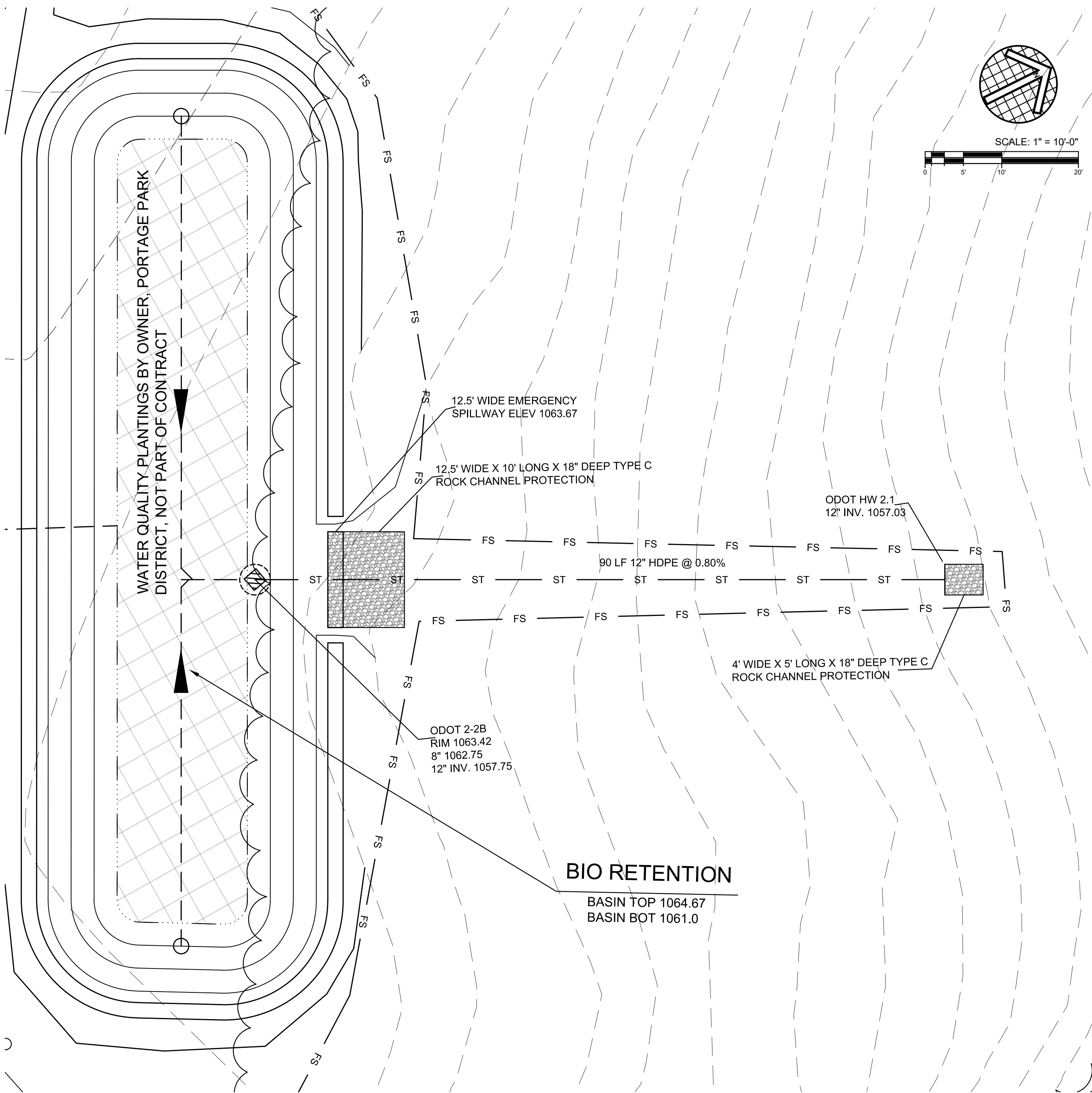
CREATING SUITABLE SOIL MEDIA: TO MEET THE ABOVE SOIL MEDIA CRITERIA, THE FOLLOWING MIX (BY VOLUME) IS RECOMMENDED AS A STARTING POINT:

SAND: 7.5 PARTS CLEAN SAND (I.E., ASTM C-33 OR EQUIVALENT, < 1% PASSING NO. 200 SIEVE) NATIVE SOIL: 1.5 PART (LOAM, SILT LOAM OR CLAY LOAM TEXTURE)

DECOMPOSED ORGANIC MATTER: 1 PART (LEAF COMPOST, PINE BARK FINES, MULCH FINES, ETC.)

BASED ON TESTING, EXPERIENCE AND NATIVE SOIL CHARACTERISTICS THE SAND, SOIL OR ORGANIC MATTER CONTENT CAN BE ADJUSTED TO ACHIEVE THE DESIRED MIX. THE SOIL MIX SUPPLIER SHOULD PRE-TEST THE SAND, NATIVE SOIL AND ORGANIC MATTER TO EVALUATE THEIR PHOSPHORUS CONTENT. THE SOIL MIX SUPPLIER MUST PRESENT A SOIL TEST SHOWING THE PLANTING MEDIA MEETS THE CRITERIA ABOVE.

THE CONTRACTOR SHALL HAVE THE PLANTING SOIL SUPPLIER TO PROVIDE CERTIFIED LABORTORY REPORT SHOWING HTAT THE MIX HAS BEEN TESTED AND MEETS THE PROJECTS SPECIFICATIONS

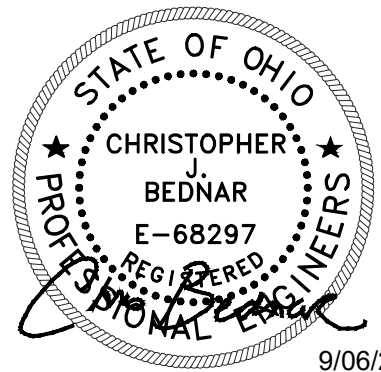


EAST BASIN 1" = 10'

LEGEND

BIO RETENTION BASIN BOTTOM
DO NOT COMPACT

STRUCTURE	NORTHING	EASTING	RIM	INVERT	ORIFICE
ODOT 2-2B	562,686.80	2,278,755.43	1064.33	12" 1059.25	4" 1063.08
ODOT HW 2.1	562,739.90	2,278,801.04		12" 1058.69	
ODOT 2-2B	562,490.01	2,279,019.73	1063.42	12" 1057.75	8" 1062.75
ODOT HW 2.1	562,568.54	2,279,063.68		12" 1057.03	



PROJECT NAME

TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME



REV. NO.	DESCRIPTION	DATE
1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019

PROJECT NO: 20190070

DRAWN BY: CDG

APPROVED BY: CJB

DATE: 09/06/2019

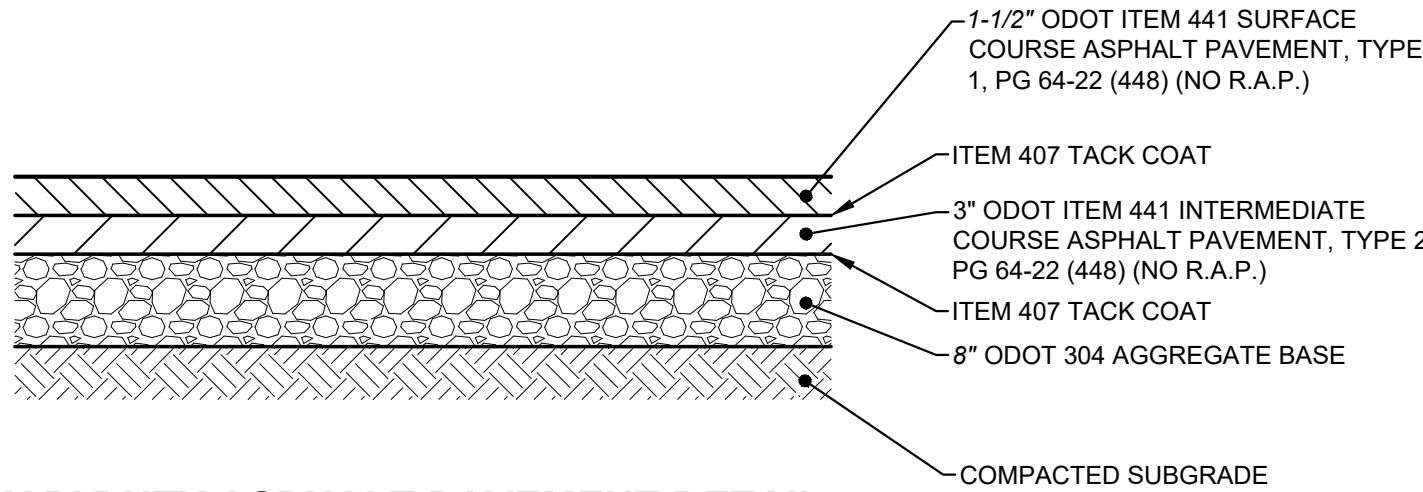
SCALE: 1" = 10'

SHEET TITLE

SWPPP
BIO RETENTION
BASINS

SHEET NUMBER

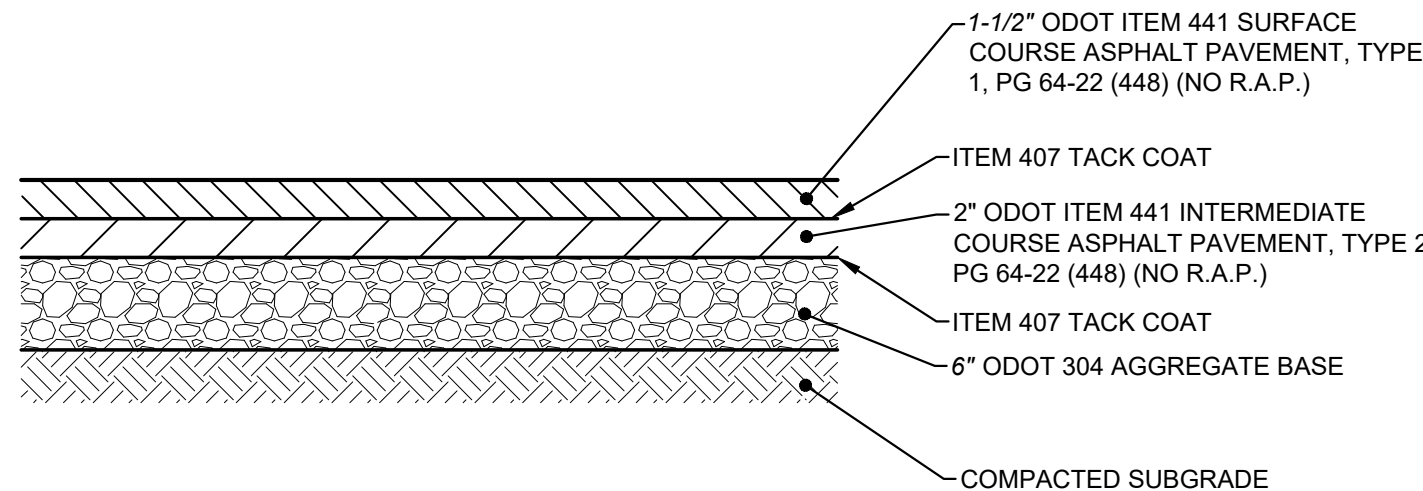
C1.06



HEAVY DUTY ASPHALT PAVEMENT DETAIL
SCALE: NONE

NOTES:

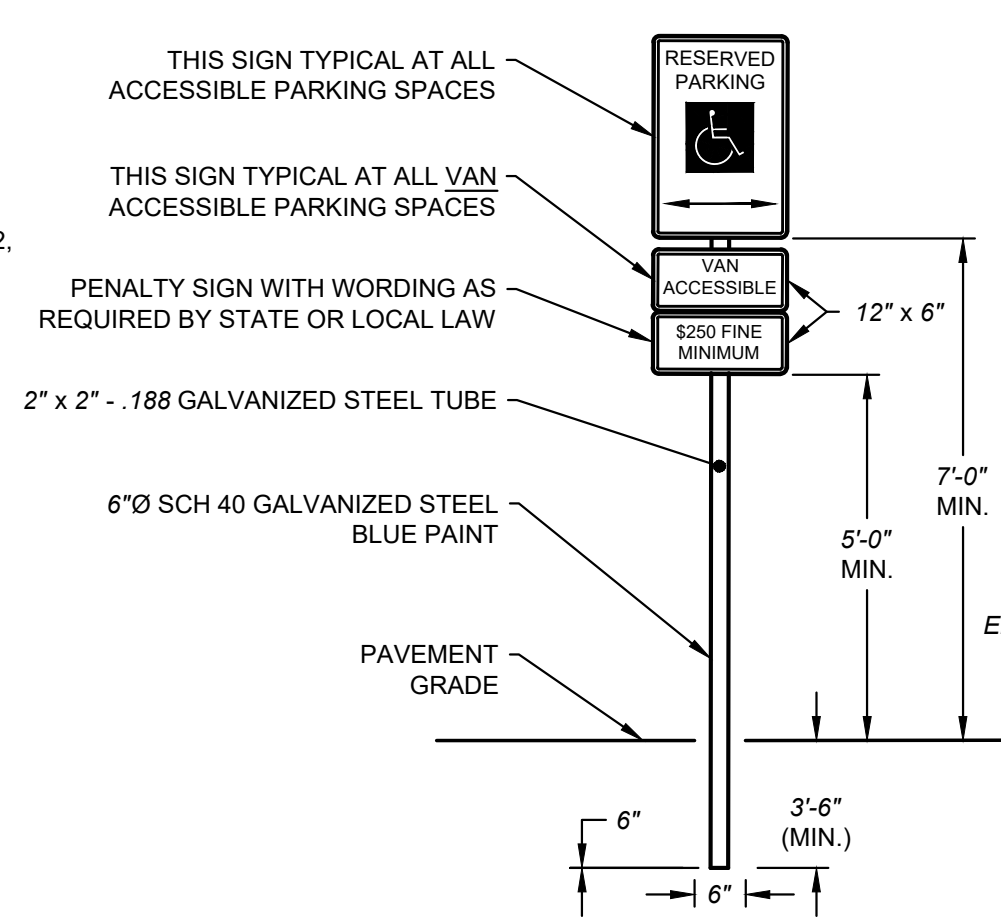
- ALL THICKNESSES SHOWN ARE COMPACTED IN PLACE.
- PRIOR TO PAVING, SUBBASE IS TO BE PROOF ROLLED.
- TACK COAT TO BE APPLIED IN ACCORDANCE WITH ODOT ITEM 407 SPECIFICATIONS.
- WHERE APPLICABLE, REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.



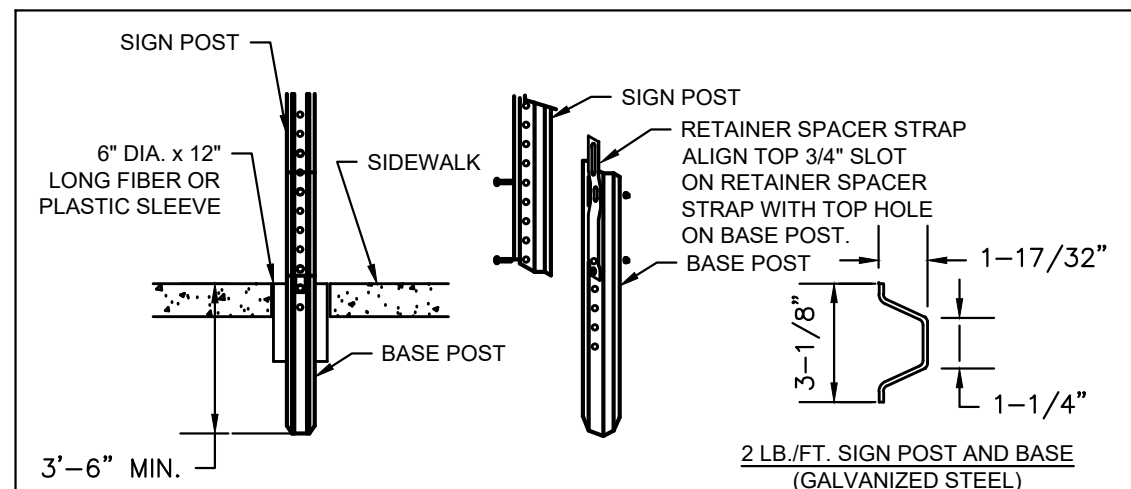
STANDARD DUTY ASPHALT PAVEMENT DETAIL
SCALE: NONE

NOTES:

- ALL THICKNESSES SHOWN ARE COMPACTED IN PLACE.
- PRIOR TO PAVING, SUBBASE IS TO BE PROOF ROLLED.
- TACK COAT TO BE APPLIED IN ACCORDANCE WITH ODOT ITEM 407 SPECIFICATIONS.
- WHERE APPLICABLE, REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.



HANDICAP PARKING SIGN DETAIL
SCALE: NONE



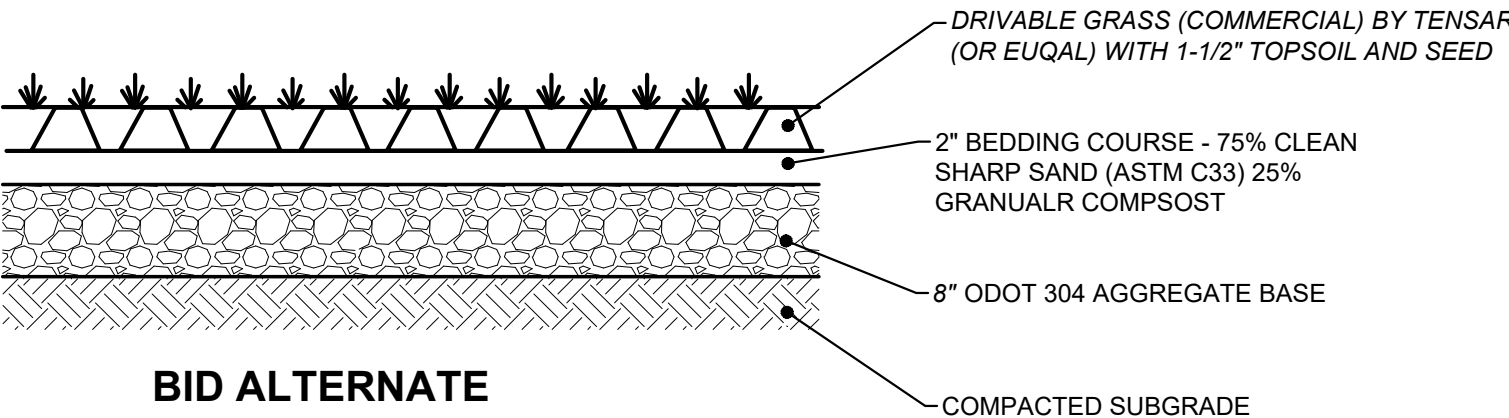
NOTES:

- BASE BOLTS SHALL BE 5/16" - 18 x 1 1/2" GRADE 8 OR ASTM A354.
- BOLTS AND NUTS SHALL BE WASHER HEAD TYPE OR INSTALLED WITH FLAT WASHERS UNDER BOLT HEAD & NUT.

TRAFFIC CONTROL SCHEDULE

SIGN NUMBER	SIGN	SIZE OF SIGN		DESCRIPTION	MOUNT TYPE	MOUNT HEIGHT SEE NOTE	REMARKS
		WIDTH	HEIGHT				
R1-1	STOP	30"	30"	STOP	CHANNEL	7'-0"	REFLECTORIZED SIGN
W2-2	Intersection Warning	30"	30"	INTERSECTION WARNING	CHANNEL	7'-0"	REFLECTORIZED SIGN
R7-8	Reserved Parking	12"	18"	ACCESSIBLE PARKING	TUBE	7'-0"	REFLECTORIZED SIGN
R7-8A	Van Accessible	12"	6"	VAN PARKING	TUBE	5'-0"	REFLECTORIZED SIGN
W16-9P	Ahead	24"	12"	AHEAD	TUBE	PLACE ABOVE WARNING SIGN	REFLECTORIZED SIGN
R5-2	No Trucks	24"	24"	NO TRUCKS	TUBE	7'-0"	REFLECTORIZED SIGN

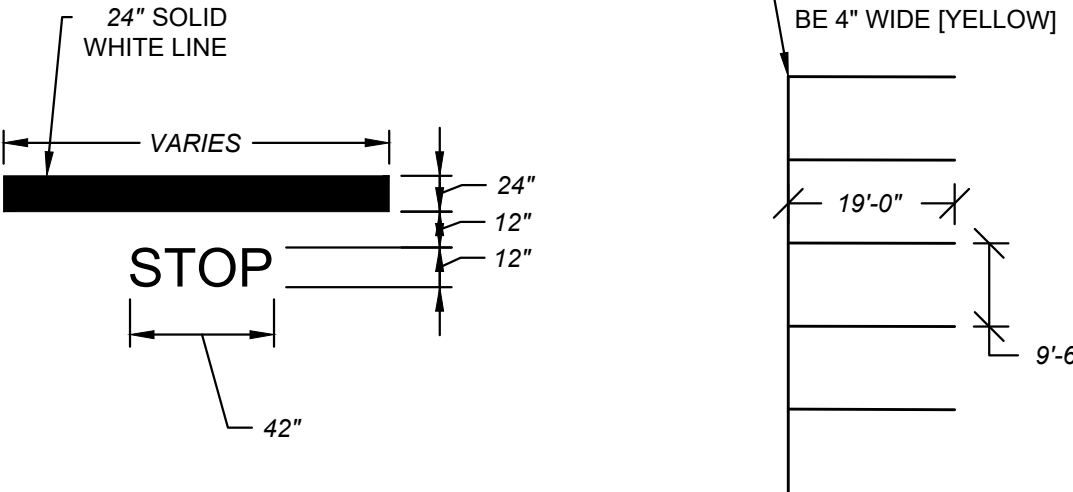
NOTE: HEIGHT SHOWN IS FROM GROUND TO BOTTOM OF SIGN



BID ALTERNATE
REINFORCED GRASS PARKING DETAIL
SCALE: NONE

NOTES:

- ALL THICKNESSES SHOWN ARE COMPACTED IN PLACE.
- OVERFILL MATS WITH 1/4 INCH ABOVE SURFACE BEFORE ALLOWING SEED TO ALLOW FOR SETTLEMENT.
- INSTALL TOPSOIL AND SEED PER TENSAR RECOMMENDATIONS.
- PRIOR TO INSTALLING, SUBBASE IS TO BE PROOF ROLLED.
- COMPACT 304 BASE PER PROJECT SPECIFICATIONS.
- WHERE APPLICABLE, REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
- PROTECT GRASS AREA UNTIL ROOT SYSTEM IS ESTABLISHED.
- PAY ITEM INCLUDES TOPSOIL, DRIVABLE GRASS, TENSAR, BEDDING COURSE, 304 BASE & SUBGRADE COMPACTION.



STOP BAR DETAIL
SCALE: NONE

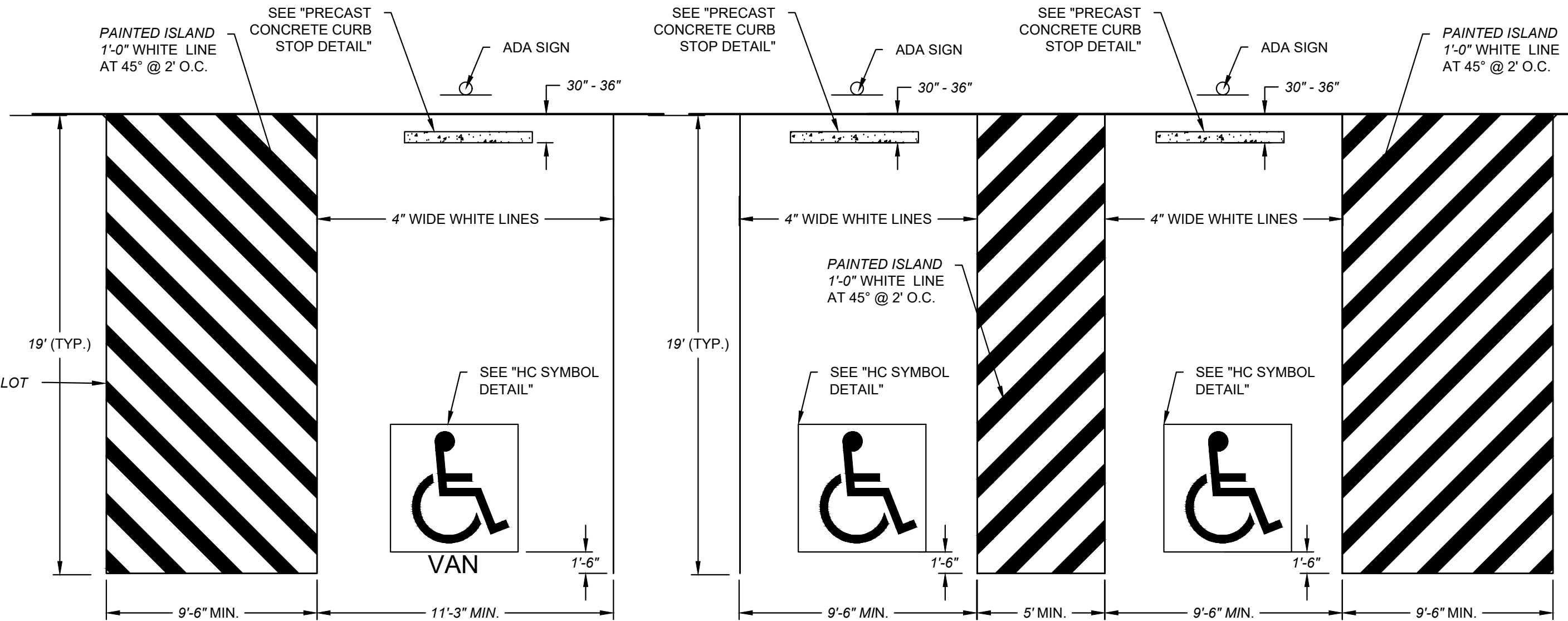
NOTES:

- THE BAR AND WORDING ARE TO BE WHITE.
- LETTERING IS TO BE CENTERED ON THE STOP BAR.
- SEE SITE PLAN FOR LOCATION AND ORIENTATION.

PARKING STALL DETAIL
SCALE: NONE

NOTES:

- TRAFFIC PAINT SHALL BE PER ODOT 642.
- PARKING SPACES AND ISLANDS PER DRIVE AISLE MAY VARY. REFER TO SITE PLAN FOR ADDITIONAL INFORMATION.
- REFER TO SITE PLAN FOR STRIPING LAYOUT, AND EXCEPTIONS TO THIS DETAIL.



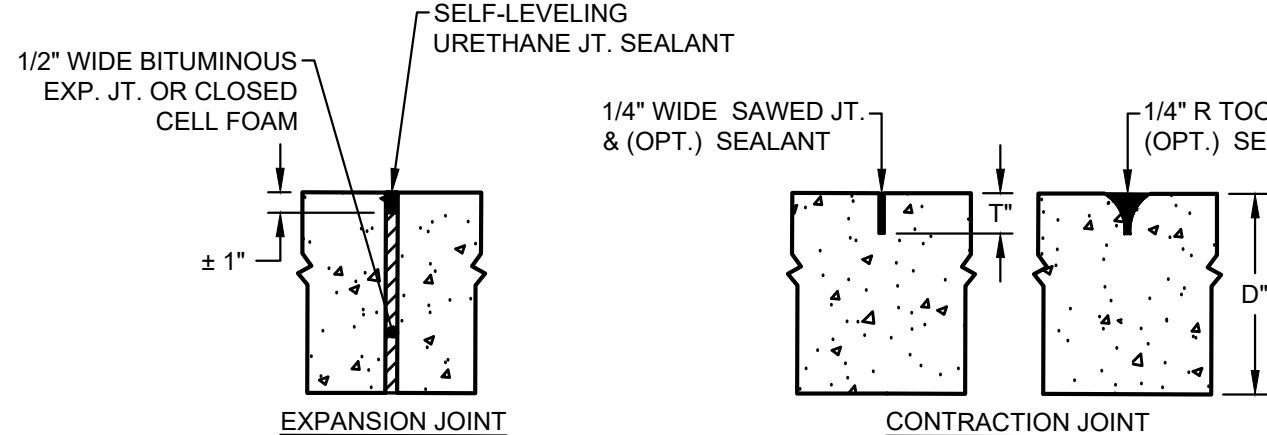
SOUTH SIDE OF LOT

NORTH SIDE OF LOT

ACCESSIBLE PARKING SPACE DETAIL
SCALE: NONE

NOTES:

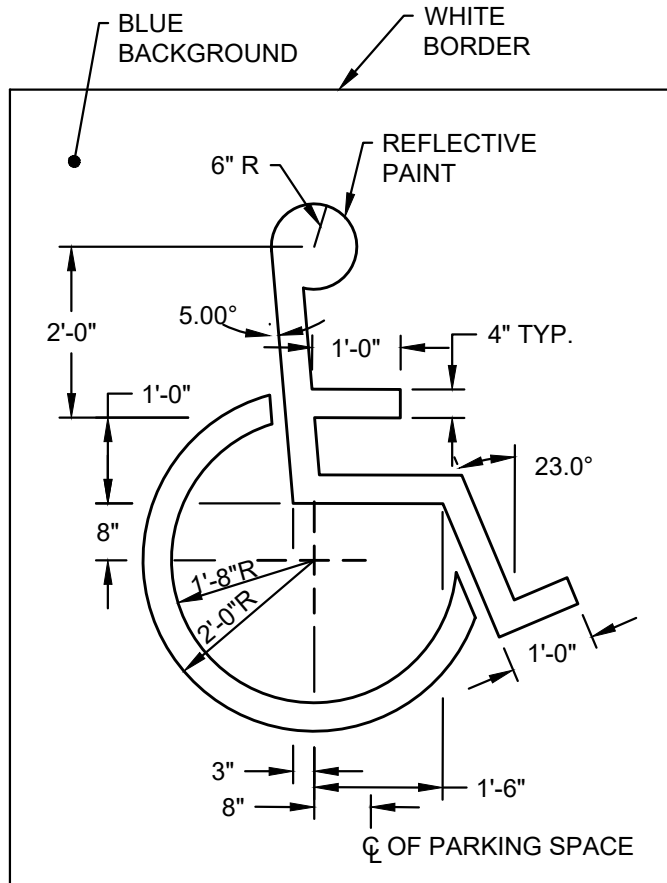
- ALL SURFACE SLOPES WITHIN ADA SPACES SHALL NOT EXCEED 2.00% IN ANY DIRECTION.



PROFILE CONCRETE JOINT DETAIL
SCALE: NONE

NOTES:

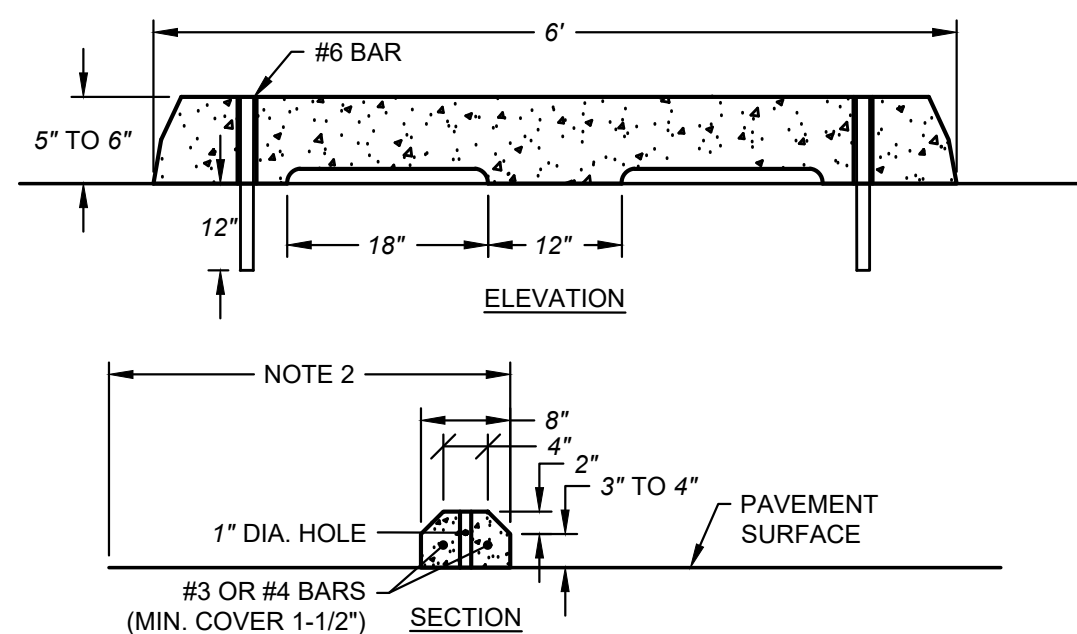
- MAXIMUM JOINT SPACING IS AS FOLLOWS:
 - CONTRACTION JOINT @ 15' O.C.
 - EXPANSION JOINT @ 60' O.C.
- USE OF SEALANT IS OPTIONAL IN CONTRACTION JOINTS



HANDICAP SYMBOL DETAIL
SCALE: NONE

NOTES:

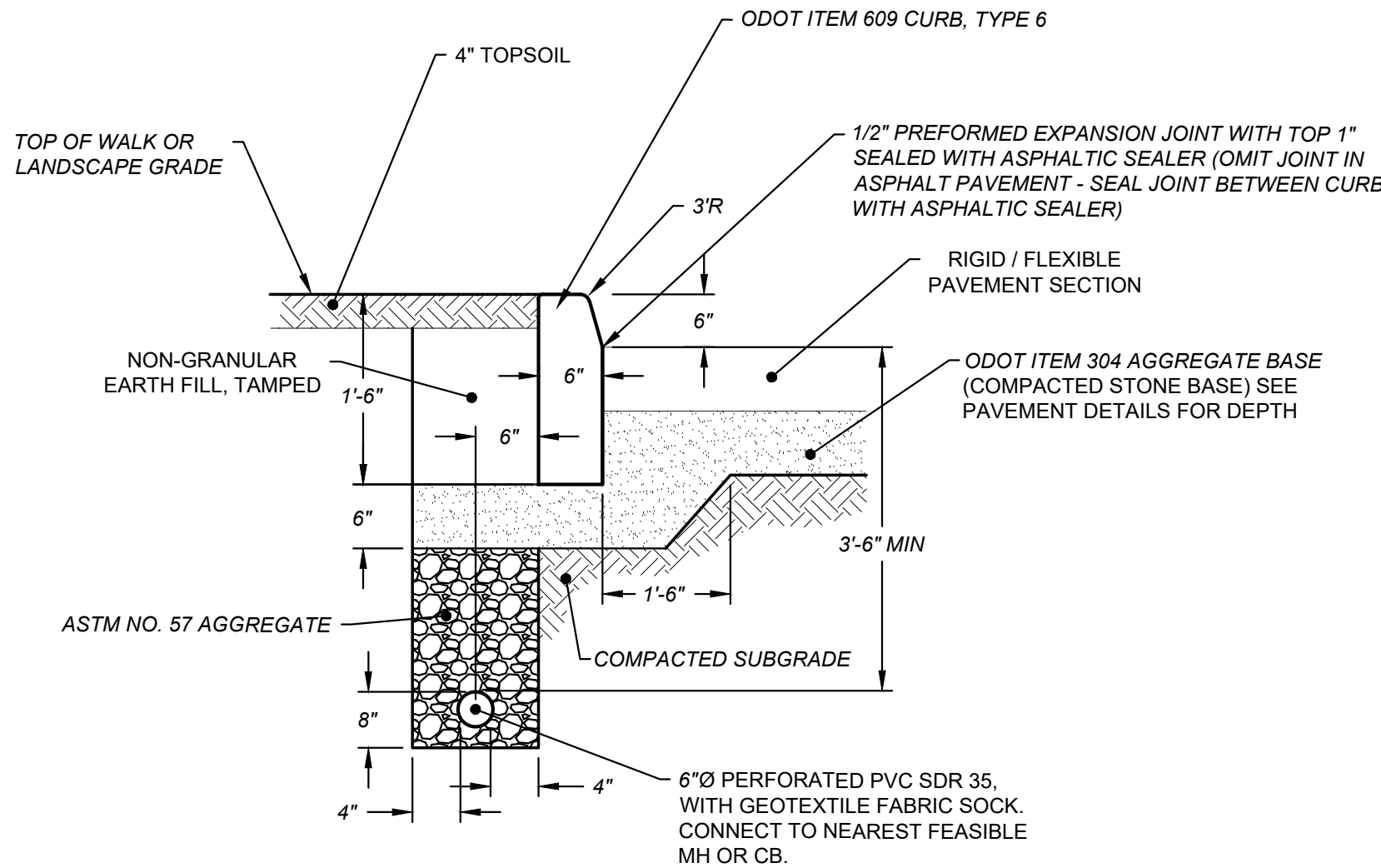
- SIGNS ARE TO CONFORM TO MUNICIPALITY PARKING STANDARDS.
- HANDICAP SYMBOL IS TO BE PAINTED WHITE ON BLUE BACKGROUND.



PARKING CONCRETE CURB STOP DETAIL
SCALE: NONE

NOTES:

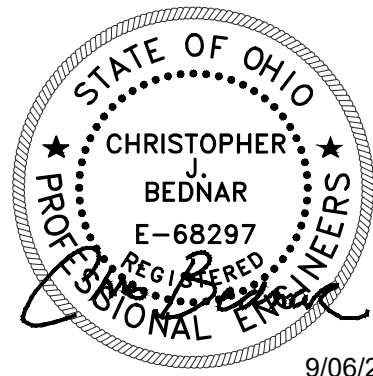
- ALL DIMENSIONS ARE NOMINAL.
- CURB STOP SHALL BE PLACED SO THAT THE DIMENSION FROM THE FACE OF THE CURB STOP TO THE EDGE OF PAVEMENT, FACE OF CURB, OR FACE OF WALK IS AT A MIN. OF 30", AND MAX OF 36".



6" CONCRETE CURB DETAIL
SCALE: NONE

NOTES:

- ALL CONCRETE SHALL BE AIR ENTRAINED 4,000 PSI UNLESS OTHERWISE DIRECTED BY ENGINEER (NO FLY ASH).
- PROVIDE HOT APPLIED ASPHALTIC SEALER ACCORDING TO ASTM D 3405 AT ALL SURFACES WHERE ASPHALT PAVEMENT ADJUTS CONCRETE CURB. APPLY SEALER IN A NEAT, WORKMANSHIP FASHION.
- INSTALL CONTRACTION JOINT @ 10' O.C.
- AGGREGATE BASE IS TO EXTEND 14" BEYOND BACK OF CURB.



PROJECT NAME

TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME



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PROJECT NO: 20190070
DRAWN BY: CDG
APPROVED BY: CJB
DATE: 09/06/2019

SCALE:
SHEET TITLE

PAVING DETAILS

SHEET NUMBER

C2.01

NOTES:

LOCATION AND ELEVATION WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE. WHEN SIDE OPENINGS ARE PROVIDED, ELEVATION SHALL BE THE FLOW LINE OF THE SIDE INLET.

CASTING AND FRAME CASTING TO BE EAST JORDAN IRON WORKS NO. 5110 W/TYPE M2 FLAT GRATE OR AS APPROVED EQUAL.

WALLS PRECAST WALLS SHALL HAVE A MIN. THICKNESS OF 6 INCHES AND BE REINFORCED SUFFICIENTLY TO PERMIT SHIPPING AND HANDLING WITHOUT DAMAGE.

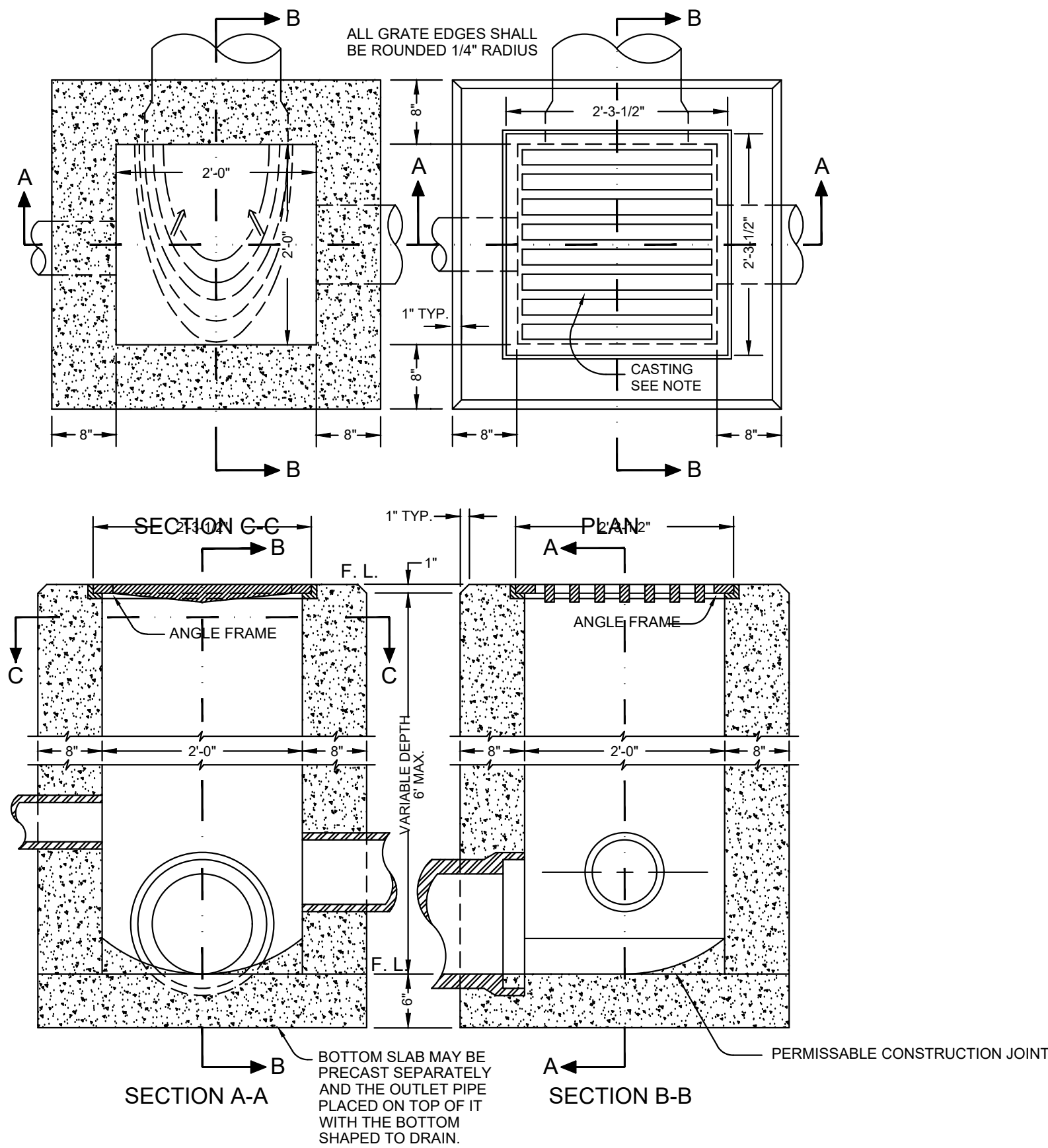
2-2-B GRATE ELEVATION TO BE PLACED 4 TO 6 INCHES BELOW NORMAL DITCH RETURNING TO NORMAL 10 FEET EACH SIDE OF THE BASIN.

ALL PRECAST CONCRETE TO BE CLASS C. CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13.

OPENINGS FOR PIPES SHALL BE O.D. +2" WHEN FABRICATED OR FIELD CUT.

BACKFILL FOR STRUCTURES WITHIN 3' OF ALL PAVEMENT, DRIVEWAYS AND SIDEWALKS SHALL BE LOW STRENGTH MORTAR BACKFILL, TYPE 2 PER CURRENT O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN.

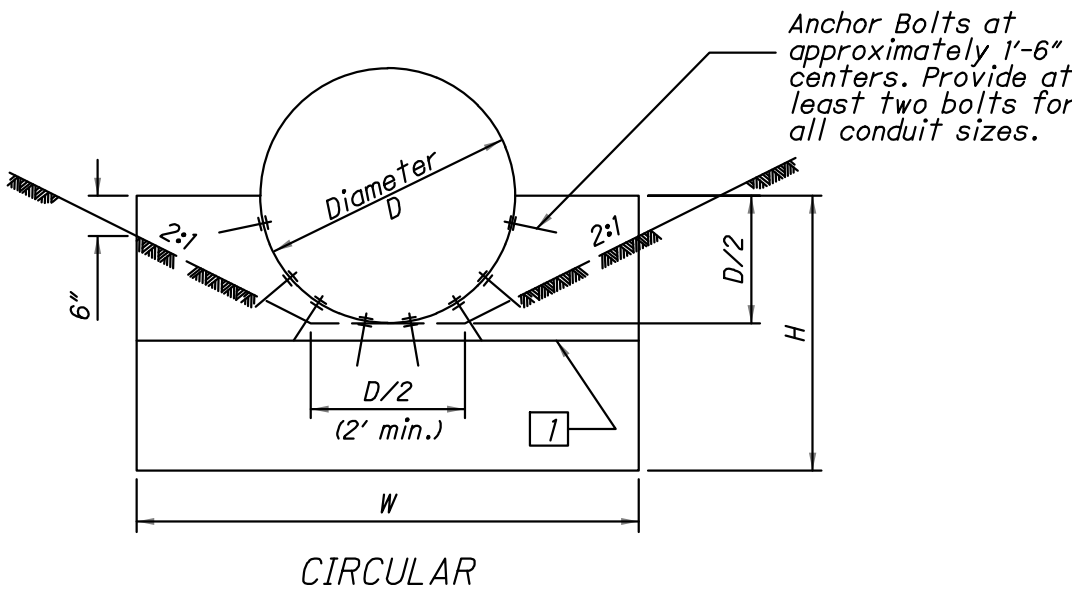
THE USE OF FOUNDRY SAND IS STRICTLY PROHIBITED.



NOTE:
SEE STORM WATER MANAGMENT BASIN DETAIL
SHEET FOR INVERTS AND RIM INFORMATION

STANDARD ODOT 2-2-B CATCH BASIN

SCALE: NONE

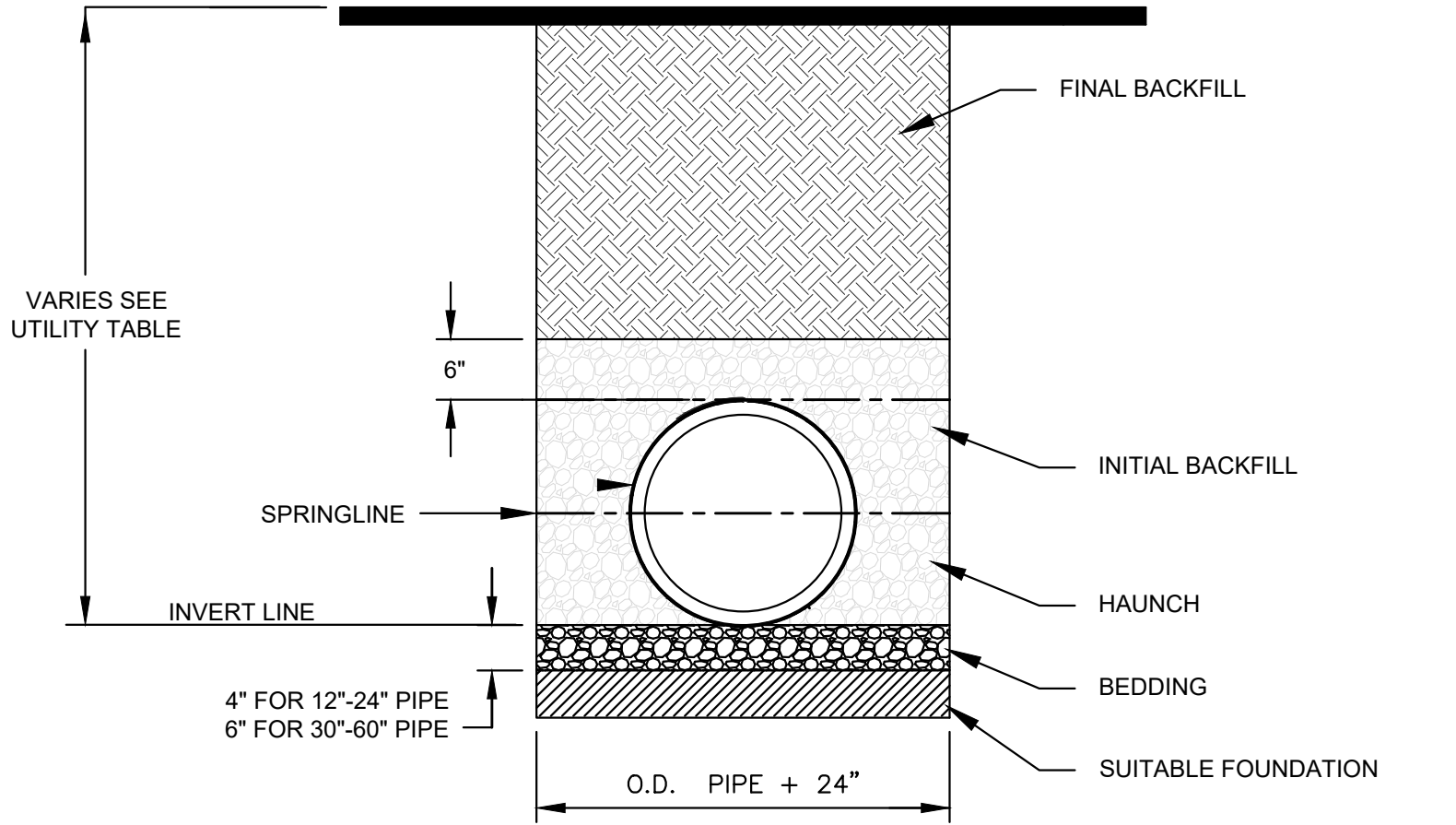


CAST-IN-PLACE HW FOR CORRUGATED METAL PIPE & PLASTIC PIPE																
CIRCULAR					PIPE ARCH						PIPE ARCH					
D	W	H	T	CONC. cu. yds.	SPAN	RISE	W	H	T	CONC. cu. yds.	SPAN	RISE	W	H	T	CONC. cu. yds.
12"	2'-0"	3'-0"	12"	0.21	2.67"x1/2" Corrugations						*81"	59"	12'-4"	5'-5"	15"	2.14
* Determine channel configuration for pipe sizes between end treatment "A" and end treatment "B" by 2:1 slopes passing through a point 6'-0" below the top and at each side of the headwall. For end treatment "B", 2:1 slopes are tangent to pipe.																

* Determine channel configuration for pipe sizes between end treatment "A" and end treatment "B" by 2:1 slopes passing through a point 6" below the top and at each side of the headwall. For end treatment "B", 2:1 slopes are tangent to pipe.

ENDWALL DETAIL

SCALE: NONE



NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I COMPACTED AGGREGATE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

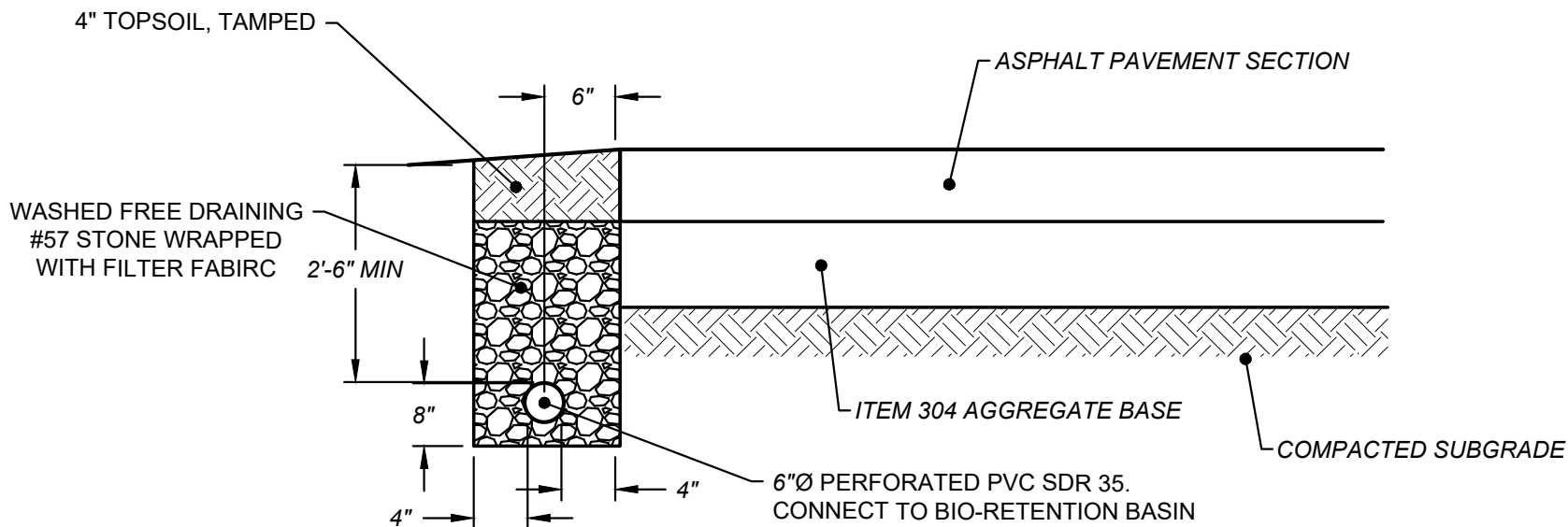
7. FINAL BACKFILL

BACKFILL UNDER LAWNS SHALL BE PREMIUM BACKFILL SHALL BE ODOT 304 LIMESTONE. THE BACKFILL SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

BACKFILL IN LAWN AREAS - SUITABLE MATERIAL MAY BE CLASS I, II, III, OR EXCAVATED MATERIAL - MAX. 8" LIFTS, 93% COMPACTION. NO ROCKS OVER 1-1/2" Ø ARE ACCEPTABLE IN UPPER 8" OF BACKFILL. A 4" (MIN.) LAYER OF SCREENED TOPSOIL IS REQUIRED IN LAWN AREAS.

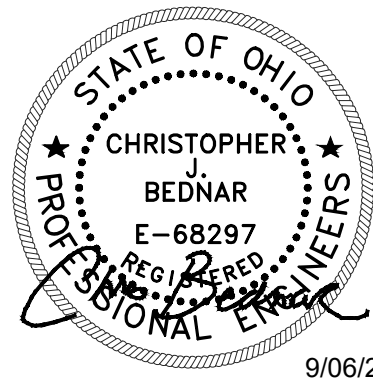
HDPE AND PVC PIPE SEWER TRENCH DETAIL

SCALE: NONE



SCALE: NONE

6" EDGE DRAIN DETAIL



PROJECT NAME

TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME



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PROJECT NO: 20190070
DRAWN BY: CDG
APPROVED BY: CJB
DATE: 09/06/2019

SCALE:
SHEET TITLE

SEWER DETAILS

SHEET NUMBER

C2.02

EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS TO REFER TO THIS PLAN AND THE E&S PLAN, NOTES, AND DETAILS.
2. CONTRACTOR IS RESPONSIBLE TO MAINTAIN LAWN AND AND STORM WATER CONTROLS UNTIL SUBSTANTIAL COMPLETION OF THE PROJECT (WINTER 2019). PERIODIC INSPECTIONS ARE REQUIRED PER THE EPA GENERAL PERMIT OHC000004. GENERAL PERMIT TO BE OBTAINED BY CM. CONTRACTOR IS REQUIRED TO KEEP COPY OF PERMIT ON-SITE AND CONFORM WITH PERMIT REQUIREMENTS.
3. THE CONTRACTOR IS TO INSTALL AND MAINTAIN THE E&S CONTROLS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL THE SITE IS FULLY STABILIZED.
4. THE CONTRACTOR IS RESPONSIBLE TO REMOVE THE TEMPORARY E&S CONTROLS ONCE THE SITE IS FULLY STABILIZED.
5. CONTRACTOR IS TO MAINTAIN, ON-SITE AT ALL TIMES, LOGS DOCUMENTING GRADING AND STABILIZATION ACTIVITIES AS WELL AS AMENDMENTS TO THE SWP3. AS REQUIRED BY THE GENERAL PERMIT.
6. DUMPSTERS, WASTE DISPOSAL AREA'S AND OTHER AREAS DESIGNATED UNDER NON-SEDIMENT POLLUTANT CONTROLS WILL BE LOCATED ON-SITE DURING CONSTRUCTION BY CM.
7. INCIDENTAL WORK BEYOND APPROXIMATE CONSTRUCTION LIMIT LINE IS TO BE INCLUDED IN BASE BID.
8. CONTRACTOR IS TO PREVENT DUST AND DEBRIS FROM BEING TRACKED OR BLOWN ONTO EAST MARKET STREET OR SURROUNDING PROPERTIES BY USE OF REGULAR SWEEPING, TIRE WASHING, DUST CONTROL METHODS, ETC. EQUIPMENT (POWER BROOM, WATER TRUCK, ETC.) ARE TO REMAIN ON-SITE AS REQUIRED, TO ACCOMMODATE DUST AND DEBRIS. CONTRACTOR IS TO UTILIZE TIRE WASHING STATION DURING CONSTRUCTION ACTIVITIES, IF NEEDED, TO PREVENT DEBRIS FROM REACHING EAST MARKET STREET
9. IF CONTRACTOR IS NOTIFIED BY POLICE, SUMMIT COUNTY OFFICIALS, OR SUMMIT SOIL AND WATER CONSERVATION DISTRICT PERSONNEL OF ANY SIGNIFICANT VIOLATION OF EPA GENERAL PERMIT AND/OR SWPPP PLANS AND INFORMATION, ALL CONSTRUCTION ON-SITE IS TO CEASE UNTIL PROBLEM(S) ARE RECTIFIED & DEEMED ACCEPTABLE.

CONSTRUCTION SEQUENCE

1. PRE-CONSTRUCTION MEETING.
2. ESTABLISH CONSTRUCTION OFFICE ON SITE. ESTABLISH TEMPORARY UTILITIES AS NEEDED. ALL TEMPORARY UTILITY SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. STAKEOUT LIMITS OF DISTURBANCE.
4. INSTALL INLET PROTECTION (DANDY BAGS OR APPROVED EQUAL) FOR ANY GRATED STORM STRUCTURES.
5. INSTALL SILT FENCE, FILTREX FILTER SOCK (OR APPROVED EQUAL) AROUND PERIMETER OF ENTIRE SITE EXCEPT AT MAN GATES AND VEHICLE CONSTRUCTION ENTRANCES/ GATES.
6. REMOVE SOIL AS NEEDED AND CONSTRUCT TEMPORARY GRAVEL CONSTRUCTION ROAD AROUND ENTIRE BUILDING AS SHOWN. GRAVEL ROAD IS TO BE CONSTRUCTED OVER A WELL COMPACTED SUBGRADE (ODOT ITEM 204) AND CONSIST OF GEOTEXTILE FABRIC (ODOT ITEM 712.09, ITEM D), 9" THICK LAYER OF (AASHTO M 43) NO. 1's & NO. 2's, AND CHOKED OFF WITH 6" ODOT 57 CRUSHED STONE. PORTIONS OF THIS GRAVEL ROAD WILL SERVE AS A CONSTRUCTION ENTRANCES WHERE GATES ARE NOTED. POWER BROOM AND/OR CLEAN ADJACENT ROADWAYS ON A DAILY BASIS AND AS REQUIRED. REMOVE ALL DEBRIS FROM SITE. TEMPORARY CONSTRUCTION DRIVE IS TO BE REMOVED NEAR SUBSTANTIAL COMPLETION AND REPLACED WITH TOPSOIL & SEED OR WALKS & DRIVES AS SHOWN ON SITE PLAN.
7. OWNER TO ANNOTATE LOCATION OF TEMPORARY FACILITIES (WORK TRAILERS, SANITARY FACILITIES, CONTRACTOR PARKING, STORAGE AREAS, LAYDOWN AREAS, ETC.) ON THE APPROVED PLAN SET AND LOG THE CHANGES.
8. MAINTAIN TEMPORARY CONTROLS UNTIL REMOVAL IS WARRANTED DUE TO PROGRESSION OF WORK AND STABILIZATION OF SITE
9. BEGIN EARTHWORK OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER OF LOCATION AND EROSION SEDIMENTATION CONTROL MEASURES IMPLEMENTED AT BORROW OR SPOIL SITE OF IMPORT/EXPORT MATERIAL.
10. STORM SEWER AND UTILITY LINE CONSTRUCTION MAY BEGIN IMMEDIATELY FOLLOWING ESTABLISHMENT OF GRADE AND PERMISSION OF THE OWNER/CM
11. STABILIZE ALL UTILITY TRENCHES AT THE END OF EACH WORKDAY BY MEANS OF GRAVEL BACKFILL TO SURFACE, RE-PAVING OR MULCHING.
12. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, PERMANENT SEED AND MULCHING IMMEDIATELY UPON REACHING FINAL GRADE.
13. INSTALL PAVEMENT BASE, WALK, AND PAVEMENT.
14. COMPLETE SITE WORK, FINAL LANDSCAPING AND CLEANUP.
15. RESEED AND REDRESS ANY AREAS THAT MAY REQUIRE ATTENTION IMMEDIATELY.
16. ALL EROSION MEASURES SHALL REMAIN IN PLACE UNTIL THE SITE IS STABILIZED. ALL AREAS OF VEGETATIVE SURFACE STABILIZATION, WHETHER TEMPORARY OR PERMANENT, SHALL BE CONSIDERED TO BE IN PLACE AND FUNCTIONAL WHEN THE REQUIRED UNIFORM RATE OF COVERAGE (80%) IS OBTAINED.
17. IF FOR ANY REASON THE PROJECT IS SUSPENDED, THE CONTRACTOR SHALL ENSURE THAT ALL INSTALLED EROSION MEASURES ARE FUNCTIONING AND PROPERLY MAINTAINED DURING THIS PERIOD, AND THAT ALL DISTURBED SOILS ARE SEEDED AND MULCHED WITH TEMPORARY SEED MIXTURE UNTIL FINAL SEEDING. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO MAINTAIN LAWN UNTIL SUBSTANTIAL COMPLETION (2017)
18. REPLACE APRON AND SIDEWALK AS THE CONSTRUCTION ENTRANCE.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

ALL TEMPORARY AND PERMANENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED THROUGHOUT CONSTRUCTION TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED IN A FUNCTIONAL CONDITION UNTIL ALL UP SLOPE AREAS THEY CONTROL ARE PERMANENTLY STABILIZED.

INSPECTIONS (MINIMUM REQUIREMENTS)

1. ALL CONTROLS ARE TO BE INSPECTED ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD. THE INSPECTION PERIOD MAY BE REDUCED TO AT LEAST ONCE EVERY MONTH IF THE ENTIRE SITE IS TEMPORARILY STABILIZED OR RUNOFF IS UNLIKELY. ONCE A DEFINABLE AREA HAS BEEN FINALLY STABILIZED NO FURTHER INSPECTION REQUIREMENTS APPLY TO THAT PORTION OF THE SITE.
2. A CHECKLIST MUST BE COMPLETED AND SIGNED BY A QUALIFIED INSPECTION PERSONNEL AND INCLUDE THE FOLLOWING:

- INSPECTION DATE

- NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION

- WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION OR COMMENCEMENT OF CONSTRUCTION ACTIVITY (INCLUDE ANY STORM ACTIVITY - DURATION, INTENSITY, DISCHARGES)

- LOCATION OF ANY SEDIMENT OR OTHER POLLUTANT DISCHARGES FROM THE SITE

- LOCATION OF BMPS THAT NEED TO BE INSTALLED AND/OR MAINTAINED

- LOCATION OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE

- CHECK FOR ANY EVIDENCE OF POLLUTANTS FROM STORED MATERIALS ENTERING THE DRAINAGE SYSTEM

- CORRECTIVE ACTION (INSTALLATION, REPAIRS, MODIFICATIONS TO SWPPP PLAN AND IMPLEMENTATION DATES)

- A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR. THE SITE SUPERINTENDENT WILL SELECT INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.

- COPIES OF THE REPORT ARE TO BE SENT TO THE OWNER, CITY ENGINEER & LOCAL SOIL & WATER CONSERVATION DISTRICT

REPAIR SCHEDULE OF SWPPP CONTROLS

A CONTROL PRACTICE, EXCEPT A SEDIMENT SETTLING POND, THAT IS IN NEED OF REPAIR OR MAINTENANCE MUST BE REPAIRED WITH 3 DAYS OF THE INSPECTION. IF APPLICABLE, SEDIMENT SETTLING PONDS MUST BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION. IF THE SPECIFIED CONTROL PRACTICE IS DEEMED INADEQUATE OR WAS NOT YET INSTALLED A NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

MAINTENANCE REQUIREMENTS DURING CONSTRUCTION (WHERE APPLICABLE)

- A. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE
- B. SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. REPAIRS ARE TO BE MADE PROMPTLY.
- C. IF APPLICABLE, THE SEDIMENT BASIN WILL BE INSPECTED FOR DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 40 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB
- D. IF APPLICABLE, DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
- E. TEMPORARY AND PERMANENT SEEDING AND PLANTINGS WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.

DEWATERING REQUIREMENTS DURING CONSTRUCTION

THERE SHALL BE NO SEDIMENT-LADEN DISCHARGES TO SURFACE WATERS RESULTING FROM DEWATERING ACTIVITIES. SHOULD DEWATERING BE REQUIRED, E.G., FROM TRENCHES, ETC., DURING CONSTRUCTION, ALL WATER SHALL BE PUMPED TO THE TEMPORARY SEDIMENT BASINS, IF POSSIBLE, BEFORE BEING RELEASED TO DOWNSTREAM CHANNELS, STORM SEWERS, ETC. IF A TEMPORARY SEDIMENT BASIN IS NOT SHOWN ON THE PLAN, OR NOT ACHIEVABLE FOR DEWATERING, THE WATER SHALL BE PUMPED INTO A SEDIMENT TRAP OR THROUGH SEDIMENT BAGS ONTO A RELATIVELY FLAT SURFACE AWAY FROM INLET BASINS, STREAMS, ETC.

POST-CONSTRUCTION INSPECTION PROCEDURE

1. (NA) THE SITE SHALL BE MAINTAINED PER THE POST-CONSTRUCTION MAINTENANCE PLAN FOLLOWING THE SUBMITTAL OF THE N.O.T.
2. THE PROPERTY OWNER OR THE OWNER'S AUTHORIZED REPRESENTATIVE(S) IS RESPONSIBLE FOR THE INSPECTION OF THE PERMANENT SWPPP CONTROLS, DISCHARGES FROM THE SITE AND ANY SEDIMENT ACCUMULATIONS.
3. MAINTENANCE COSTS, IF INSPECTED BY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE(S) WILL BE PAID BY THE OWNER.
4. REGULAR INSPECTIONS, ESPECIALLY FOLLOWING MAJOR STORM EVENTS, WILL REQUIRE AN INSPECTION REPORT THAT SHALL BE KEPT BY THE OWNER FOR A PERIOD OF THREE YEARS. A COPY OF THE REPORT IS TO BE SUBMITTED TO THE CITY'S ENGINEERING DEPARTMENT (IF REQUIRED)

POST CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

NOTE(S) - FROM OHIO RAINWATER DEVELOPMENT MANUAL STANDARD AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL:

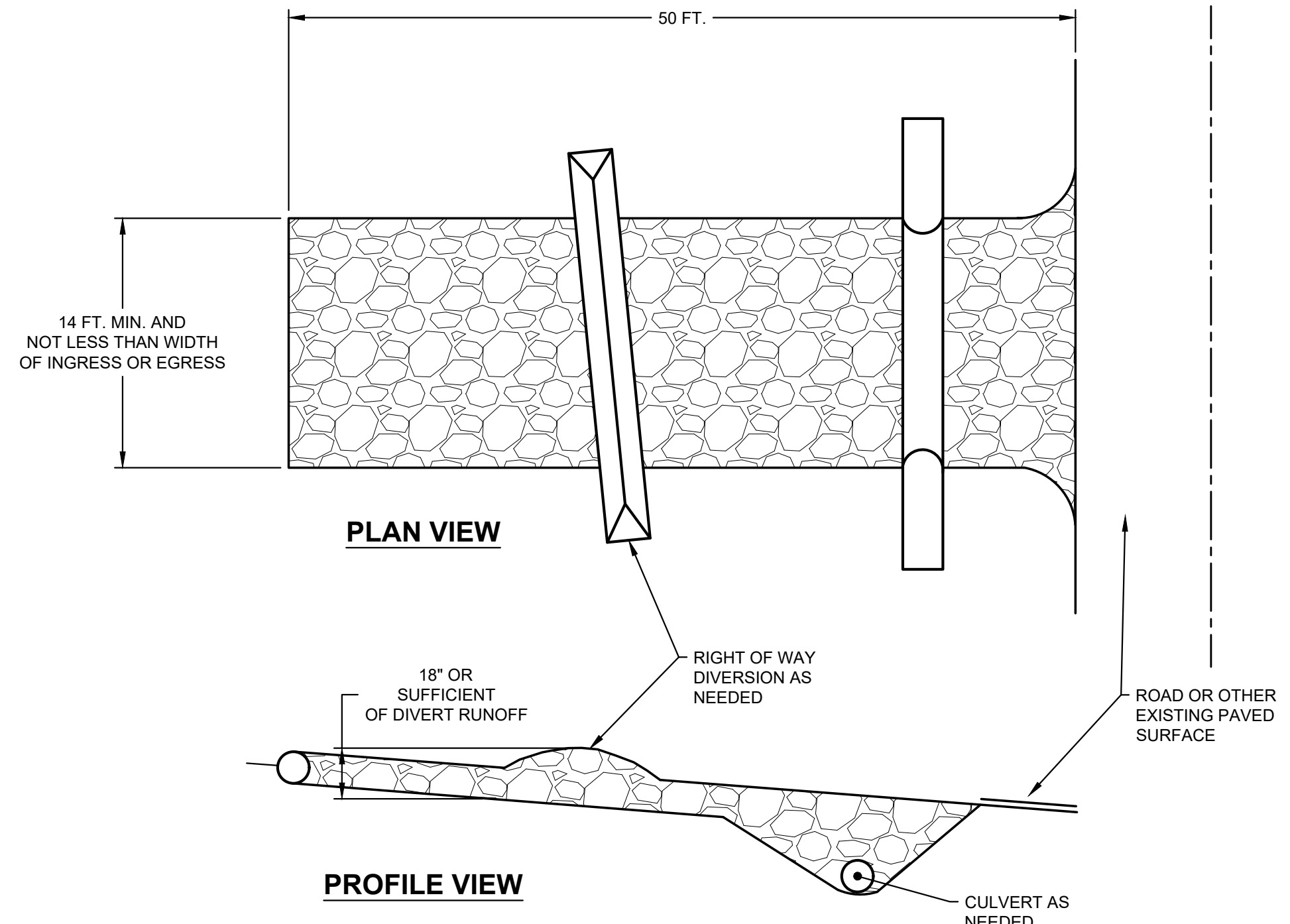
POST-CONSTRUCTION STORM WATER MANAGEMENT PRACTICES TREAT RUNOFF FROM A DEVELOPMENT SITE AFTER CONSTRUCTION IS COMPLETE.

CONSTRUCTION ENTRANCE CE

DESCRIPTION

A CONSTRUCTION ENTRANCE IS A STABILIZED PAD OF STONE UNDERLAIN WITH A GEOTEXTILE AND IS USED TO REDUCE THE AMOUNT OF MUD TRACKED OFF-SITE WITH CONSTRUCTION TRAFFIC. LOCATED AT POINTS OF INGRESS/EGRESS, THE PRACTICE IS USED TO REDUCE THE AMOUNT OF MUD TRACKED OFF-SITE WITH CONSTRUCTION TRAFFIC.

SPECIFICATIONS FOR CONSTRUCTION ENTRANCE



1. STONE SIZE - # 2 (1.5-2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDENCE LOTS).
3. THICKNESS - THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
4. WIDTH - THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE - A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

GEOTEXTILE SPECIFICATIONS FOR CONSTRUCTION ENTRANCES	
MINIMUM TENSILE STRENGTH	200 LBS.
MINIMUM PUNCTURE STRENGTH	80 PSI
MINIMUM TEAR STRENGTH	50 LBS
MINIMUM BURST STRENGTH	320 PSI
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	EOS < 0.6MM
PERMITTIVITY	1x10 ⁻³ CM/SEC

6. TIMING - THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
7. CULVERT - A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
8. WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
9. MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
10. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION-SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
11. REMOVAL - THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

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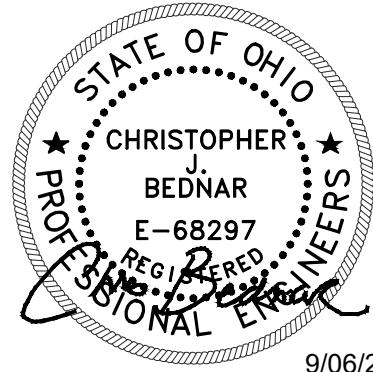
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PROJECT NAME

TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME



1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019
REV. NO.	DESCRIPTION	DATE

PROJECT NO: 20190070

DRAWN BY: CDG

APPROVED BY: CJB

DATE: 09/06/2019

SCALE:

SHEET TITLE

SWPPP DETAILS

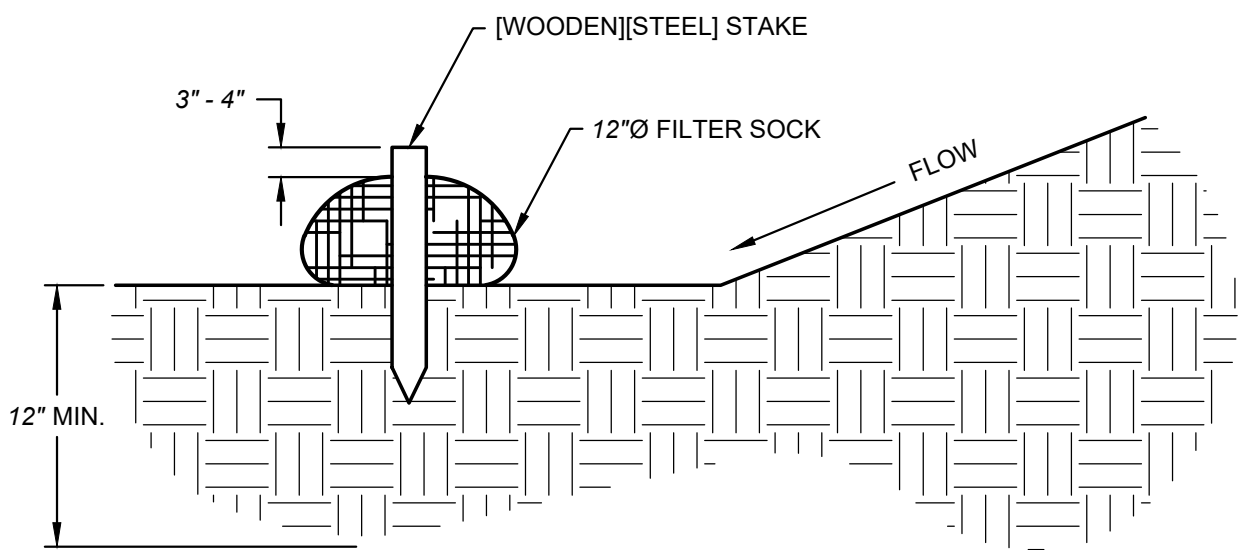
SHEET NUMBER

C2.03

FILTER SOCK FS

DESCRIPTION

FILTER SOCKS ARE SEDIMENT-TRAPPING DEVICES USING COMPOST INSERTED INTO A FLEXIBLE, PERMEABLE TUBE WITH A PNEUMATIC BLOWER DEVICE OR EQUIVALENT. FILTER SOCKS TRAP SEDIMENT BY FILTERING WATER PASSING THROUGH THE BERM AND ALLOWING WATER TO POND, CREATING A SETTLING OF SOLIDS.



SECTION

SPECIFICATIONS FOR FILTER SOCK

- MATERIALS - COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF A PARTICLES RANGING FROM 3/8" TO 2".
- FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

INSTALLATION:

- FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
- FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
- FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.

MAINTENANCE:

- ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITIONAL AT ALL TIMES.
- REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
- WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
- REMOVAL - FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

DUST CONTROL DC

DESCRIPTION

DUST CONTROL INVOLVES PREVENTING OR REDUCING DUST FROM EXPOSED SOILS OR OTHER SOURCES DURING LAND DISTURBING, DEMOLITION AND CONSTRUCTION ACTIVITIES TO REDUCE THE PRESENCE OF AIR-BORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.

SPECIFICATIONS FOR DUST CONTROL

- VEGETATIVE COVER AND/MULCH - APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 21 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING; PERMANENT SEEDING; MULCHING PRACTICES; AND TREE AND NATURAL AREA PROTECTION PRACTICES.
- WATERING - SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- SPRAY-ON ADHESIVES - APPLY ADHESIVE ACCORDING TO THE FOLLOWING TABLE OR MANUFACTURERS' INSTRUCTIONS.
- STONE - GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
- BARRIERS - EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT TO CONTROL AIR CURRENTS AND BLOWING SOIL.
- CALCIUM CHLORIDE - THIS CHEMICAL MAY BE APPLIED BY MECHANICAL SPREADER AS LOOSE, DRY GRANULES OR FLAKES AT A RATE THAT KEEPS THE SURFACE MOIST BUT NOT SO HIGH AS TO CAUSE WATER POLLUTION OR PLANT DAMAGE. APPLICATION RATES SHOULD BE STRICTLY IN ACCORDANCE WITH SUPPLIERS' SPECIFIED RATES.
- OPERATION AND MAINTENANCE - WHEN TEMPORARY DUST CONTROL MEASURES ARE USED; REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL. STREET CLEANING - PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED, UTILIZING A STREET SWEEPER OR BUCKET -TYPE ENDLOADER OR SCRAPER.

ADHESIVES FOR DUST CONTROL

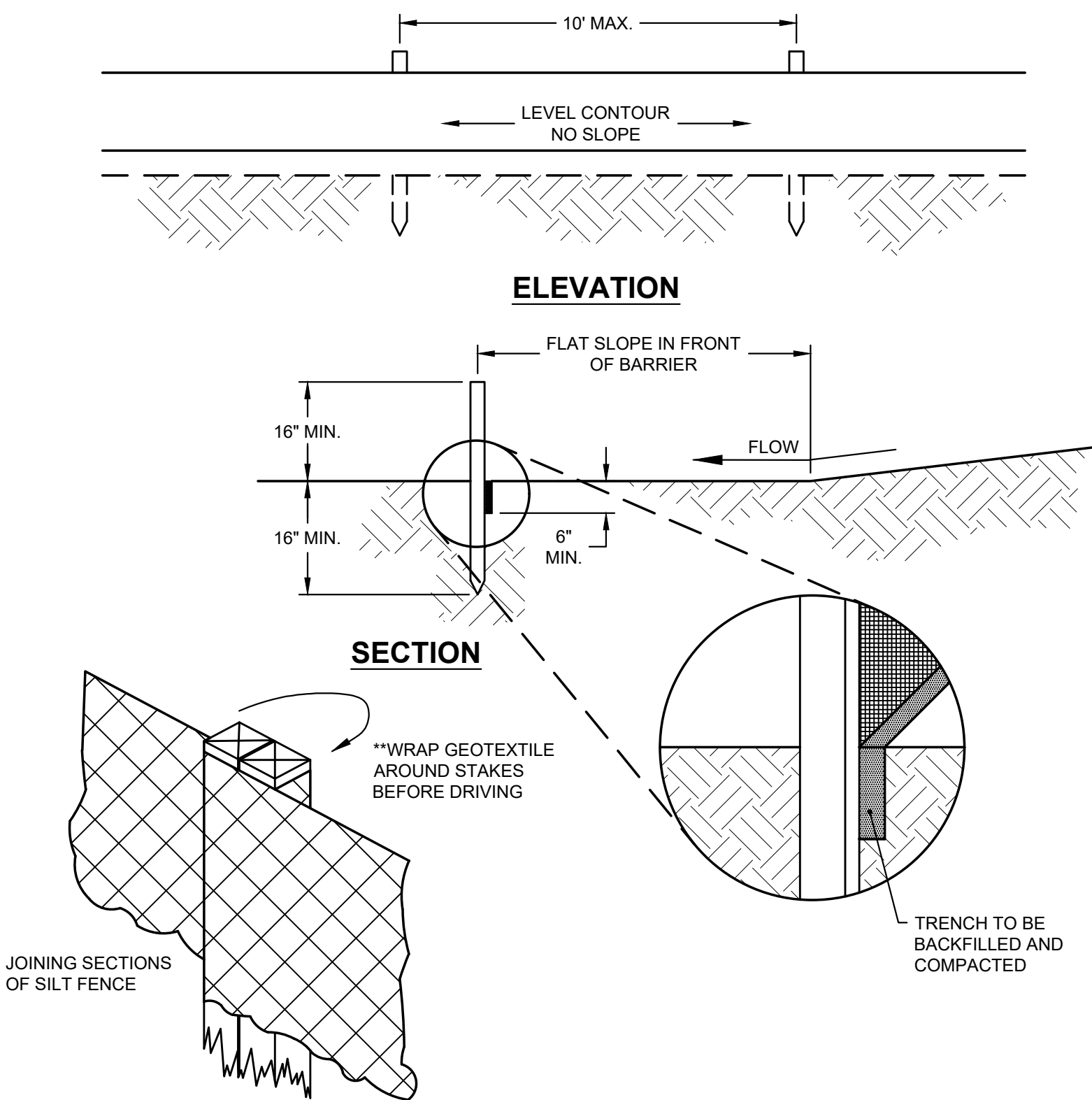
ADHESIVE	WATER DILUTION (ADHESIVE: WATER)	NOZZLE TYPE	APPLICATION RATE (GAL./AC.)
LATEX EMULSION	12.5:1	FINE	235
RESIN IN WATER ACRYLIC EMULSION (NO-TRAFFIC)	4:1	FINE	300
ACRYLIC EMULSION (NO-TRAFFIC)	7:1	COARSE	450
ACRYLIC EMULSION (TRAFFIC)	3.5:1	COARSE	350

SILT FENCE SF

DESCRIPTION

SILT FENCE IS A SEDIMENT-TRAPPING PRACTICE UTILIZING A GEOTEXTILE FENCE, TOPOGRAPHY AND SOMETIMES VEGETATION TO CAUSE SEDIMENT DEPOSITION. SILT FENCE REDUCES RUNOFF'S ABILITY TO TRANSPORT SEDIMENT BY PONDING RUNOFF AND DISSIPATING SMALL RILLS OR CONCENTRATED FLOW INTO UNIFORM SHEET FLOW. SILT FENCE IS USED TO PREVENT SEDIMENT-LADEN SHEET RUNOFF FROM ENTERING INTO DOWNSTREAM CREEKS AND SEWER SYSTEMS.

SPECIFICATIONS FOR SILT FENCE



CONCRETE WASHOUT DETAILS

SCALE: NONE

NOTES:

- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
- A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30'-0" OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
- MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
- HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

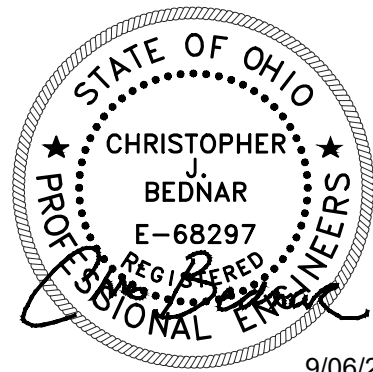
CWA INSTALLATION NOTES

- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- BERM SURROUNDING SIDES AND BACK OF CWA SHALL HAVE A MINIMUM HEIGHT OF 1'-0".
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

- INSPECT BMP'S EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMP'S SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMP'S AS SOON AS POSSIBLE (AND ALWAYS WITH 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMP'S IN EFFECTIVE OPERATING CONDITIONS. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMP'S HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'-0".
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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9/06/2019

PROJECT NAME

TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME



1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019

REV. NO.	DESCRIPTION	DATE
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PROJECT NO: 20190070

DRAWN BY: CDG

APPROVED BY: CJB

DATE: 09/06/2019

SCALE:

SHEET TITLE

SWPPP DETAILS

SHEET NUMBER

C2.04

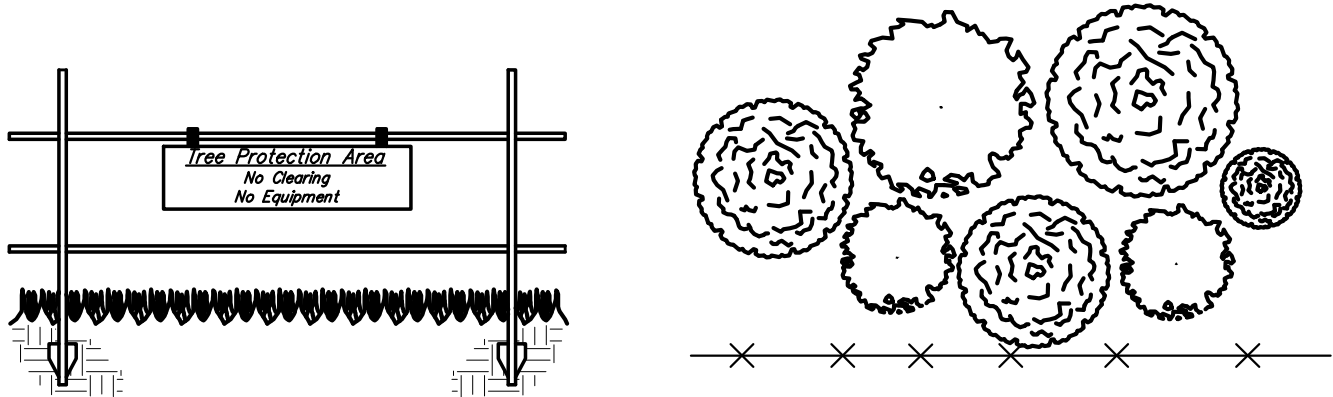
TREE AND NATURAL AREA PRESERVATION

TP

DESCRIPTION

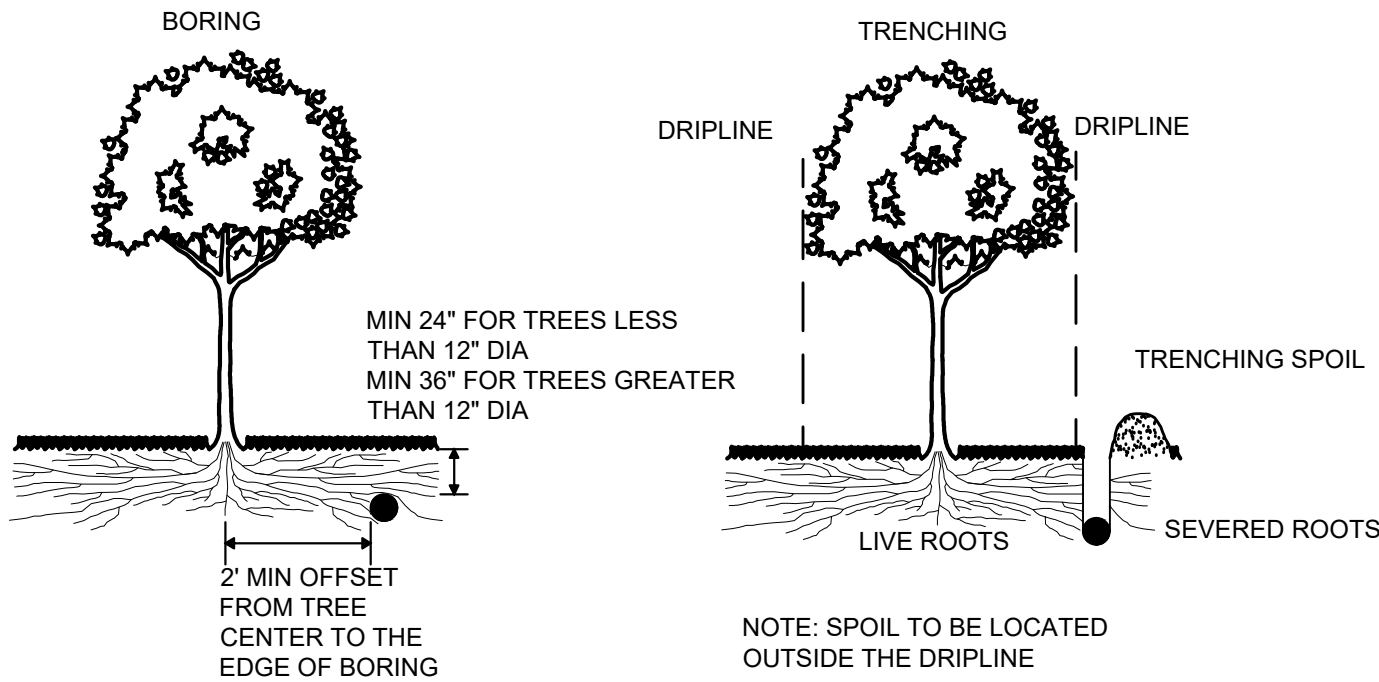
TREE AND NATURAL AREA PRESERVATION INSURES THAT IMPORTANT VEGETATED AREAS EXISTING ON-SITE PRIOR TO DEVELOPMENT WILL SURVIVE THE CONSTRUCTION PROCESS. TREE PROTECTION AREAS PREVENT THE LOSSES AND DAMAGES TO TREES THAT ARE COMMON AS A RESULT OF CONSTRUCTION. THIS PRACTICE IS USEFUL TO PROTECT INDIVIDUAL TREES, AND AREAS OF FOREST OR NATURAL VEGETATION IN STREAM CORRIDORS, OR OPEN SPACE.

SPECIFICATIONS FOR TREE AND NATURAL AREA PRESERVATION:



1. TREE AND NATURAL AREA PRESERVATION SHALL BE FENCED PRIOR TO BEGINNING CLEARING OPERATIONS.
2. FENCE MATERIALS SHALL BE METAL FENCE POSTS WITH TWO STRANDS OF HIGH TENSILE WIRE, PLASTIC FENCE OR SNOW FENCE.
3. SIGNAGE SHALL CLEARLY IDENTIFY THE TREE AND NATURAL PRESERVATION AREA AND STATE THAT NO CLEARING OR EQUIPMENT IS ALLOWED WITHIN IT.
4. FENCE SHALL BE PLACED AS SHOWN ON PLANS AND BEYOND THE DRIP LINE OR CANOPY OF TREES TO BE PROTECTED.
5. IF ANY CLEARING IS DONE AROUND SPECIMEN TREES IT SHALL BE DONE BY CUTTING AT GROUND LEVEL WITH HAND HELD TOOLS AND SHALL NOT BE GRUBBED OR PULLED OUT. NO CLEARING SHALL BE DONE IN BUFFER STRIPS OR OTHER PRESERVED FORESTED AREAS.
6. NO FILLING OR STOCKPILING OF MATERIALS SHALL OCCUR WITHIN THE TREE PROTECTION AREA, INCLUDING DEPOSITION OF SEDIMENT.

SPECIFICATIONS FOR PROTECTION DURING UTILITY INSTALLATION:



1. WHERE UTILITIES MUST RUN THROUGH A TREE'S DRIPLINE, TUNNELING SHOULD BE USED TO MINIMIZE ROOT DAMAGE. TUNNELING SHOULD BE PERFORMED AT A MINIMUM DEPTH OF 24 INCHES FOR TREES LESS THAN 12 INCHES IN DIAMETER OR AT A MINIMUM DEPTH OF 36 INCHES FOR LARGER DIAMETER TREES.
2. WHERE TUNNELING WILL BE PERFORMED WITHIN THE DRIPLINE OF A TREE, THE TUNNEL SHOULD BE PLACED A MINIMUM OF 2 FEET AWAY FROM THE TREE TRUNK TO AVOID TAPROOTS.
3. MINIMIZE EXCAVATION OR TRENCHING WITHIN THE DRIPLINE OF THE TREE. ROUTE TRENCHES AROUND THE DRIPLINE OF TREES.
4. ROOTS TWO INCHES OR LARGER THAT ARE SEVERED BY TRENCHING SHOULD BE SAWN OFF NEATLY IN ORDER TO ENCOURAGE NEW GROWTH AND DISCOURAGE DECAY.
5. SOIL EXCAVATED DURING TRENCHING SHALL BE PILED ON THE SIDE AWAY FROM THE TREE.
6. ROOTS SHALL BE KEPT MOIST WHILE TRENCHES ARE OPEN AND REFILLED IMMEDIATELY AFTER UTILITIES ARE INSTALLED OR REPAIRED.

TEMPORARY SEEDING

TS

DESCRIPTION

TEMPORARY SEEDINGS ESTABLISH TEMPORARY COVER ON DISTURBED AREAS BY PLANTING APPROPRIATE RAPIDLY GROWING ANNUAL GRASSES OR SMALL GRAINS. TEMPORARY SEEDING PROVIDES EROSION CONTROL ON AREAS IN BETWEEN CONSTRUCTION OPERATIONS. GRASSES, WHICH ARE QUICK GROWING, ARE SEEDED AND USUALLY MULCHED TO PROVIDE PROMPT, TEMPORARY SOIL STABILIZATION. IT EFFECTIVELY MINIMIZES THE AREA OF A CONSTRUCTION SITE PRONE TO EROSION AND SHOULD BE USED EVERYWHERE THE SEQUENCE OF CONSTRUCTION OPERATIONS ALLOWS VEGETATION TO BE ESTABLISHED.

SPECIFICATIONS FOR TEMPORARY SEEDING

TEMPORARY SEEDING SPECIES SELECTION			
SEEDING DATES	SPECIES	LB./1,000 SF	LB./ACRE
MARCH 1 TO AUGUST 15	OATS	3	128 (4 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	55
AUGUST 16 TO NOVEMBER	PERENNIAL RYEGRASS	3.25	142
	CREEPING RED FESCUE	0.4	17
	KENTUCKY BLUEGRASS	0.4	17
	OATS	3	128 (3 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1	40
NOVEMBER 1 TO FEB. 29	RYE	3	112 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	WHEAT	3	120 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	40
	PERENNIAL RYEGRASS	3.25	40
	CREEPING RED FESCUE	0.4	40
	KENTUCKY BLUEGRASS	0.4	0
NOVEMBER 1 TO FEB. 29		USE MULCH ONLY OR DORMANT SEEDING	

NOTE: OTHER APPROVED SPECIES MAY BE SUBSTITUTED.

NOTES:

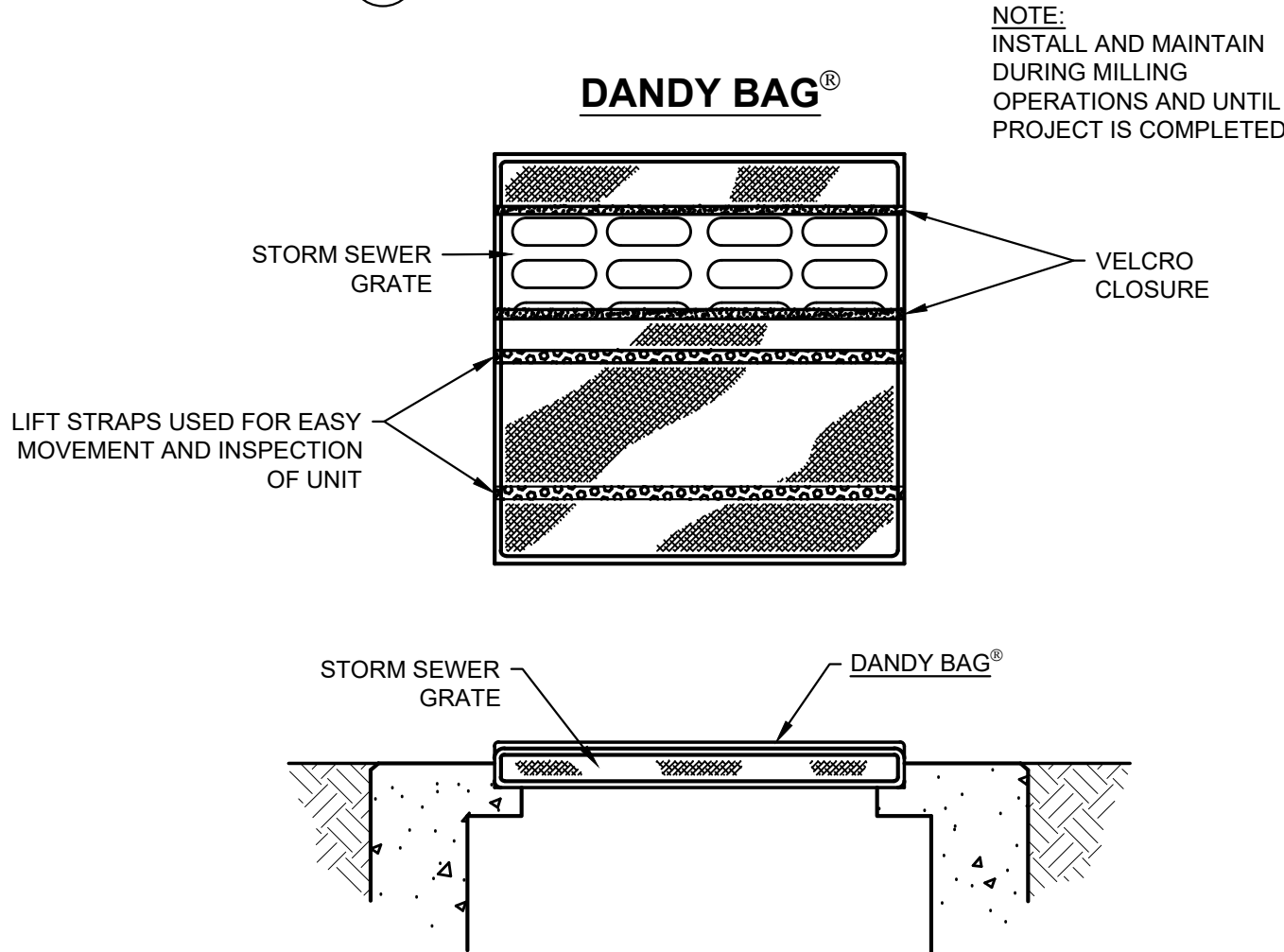
1. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.
2. TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 21 DAYS OR GREATER. THESE IDLE AREAS SHALL BE SEEDED WITHIN 7 DAYS AFTER GRADING.
3. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHOULD NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.
4. SOIL AMENDMENTS - TEMPORARY VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION, WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. BASE RATES FOR LIME AND FERTILIZER SHALL BE USED.
5. SEEDING METHOD - SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

MULCHING TEMPORARY SEEDING

1. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH, WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.
2. MATERIALS:
 - STRAW - IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONS/ACRE OR 90 LBS./1,000 SQ.-FT. (2-3 BALES)
 - HYDROSEEDERS - IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2,000 LBS./AC. OR 46 LB./1,000 SQ.-FT.
 - OTHER - OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TON/AC.
3. STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:
 - MECHANICAL - A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT LEFT TO A LENGTH OF APPROXIMATELY 6 INCHES.
 - MULCH NETTING - NETTING SHALL BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.
 - SYNTHETIC BINDERS - SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
 - WOOD-CELLULOSE FIBER - WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WT. 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.

INLET PROTECTION

IP

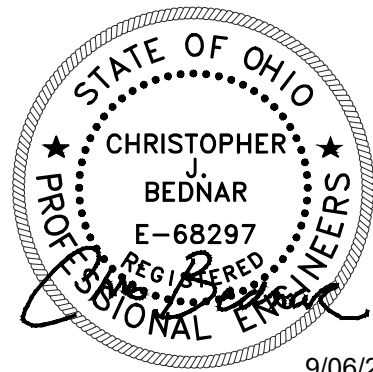


NOTE: THE DANDY BAG WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 X 10
PUNCTURE STRENGTH	ASTM D 4833	kN (LBS)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	KPa (PSI)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (LBS)	0.51 (115) X 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US STD SIEVE)	0.425 (4)
FLOW RATE	ASTM D 4491	1/MIN/M ² (GAL/MIN/FT ²)	5907 (145)
PERMITTIVITY	ASTM D 4491	SEC ⁻¹	2.1000

*NOTE: ALL DANDY BAGS® CAN BE ORDERED WITH OUR OPTIONAL OIL ABSORBENT PILLOWS



PROJECT NAME

TRAIL LAKE PARK
PARKING LOT
AND DRIVE

CLIENT NAME



1	100% OWNER'S REVIEW	08/22/2019
2	BID SET	09/06/2019

REV. NO. DESCRIPTION DATE

PROJECT NO: 20190070
DRAWN BY: CDG
APPROVED BY: CJB
DATE: 09/06/2019
SCALE:
SHEET TITLE

SWPPP DETAILS

SHEET NUMBER

C2.05