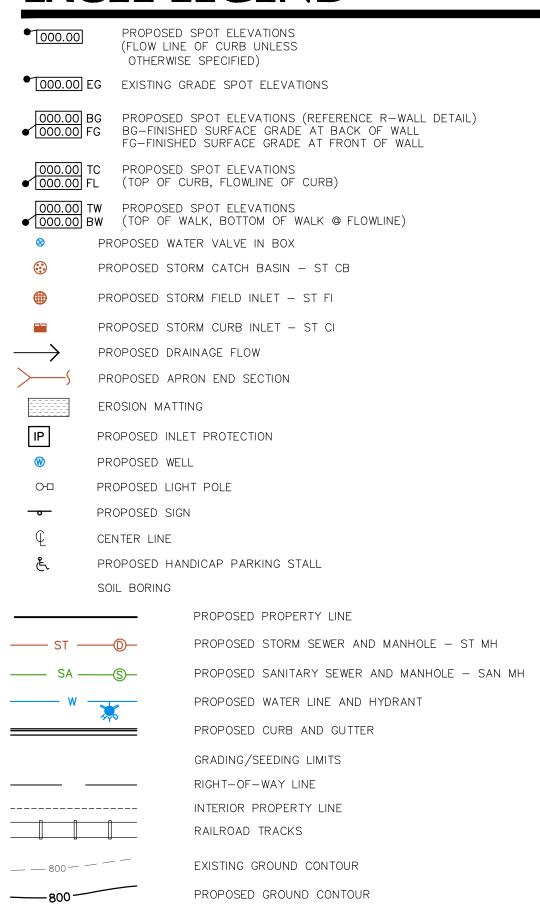
PROPOSED DEVELOPMENT FOR: STARBUCKS & PANDA EXPRESS

MASSILLON, OHIO

EXCEL LEGEND



CIVIL SHEET INDEX

C0.1 CIVIL COVER AND SPECIFICATION SHEET C1.0 EXISTING SITE AND DEMOLITION PLAN C1.1 SITE PLAN C1.2A GRADING AND EROSION CONTROL PLAN C1.2B GRADING AND EROSION CONTROL PLAN - CROSS SECTION VIEWS C1.3A UTILITY PLAN C1.3B UTILITY PLAN - STORM SEWER PLAN/PROFILE C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS C3.1 SITE PHOTOMETRIC PLAN & DETAILS	SHEET	SHEET TITLE			
C1.0 EXISTING SITE AND DEMOLITION PLAN C1.1 SITE PLAN C1.2A GRADING AND EROSION CONTROL PLAN C1.2B GRADING AND EROSION CONTROL PLAN - CROSS SECTION VIEWS C1.3A UTILITY PLAN C1.3B UTILITY PLAN - STORM SEWER PLAN/PROFILE C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS		•			
C1.1 SITE PLAN C1.2A GRADING AND EROSION CONTROL PLAN C1.2B GRADING AND EROSION CONTROL PLAN - CROSS SECTION VIEWS C1.3A UTILITY PLAN C1.3B UTILITY PLAN - STORM SEWER PLAN/PROFILE C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C0.1	CIVIL COVER AND SPECIFICATION SHEET			
C1.2A GRADING AND EROSION CONTROL PLAN C1.2B GRADING AND EROSION CONTROL PLAN - CROSS SECTION VIEWS C1.3A UTILITY PLAN C1.3B UTILITY PLAN - STORM SEWER PLAN/PROFILE C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C1.0	EXISTING SITE AND DEMOLITION PLAN			
C1.2B GRADING AND EROSION CONTROL PLAN - CROSS SECTION VIEWS C1.3A UTILITY PLAN C1.3B UTILITY PLAN - STORM SEWER PLAN/PROFILE C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C1.1	SITE PLAN			
C1.3A UTILITY PLAN C1.3B UTILITY PLAN - STORM SEWER PLAN/PROFILE C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C1.2A	GRADING AND EROSION CONTROL PLAN			
C1.3B UTILITY PLAN - STORM SEWER PLAN/PROFILE C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C1.2B	GRADING AND EROSION CONTROL PLAN - CROSS SECTION VIEWS			
C1.4 LANDSCAPE AND RESTORATION PLAN C2.0 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C1.3A	UTILITY PLAN			
C2.0 DETAILS C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C1.3B	UTILITY PLAN - STORM SEWER PLAN/PROFILE			
C2.1 DETAILS C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C1.4	LANDSCAPE AND RESTORATION PLAN			
C2.2 PANDA EXPRESS SITE NOTES & DETAILS C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C2.0	DETAILS			
C2.3 EROSION CONTROL DETAILS C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C2.1	DETAILS			
C2.4 EROSION CONTROL DETAILS C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C2.2	PANDA EXPRESS SITE NOTES & DETAILS			
C2.5 CITY OF MASSILLON DETAILS C2.6 CITY OF MASSILLON DETAILS	C2.3	EROSION CONTROL DETAILS			
C2.6 CITY OF MASSILLON DETAILS	C2.4	EROSION CONTROL DETAILS			
	C2.5	CITY OF MASSILLON DETAILS			
C3.1 SITE PHOTOMETRIC PLAN & DETAILS	C2.6	CITY OF MASSILLON DETAILS			
	C3.1	SITE PHOTOMETRIC PLAN & DETAILS			

CONTACTS

CIVIL ENGINEER

EXCEL ENGINEERING
100 CAMELOT DRIVE
FOND DU LAC, WISCONSIN 54935
CONTACT: JASON DAYE, PE
P: (920) 926-9800
F: (920) 926-9801



CONTRACTOR SHALL CALL OUPS AT 1-800-362-2764 AT LEAST 48 HOURS BUT NO MORE THAN 10 WORKING DAYS PRIOR TO EXCAVATION ON SITE.

DIVISION 31 EARTH WORK

31 10 00 SITE CLEARING (DEMOLITION)

- A. CONTRACTOR SHALL CALL OHIO ONE CALL AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING SITE DEMOLITION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD
- B. DEMOLITION PLAN IS AN OVERVIEW OF DEMOLITION TO TAKE PLACE ON SITE. CONTRACTOR TO FIELD VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE, REPLACE, OR DEMOLISH ALL ITEMS AS NEEDED DURING CONSTRUCTION.

 C. CONTRACTOR TO PROTECT EXISTING IMPROVEMENTS THAT ARE SCHEDULED TO REMAIN. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPLACED
- AT CONTRACTORS EXPENSE.

 D. ALL CONCRETE NOTED TO BE REMOVED SHALL BE REMOVED TO THE NEAREST CONTROL JOINT.

31 20 00 EARTH MOVING

- A. CONTRACTOR SHALL CALL OHIO ONE CALL AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING EXCAVATION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.

 B. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT FOR ALL EXCAVATION, GRADING, FILL AND BACKFILL WORK AS REQUIRED TO COMPLETE THE GENERAL CONSTRUCTION WORK. ALL EXCAVATION AND BACKFILL FOR ELECTRICALS AND MECHANICALS ARE THE RESPONSIBILITY OF THE
- RESPECTIVE CONTRACTOR UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS.

 C. ALL ORGANIC TOPSOIL INSIDE THE BUILDING AREA, UNDER PAVED AREAS, AND AT SITE FILL AREAS SHALL BE REMOVED. PROOF ROLL SUBGRADES BEFORE PLACING FILL WITH HEAVY PNEUMATIC-TIRED EQUIPMENT, SUCH AS A FULLY-LOADED TANDEM AXLE DUMP TRUCK, TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. CONTRACTOR SHALL VERIFY TOPSOIL DEPTHS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ACCOUNT FOR EXISTING CONDITIONS PRIOR TO SUBMITTING BID FOR THE PROJECT. EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED IN THE PLANS OR BY LOCAL ZONING
- D. PLACE AND COMPACT FILL MATERIAL IN LAYERS TO REQUIRED ELEVATIONS. UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL LAYER BEFORE COMPACTION AS RECOMMENDED TO ACHIEVE SPECIFIED DRY DENSITY. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT IS TOO WET TO COMPACT TO SPECIFIED DRY DENSITY.

 E. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
- EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.

 F. COMPACT THE SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D 698, STANDARD PROCTOR TEST. FILL MAY NOT BE PLACED ON FROZEN GROUND AND NO FROZEN MATERIALS MAY BE USED FOR BACK FILL. APPLY THE MORE STRINGENTS REQUIREMENTS WHEN COMPARED AND FACULA MAY DEPROCHABLE TO A DEPTACE THAN 18 PERCENTAGE.
- UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS MORE THAN 3 FEET BELOW THE SLAB PLACE A DRAINAGE COURSE LAYER OF 3/4"
 CRUSHED STONE, WITH 5% TO 12% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT THE
 SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.
 UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS WITHIN 3 FEET OF THE SLAB SURFACE- PLACE A DRAINAGE COURSE LAYER OF CLEAN
 3/4" CRUSHED STONE, WITH NO MORE THAN 5% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT
- THE SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.

 4. UNDER EXTERIOR CONCRETE AND ASPHALT PAVEMENTS COMPACT THE SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.

 5. UNDER WALKWAYS COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.

 6. UNDER LAWN OR UNPAVED AREAS COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL, TO NOT LESS THAN 85 PERCENT.
- G. CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS.

 CONTRACTOR SHALL PROVIDE DOCUMENTATION OF PASSING DENSITY TESTING AND PROOF-ROLLING TO ENGINEER UPON COMPLETION. IT IS

 SUGGESTED THAT THE GEOTECHNICAL FIRM USED TO PERFORM THE SUBSURFACE SOIL INVESTIGATION BE ENGAGED FOR THE FIELD QUALITY

 CONTROL TESTS.

 H. ALLOW THE TESTING AGENCY TO TEST AND INSPECT SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTHWORK
- ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS. PROVIDE ONE TEST FOR EVERY 2000 SQUARE FEET OF PAVED AREA OR BUILDING SLAB, ONE TEST FOR EACH SPREAD FOOTING, AND ONE TEST FOR EVERY 50 LINEAR FEET OF WALL STRIP FOOTING.

 I. WHEN THE TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS
- I. THE BUILDING SITE SHALL BE GRADED TO PROVIDE DRAINAGE AWAY FROM THE BUILDING AS INDICATED ON THE PLANS. SITE EARTHWORK SHALL BE GRADED TO WITHIN 0.10' OF REQUIRED EARTHWORK ELEVATIONS ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE

31 30 00 EROSION CONTROL/STORMWATER MANAGEMENT & POLLUTION PREVENTION

- A. THE DESIGN ENGINEER SHALL PREPARE A SITE SPECIFIC EROSION CONTROL AND A STORMWATER MANAGEMENT PLAN PURSUANT TO THE
 REQUIREMENTS OF THE OHIO EPA PERMIT NO OH000005 (CONSTRUCTION GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES). THE
 DESIGN ENGINEER SHALL ALSO FILE A CONSTRUCTION NOTICE OF INTENT WITH THE OHIO EPA.
 B. THE CONTRACTOR SHALL KEEP THE NOTICE OF INTENT PERMIT, APPROVED EROSION CONTROL AND STORMWATER MANAGEMENT PLANS, SWPPP,
- TERMINATED.

 C. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL EROSION CONTROL PERMITS.

 D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE MONITORING, MAINTENANCE, AND REPORTING REQUIREMENTS OF THE CONSTRUCTION GENERAL PERMIT. INSPECTIONS OF IMPLEMENTED EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MUST AT A MINIMUM BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5" OR MORE. A PRECIPITATION EVENT MAY BE CONSIDERED TO BE THE TOTAL AMOUNT OF PRECIPITATION RECORDED IN ANY CONTINUOUS 24-HOUR PERIOD. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH THE EXCEPTION OF A SEDIMENT SETTLING POND, IT MUST BE REPAIRED OR MAINTAINED WITHIN THREE DAYS OF THE INSPECTION. SEDIMENT SETTLING PONDS MUST BE REPAIRED OR MAINTAINED WITHIN TEN DAYS OF THE INSPECTION. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE

AND PLAN AMENDMENTS ON THE CONSTRUCTION SITE AT ALL TIMES PURSUANT TO OHIO EPA REQUIREMENTS UNTIL PERMIT COVERAGE IS

- MAINTAINED WITHIN THREE DAYS OF THE INSPECTION. SEDIMENT SETTLING PONDS MUST BE REPAIRED OR MAINTAINED WITHIN TEN DAYS OF THE INSPECTION. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWPPP MUST BE AMENDED AND THE NEW CONTROL PRACTICE MUST BE INSTALLED WITHIN 10 DAYS OF INSPECTION. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT YET BEEN IMPLEMENTED IN ACCORDANCE WITH THE SWPPP SCHEDULE, THE CONTROL PRACTICE MUST BE IMPLEMENTED WITHIN 10 DAYS FROM THE DATE OF INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD MUST CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT NEEDED.
- E. THE CONTRACTOR SHALL MAINTAIN, AT THE CONSTRUCTION SITE OR AVAILABLE VIA AN INTERNET WEBSITE, WEEKLY WRITTEN REPORTS OF ALL INSPECTIONS CONDUCTED. INSPECTION LOGS FOUND WITHIN THE SITE SPECIFIC SWPPP SHALL BE USED. WEEKLY INSPECTION REPORTS SHALL INCLUDE ALL OF THE FOLLOWING:
 1. THE DATE, TIME, AND LOCATION OF THE CONSTRUCTION SITE INSPECTION.
- THE NAME OF THE INDIVIDUAL WHO PERFORMED THE INSPECTION.
 AN ASSESSMENT OF THE CONDITION OF THE EROSION AND SEDIMENT CONTROLS.
 A DESCRIPTION OF ANY PROSION AND SEDIMENT CONTROL REST MANAGEMENT PRACTICE IM

PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.

- 4. A DESCRIPTION OF ANY EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE IMPLEMENTATION AND MAINTENANCE PERFORMED.
 5. A DESCRIPTION OF THE PRESENT PHASE OF LAND DISTURBING CONSTRUCTION ACTIVITY AT THE CONSTRUCTION SITE.
 EROSION AND SEDIMENT CONTROL IMPLEMENTED DURING CONSTRUCTION SHALL STRICTLY COMPLY WITH THE GUIDELINES AND REQUIREMENTS
 SET FORTH IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL. THE METHODS AND TYPES OF EROSION CONTROL WILL BE
 DEPENDENT ON THE LOCATION AND TYPE OF WORK INVOLVED. ALL SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD
 CONDITIONS AT THE TIME OF CONSTRUCTION, AND INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL. BELOW
 IS A LIST OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES TO ACHIEVE THE PERFORMANCE STANDARDS REQUIRED.
- SILT FENCE SHALL BE PLACED ON SITE AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. SILT FENCE SHALL ALSO BE PROVIDED AROUND
 THE PERIMETER OF ALL SOIL STOCKPILES THAT WILL EXIST FOR MORE THAN 7 DAYS. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER
 AND LAND DEVELOPMENT MANUAL.
 DITCH CHECKS SHALL BE PROVIDED TO REDUCE THE VELOCITY OF WATER FLOWING IN DITCH BOTTOMS. PLACE AT LOCATIONS SHOWN ON THE
 EROSION CONTROL PLAN. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
- 3. STONE TRACKING PADS AND TRACKOUT CONTROL PRACTICES SHALL BE PLACED AT ALL CONSTRUCTION SITE ENTRANCES AND SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE CONSTRUCTION SITE. SEE THE EROSION CONTROL PLAN FOR LOCATIONS. SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. OTHER TRACKOUT CONTROL PRACTICES INCLUDING STABILIZED WORK SURFACES, MANUFACTURED TRACKOUT CONTROL DEVICES, TIRE WASHING, AND STREET/PAVEMENT CLEANING SHALL BE IMPLEMENTED AS NECESSARY TO MITIGATE THE TRACKOUT OF SEDIMENT OFFSITE. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
 4. STORM DRAIN INLET PROTECTION SHALL BE PROVIDED FOR ALL NEW AND DOWNSTREAM STORM CATCH BASINS AND CURB INLETS. FOLLOW
- 5. DUST CONTROL MEASURES SHALL BE PROVIDED TO REDUCE OR PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. CONTROL MEASURES INCLUDE APPLYING MULCH AND ESTABLISHING VEGETATION, WATER SPRAYING, SURFACE ROUGHENING, APPLYING POLYMERS, SPRAY-ON TACKIFIERS, CHLORIDES, AND BARRIERS. SOME SITES MAY REQUIRE AN APPROACH THAT UTILIZES A COMBINATION OF MEASURES FOR DUST CONTROL. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
 6. THE USE. STORAGE, AND DISPOSAL OF CHEMICALS. CEMENT. AND OTHER COMPOUNDS AND MATERIALS USED ON SITE SHALL BE MANAGED.
- DURING THE CONSTRUCTION PERIOD TO PREVENT THEIR TRANSPORT BY RUNOFF INTO WATERS OF THE STATE.

 CONTRACTOR SHALL PROVIDE AN OPEN AGGREGATE CONCRETE TRUCK WASHOUT AREA ON SITE. CONTRACTOR TO ENSURE THAT CONCRETE WASHOUT SHALL BE CONTAINED TO THIS DESIGNATED AREA AND NOT BE ALLOWED TO RUN INTO STORM INLETS OR INTO THE OVERLAND STORMWATER DRAINAGE SYSTEM. WASHOUT AREA SHALL BE REMOVED UPON COMPLETION OF CONSTRUCTION.

PLAN SPECIFICATIONS (BASED ON CSI FORMAT)

- 8. TEMPORARY SITE RESTORATION SHALL TAKE PLACE IN DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 14 DAYS AND REQUIRES VEGETATIVE COVER FOR LESS THAN ONE YEAR. THIS TEMPORARY SITE RESTORATION REQUIREMENT ALSO APPLIES TO SOIL STOCKPILES THAT EXIST FOR MORE THAN 7 DAYS. PERMANENT RESTORATION APPLIES TO AREAS WHERE PERENNIAL VEGETATIVE COVER IS NEEDED TO PERMANENTLY STABILIZE AREAS OF EXPOSED SOIL. PERMANENT STABILIZATION SHALL OCCUR WITHIN 2 WORKING DAYS OF FINAL GRADING. TOPSOIL, SEED, AND MULCH SHALL BE IN GENERAL CONFORMANCE WITH THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL RECOMMENDATIONS AND SHALL MEET THE
- SPECIFICATIONS FOUND IN THE LANDSCAPING AND SITE STABILIZATION SECTION OF THIS CONSTRUCTION DOCUMENT. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR FINAL STABILIZATION MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.

 9. IF SITE DEWATERING IS REQUIRED FOR PROPOSED CONSTRUCTION ACTIVITIES, ALL SEDIMENT LADEN WATER GENERATED DURING THE DEWATERING PROCESS SHALL BE TREATED TO REMOVE SEDIMENT PRIOR TO DISCHARGING OFF-SITE OR TO WATERS OF THE STATE. FOLLOW ALL
- DEWATERING PROCESS SHALL BE TREATED TO REMOVE SEDIMENT PRIOR TO DISCHARGING OFF-SITE OR TO WATERS OF THE STATE. FOLLOW ALL PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.

 10. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION WORK OR A STORM EVENT SHALL BE CLEANED UP BY THE END OF EACH WORKING DAY. DUST CONTROL REQUIREMENTS SHALL BE FOLLOWED PER THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
- FLUSHING SHALL NOT BE ALLOWED.

 G. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL THE AREA(S) SERVED HAVE ESTABLISHED VEGETATIVE COVER.

 H. ONCE THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED AND TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICES HAVE BEEN
- REMOVED, THE CONTRACTOR SHALL FILE A CONSTRUCTION NOTICE OF TERMINATION WITH THE OHIO EPA IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.

 I. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL GIVE THE OWNER COPIES OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLANS, SWPPP, AMENDMENTS TO PLANS, SUPPORTING PLAN DATA, AND CONSTRUCTION SITE EROSION CONTROL INSPECTION
- REPORTS. THE OWNER SHALL RETAIN THESE FOR A PERIOD OF 3 YEARS FROM THE DATE OF TERMINATING COVERAGE UNDER THE OHIO EPA GENERAL PERMIT.

 J. ALL POST CONSTRUCTION STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES SHALL BE CONSTRUCTED BEFORE THE SITE HAS UNDERGONE FINAL STABILIZATION.

DIVISION 32 EXTERIOR IMPROVEMENTS

32 10 00 AGGREGATE BASE & ASPHALT PAVEMENT

- A. CONTRACTOR TO PROVIDE COMPACTED AGGREGATE BASE AND HOT MIX ASPHALT PAVEMENT WHERE INDICATED ON THE PLANS. ALL AGGREGATE PROVIDED MUST COMPLY WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). PROVIDE HOT MIX ASPHALT MIXTURE TYPES PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). CONTRACTOR SHALL OBTAIN AND REVIEW SOILS REPORT FOR RECOMMENDATIONS FOR GEO-GRID / GEOTEXTILE BELOW CRUSHED AGGREGATE (IF APPLICABLE). CONTRACTOR TO PROVIDE AGGREGATE BASE AND HOT MIX ASPHALT PAVEMENT TYPES AND DEPTHS AS INDICATED BELOW OR PER GEOTECHNICAL RECOMMENDATIONS:
- HEAVY ASPHALT PAVING SECTION: 1-1/2" SURFACE COURSE
- 2-1/2" BINDER COURSE 12" OF 1-1/4" CRUSHED AGGREGATE
- B. CONTRACTOR TO COMPACT THE AGGREGATE BASE, ASPHALT BINDER COURSE, AND ASPHALT SURFACE COURSE TO AN AVERAGE DENSITY PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). ALL ASPHALT PAVEMENT AREAS SHALL BE PAVED TO WITHIN 0.05' OF DESIGN SURFACE GRADES WITH POSITIVE DRAINAGE BEING MAINTAINED IN ACCORDANCE WITH DESIGN PLANS. A MINIMUM OF 1.5% SLOPE SHALL BE MAINTAINED IN ALL ASPHALT PAVEMENT AREA.

 C. HOT MIX ASPHALT CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF GEOTECHNICAL REPORT OR CONSTRUCTION
- D. CONTRACTOR TO PROVIDE 4" WIDE WHITE PAINTED STRIPING FOR PARKING STALLS, TRAFFIC LANES, AND NO PARKING AREAS. PAINT MARKINGS SHALL ALSO BE PROVIDED FOR H.C. ACCESSIBLE SYMBOLS, TRAFFIC ARROWS, AND TRAFFIC MESSAGES.

32 20 00 CONCRETE AND AGGREGATE BASE

- A. CONTRACTOR TO PROVIDE CRUSHED AGGREGATE BASE AND CONCRETE WHERE INDICATED ON THE PLANS.

 B. ALL AGGREGATE PROVIDED MUST COMPLY WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). ALL AGGREGATE PLACED MUST BE COMPACTED TO AN AVERAGE DENSITY PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION).

 C. DESIGN AND CONSTRUCTION OF ALL CAST-IN-PLACE EXTERIOR CONCRETE FLAT WORK SHALL CONFORM TO ACI 330R-08 & ACI 318-08.

 D. EXTERIOR CONCRETE FLAT WORK CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF THE GEOTECHNICAL REPORT OR THIS
- SPECIFICATION. CONCRETE FLAT WORK CONSTRUCTION IS AS FOLLOWS:
 SIDEWALK CONCRETE 4" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE BASE. CONTRACTION JOINTS SHALL CONSIST OF 1/8" WIDE BY 1" DEEP TOOLED JOINT WHERE INDICATED ON THE PLANS.
 HEAVY DUTY/DRIVE-THRU/DUMPSTER PAD CONCRETE (TRUCK TRAFFIC) 6" OF CONCRETE OVER 6" OF 3/4" CRUSHED AGGREGATE. CONCRETE
- 2. HEAVY DUTY/DRIVE-THRU/DUMPSTER PAD CONCRETE (TRUCK TRAFFIC) 6" OF CONCRETE OVER 6" OF 3/4" CRUSHED AGGREGATE. CONCRETE SHALL BE REINFORCED WITH #3 REBARS ON CHAIRS AT 3" O.C. REBAR SHALL BE PLACED PLACED IN THE UPPER 1/3 TO ½ OF THE SLAB. CONTRACTION JOINTS SHALL BE SAWCUT 1.5" IN DEPTH AND BE SPACED A MAXIMUM OF 15' ON CENTER.

 3. LIGHT DUTY CONCRETE (PASSENGER CAR TRAFFIC) 5" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE. CONTRACTION JOINTS SHALL BE SAWCUT 1.5" IN DEPTH AND BE SPACED A MAXIMUM OF 12.5' ON CENTER
- TIE BARS AT OUTERMOST CONTRACTION JOINT (FIRST JOINT FROM EDGE OR AT CURB JOINT) AROUND PERIMETER OF CONCRETE. TIE BARS SHALL BE #4 REBAR 24" LONG PLACED AT 30" O.C.
 TYPICAL POUR CONTROL JOINT POUR CONTROL JOINT SHALL BE PROVIDED WITH 1/4" X 4-1/2" X 4-1/4" DIAMOND SHAPED TAPERED PLAT
- 2). TYPICAL POUR CONTROL JOINT POUR CONTROL JOINT SHALL BE PROVIDED WITH 1/4" X 4-1/2" X 4-1/4" DIAMOND SHAPED TAPERED PLATE DOWELS MANUFACTURED PER ASTM A36. INSTALL PER MANUFACTURERS SPECIFICATIONS.
- E. DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94
 1. STRENGTH TO BE MINIMUM OF 4,500 PSI AT 28 DAYS FOR EXTERIOR CONCRETE.
- 2. MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45.
 3. SLUMP SHALL NOT EXCEED 4" FOR EXTERIOR CONCRETE FLAT WORK

a. CONCRETE SHALL BE STEEL REINFORCED AS FOLLOWS:

- 4. SLUMP SHALL BE 2.5" OR LESS FOR SLIP-FORMED CURB AND GUTTER
- 5. SLUMP SHALL BE BETWEEN 1.5" TO 3" FOR NON SLIP-FORMED CURB AND GUTTER.
- ALL EXTERIOR CONCRETE SHALL BE AIR ENTRAINED WITH 4% TO 7% AIR CONTENT. NO OTHER ADMIXTURES SHALL BE USED WITHOUT APPROVAL
 OF EXCEL ENGINEERING, INC. CALCIUM CHLORIDE SHALL NOT BE USED.
 MAXIMUM AGGREGATE SIZE FOR ALL EXTERIOR CONCRETE SHALL BE 0.75 INCHES.
 VERIFY FOUIPMENT CONCRETE PAD SIZES WITH RESPECTIVE CONTRACTORS. PADS SHALL HAVE FIBERMESH 300 FIBERS AT A RATE OF 1.5 LBS/CU. YD.
- F. VERIFY EQUIPMENT CONCRETE PAD SIZES WITH RESPECTIVE CONTRACTORS. PADS SHALL HAVE FIBERMESH 300 FIBERS AT A RATE OF 1.5 LBS/CU. YD. OR 6 X 6-W1.4 X W1.4 WELDED WIRE MESH WITH MINIMUM 1 INCH COVER. EQUIPMENT PADS SHALL BE 3.5 INCHES THICK WITH 1 INCH CHAMFER UNLESS SPECIFIED OTHERWISE. COORDINATE ADDITIONAL PAD REQUIREMENTS WITH RESPECTIVE CONTRACTOR.

 G. ALL CONCRETE FLAT WORK SURFACES AND CONCRETE CURB FLOWLINES SHALL BE CONSTRUCTED TO WITHIN 0.05' OF DESIGN SURFACE AND
- G. ALL CONCRETE FLAT WORK SURFACES AND CONCRETE CURB FLOWLINES SHALL BE CONSTRUCTED TO WITHIN 0.05" OF DESIGN SURFACE AND FLOWLINE GRADES ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE DESIGN PLANS.

 H. CONCRETE FLAT WORK SHALL HAVE CONSTRUCTION JOINTS OR SAW CUT JOINTS PLACED AS INDICATED ON THE PLANS OR PER THIS SPECIFICATION SAWCUTS SHALL BE DONE AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED. CONCRETE CURB AND GUTTER JOINTING SHALL BE PLACED EVERY 10" OR CLOSER (6" MIN.). IF CONCRETE PAVEMENT IS ADJACENT TO CONCRETE CURB, JOINTING IN THE PAVEMENT
- AND CURB SHALL ALIGN. ALL EXTERIOR CONCRETE SHALL HAVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE. A UNIFORM COAT OF A HIGH SOLIDS CURING COMPOUND MEETING ASTM C309 SHOULD BE APPLIED TO ALL EXPOSED CONCRETE SURFACES. ALL CONCRETE IS TO BE CURED FOR 7 DAYS. EXTERIOR CONCRETE SHALL BE SEPARATED FROM BUILDINGS WITH CONTINUOUS 0.5 INCH FIBER EXPANSION JOINT AND/OR 0.25 INCH FIBER EXPANSION JOINT AT DECORATIVE MASONRY UNITS.

 I. ALL REINFORCING BARS SHALL BE ASTM A615 GRADE 60. THICKNESS OF CONCRETE COVER OVER REINFORCEMENT SHALL BE NOT LESS THAN 3"
- HISER EXPANSION JOINT AT DECORATIVE MASONRY UNITS.

 I. ALL REINFORCING BARS SHALL BE ASTM A615 GRADE 60. THICKNESS OF CONCRETE COVER OVER REINFORCEMENT SHALL BE NOT LESS THAN 3"

 WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND WITHOUT THE USE OF FORMS AND NOT LESS THAN 1.5" IN ALL OTHER LOCATIONS. ALL

 REINFORCING SHALL BE LAPPED 36 DIAMETERS FOR UP TO #6 BARS, 60 DIAMETERS FOR #7 TO #10 BARS OR AS NOTED ON THE DRAWINGS AND

 EXTENDED AROUND CORNERS WITH CORNER BARS. PLACING AND DETAILING OF STEEL REINFORCING AND REINFORCING SUPPORTS SHALL BE IN

 ACCORDANCE WITH CRSI AND ACI MANUAL AND STANDARD PRACTICES. THE REINFORCEMENT SHALL NOT BE PAINTED AND MUST BE FREE OF

 GREASE/OIL, DIRT OR DEEP RUST WHEN PLACED IN THE WORK. ALL WELDED WIRE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A 185. WELDED
- WIRE FABRIC SHALL BE PLACED 2" FROM TOP OF SLAB, UNLESS INDICATED OTHERWISE.

 J. CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO SAMPLE MATERIALS, PERFORM TESTS, AND SUBMIT TEST REPORTS DURING CONCRETE PLACEMENT. TESTS WILL BE PERFORMED ACCORDING TO ACI 301. CAST AND LABORATORY CURE ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. PERFORM COMPRESSIVE-STRENGTH TESTS ACCORDING TO ASTM C 39. TEST TWO SPECIMENS AT 7 DAYS AND TWO SPECIMENS AT 28 DAYS. PERFORM SLUMP TESTING ACCORDING TO ASTM C 143. PROVIDE ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIX.
- PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.

 K. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. IN HOT, DRY, AND WINDY WEATHER, APPLY AN EVAPORATION-CONTROL COMPOUND ACCORDING TO MANUFACTURER'S INSTRUCTIONS AFTER SCREEDING AND BULL FLOATING. BUT BEFORE POWER FLOATING AND TROWELLING.
- L. LIMIT MAXIMUM WATER-CEMENTIOUS RATIO OF CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING SALTS TO 0.45.

 M. TEST RESULTS WILL BE REPORTED IN WRITING TO THE DESIGN ENGINEER, READY-MIX PRODUCER, AND CONTRACTOR WITHIN 24 HOURS AFTER TESTS.
- REPORTS OF COMPRESSIVE STRENGTH TESTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT NAME OF CONCRETE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH IN STRUCTURE, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7-DAYTESTS AND 28-DAY TESTS.
- N. CONTRACTOR TO PROVIDE 4" WIDE WHITE PAINTED STRIPING FOR PARKING STALLS, TRAFFIC LANES, AND NO PARKING AREAS. PAINT MARKINGS SHALL ALSO BE PROVIDED FOR H.C. ACCESSIBLE SYMBOLS, TRAFFIC ARROWS, AND TRAFFIC MESSAGES.

TYPE OF ACTION

32 30 00 LANDSCAPING AND SITE STABILIZATION

SHALL ALSO BE REMOVED.

- A. TOPSOIL: CONTRACTOR TO PROVIDE A MINIMUM OF 6" OF TOPSOIL FOR ALL DISTURBED OPEN AREAS, OTHER THAN A LANDSCAPE ISLANDS, WHICH SHALL BE PROVIDED WITH A MINIMUM OF 10" OF TOPSOIL. REUSE SURFACE SOIL STOCKPILED ON SITE AND SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN QUANTITIES ARE INSUFFICIENT. EXCAVATOR SHALL BE RESPONSIBLE FOR ROUGH PLACEMENT OF TOPSOIL TO WITHIN 1" OF FINAL GRADE PRIOR TO LANDSCAPER FINAL GRADING. LANDSCAPER TO PROVIDE PULVERIZING AND FINAL GRADING OF TOPSOIL PROVIDE SOIL ANALYSIS BY A QUALIFIED SOIL TESTING LABORATORY AS REQUIRED TO VERIFY THE SUITABILITY OF SOIL TO BE USED AS TOPSOIL AND TO DETERMINE THE NECESSARY SOIL AMENDMENTS. TEST SOIL FOR PRESENCE OF ATRAZINE AND INFORM EXCEL ENGINEERING, INC. IF PRESENT PRIOR TO BIDDING PROJECT. TOPSOIL SHALL HAVE A PH RANGE OF 5.5 TO 8, CONTAIN A MINIMUM OF 5 PERCENT ORGANIC MATERIAL CONTENT, AND SHALL BE FREE OF STONES 1 INCH OR LARGER IN DIAMETER. ALL MATERIALS HARMFUL TO PLANT GROWTH
- B. TOPSOIL INSTALLATION: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES AND REMOVE STONES LARGER THAN 1" IN DIAMETER. ALSO REMOVE ANY STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND DISPOSE OF THEM OFF THE PROPERTY. SPREAD TOPSOIL TO A DEPTH OF 6" BUT NOT LESS THAN WHAT IS REQUIRED TO MEET FINISHED GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD TOPSOIL IF SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET. GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN 0.05 FEET OF FINISHED GRADE ELEVATION.

 C. SEEDED LAWNS:
- 1. PERMANENT LAWN AREAS SHALL BE SEEDED WITH A BLEND THAT IS CONSISTENT WITH LOCAL CLIMATE AND TYPICAL OF THE GENERAL AREA. THI FOLLOWING MIXTURE IS PROVIDED AS A GENERAL RECOMMENDATION: 65% KENTUCKY BLUEGRASS BLEND (2.0-2.6 LBS./1,000 S.F.), 20% PERENNIAL RYEGRASS (0.6-0.8 LBS./1,000 S.F.), 15% FINE FESCUE (0.4-0.6 LBS/1,000 S.F.) STRAW AND MULCH SHALL BE LAID AT 100LBS/1,000 S.F. FERTILIZE AS PER SOIL TEST OR APPLY 5-10-10 OR EQUIVALENT AT 5-6 LBS/1,000 S.F.) STRAW AND MULCH SHALL BE LAID AT 100LBS/1,000 S.F. STEE EROSION MATTING SPECIFICATIONS AS REQUIRED. ALL SITE DISTURBED AREAS NOT DESIGNATED FOR OTHER LANDSCAPING AND SITE STABILIZATION METHODS SHALL BE SEEDED AS PERMANENT LAWN NO BARE TOPSOIL SHALL BE LEFT ONSITE. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.

 2. ALL PERMANENT AND TEMPORARY STORM WATER CONVEYANCE SWALE BOTTOMS AND SIDE SLOPES SHALL BE SEEDED WITH THE FOLLOWING MIXTURE: 45% KENTUCKY BLUEGRASS (0.60 LBS./1000 S.F.), 40% CREEPING RED FESCUE (0.50 LBS./1,000 S.F.), AND 15% PERENNIAL RYEGRASS (0.20 LBS./1,000 S.F.). FERTILIZE AS PER SOIL TEST OR APPLY 5-10-10 OR EQUIVALENT AT 5-6 LBS./1,000 S.F. SEE EROSION MATTING SPECIFICATIONS AS REQUIRED. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.

 3. ALL TEMPORARY SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE: 100% RYEGRASS AT 1.9 LBS./1,000 S.F. STRAW AND MULCH SHALL BE

LAID AT 100 LBS./1.000 S.F. FERTILIZE AS PER SOIL TEST OR APPLY 5-10-10 OR EQUIVALENT AT 5-6 LBS./1.000 S.F. SEE EROSION MATTING

- SPECIFICATIONS AS REQUIRED. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.

 D. SEEDED LAWN MAINTENANCE: CONTRACTOR TO PROVIDE MAINTENANCE OF ALL LANDSCAPING FOR A PERIOD OF 90 DAYS FROM THE DATE OF INSTALLATION. AT THE END OF THE MAINTENANCE PERIOD, A HEALTHY, UNIFORM, CLOSE STAND OF GRASS SHOULD BE ESTABLISHED FREE OF WEEDS AND SURFACE IRREGULARITIES. LAWN COVERAGE SHOULD EXCEED 90% AND BARE SPOTS SHOULD NOT EXCEED 5"X5". CONTRACTOR SHOULD REESTABLISH LAWNS THAT DO NOT COMPLY WITH THESE REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL LAWNS ARE
- SATISFACTORY.

 E. <u>EROSION MATTING:</u>

 1. CONTRACTOR TO PROVIDE EROSION CONTROL MATTING (NORTH AMERICAN GREEN S150) OR EQUIVALENT ON ALL SLOPES THAT ARE 4:1 AND GREATER. LAWN SEED SHALL BE PLACED <u>BELOW</u> MATTING IN ACCORDANCE WITH SEEDING REQUIREMENTS AND MANUFACTURER
- SPECIFICATIONS.

 F. TREES AND SHRUBS: FURNISH NURSERY-GROWN TREES AND SHRUBS WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, AND HEALTHY LOOKING STOCK. STOCK SHOULD ALSO BE FREE OF DISEASE, INSECTS, EGGS, LARVAE. AND DEFECTS SUCH AS KNOTS. SUN SCALD. INJURIES. ABRASIONS. AND DISFIGUREMENT. SEE THE LANDSCAPE PLAN FOR SPECIFIC SPECIE
- TYPE, SIZE, AND LOCATION.

 G. TREE AND SHRUB INSTALLATION: EXCAVATE CIRCULAR PITS WITH SIDES SLOPED INWARD. TRIM BASE LEAVING CENTER AREA RAISED SLIGHTLY TO SUPPORT ROOT BALL. EXCAVATE PIT APPROXIMATELY THREE TIMES AS WIDE AS THE ROOT BALL DIAMETER. SET TREES AND SHRUBS PLUMB AND IN CENTER OF PIT WITH TOP OF BALL IN LAYERS AND TAME TO
- SUPPORT ROOT BALL. EXCAVATE PIT APPROXIMATELY THREE TIMES AS WIDE AS THE ROOT BALL DIAMETER. SET TREES AND SHRUBS PLUMB AND IN CENTER OF PIT WITH TOP OF BALL 1" ABOVE ADJACENT FINISHED GRADES. PLACE PLANTING SOIL MIX AROUND ROOT BALL IN LAYERS AND TAMP TO SETTLE MIX. WATER ALL PLANTS THOROUGHLY. PROVIDE TEMPORARY STAKING FOR TREES AS REQUIRED.

 H. TREE AND SHRUB MAINTENANCE/WARRANTY: CONTRACTOR TO PROVIDE MAINTENANCE OF ALL LANDSCAPING FOR A PERIOD OF 90 DAYS FROM
- H. TREE AND SHRUB MAINTENANCE/WARRANTY: CONTRACTOR TO PROVIDE MAINTENANCE OF ALL LANDSCAPING FOR A PERIOD OF 90 DAYS FROM
 THE DATE OF INSTALLATION. MAINTENANCE TO INCLUDE REGULAR WATERING AS REQUIRED FOR SUCCESSFUL PLANT ESTABLISHMENT.
 CONTRACTOR TO PROVIDE 1 YEAR WARRANTY ON ALL TREES, SHRUBS, AND PERENNIALS.
 I. DECORATIVE STONE MULCH: PROVIDE 3" MINIMUM THICK BLANKET OF 1.5" MINIMUM TO 2.5" MAXIMUM CRUSHED DECORATIVE STONE AT ALL
- PLANTING AREAS INDICATED ON THE LANDSCAPE PLAN. INSTALL OVER NON-WOVEN WEED BARRIER FABRIC. CONTRACTOR TO COORDINATE COLOR/STYLE TO BE USED WITH OWNER/TENANT.

 J. PLASTIC EDGING: INSTALL VALLEY VIEW INDUSTRIES BLACK DIAMOND LAWN EDGING TO SEPARATE ALL PLANTING BEDS FROM LAWN AREAS. EDGING TO BE 5.5" TALL WITH METAL STAKES INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. CONTRACTOR TO VERIFY FINAL EDGING
- K. LANDSCAPE AND LAWN IRRIGATION: DESIGN-BUILD LANDSCAPE IRRIGATION CONTRACTOR TO PROVIDE DESIGN AND INSTALLATION OF IRRIGATION SYSTEM PIPING, VALVES, VALVE BOXES, SPRINKLERS, EMITTERS, DRIP TUBES, AND CONTROLS IN COMBINATIONS THAT BEST SUIT THE LANDSCAPE PLAN LAYOUT. THE DESIGN SHOULD MINIMIZE THE AMOUNT OF WATER THAT EXTENDS BEYOND THE PROPERTY AND ON PAVED AREAS. THE SYSTEM SHALL BE DESIGNED FOR FULLY AUTOMATIC OPERATION AND PROVIDE ALL NECESSARY CONTROLS, VALVES, AND WIRING TO OPERATE THE SYSTEM. THE CONTROL UNIT SHALL BE INSTALLED IN A MECHANICAL ROOM OR AT A LOCATION AGREED TO WITH THE OWNER. THE CONTROL UNIT SHOULD BE PROVIDED WITH A LOCKING COVER. CONTRACTOR TO VERIFY OWNER/TENANT SPECIFIC IRRIGATION REQUIREMENTS PRIOR TO DESIGN AND INSTALLATION. VERIFY IRRIGATION METERING REQUIREMENTS WITH OWNER AND AHJ.

DIVISION 33 UTILITIES

TYPE TO BE WITH OWNER/TENANT PRIOR TO ORDERING/INSTALLING.

33 10 00 SITE UTILITIES

- A. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES ON SITE. CONTRACTOR TO VERIFY PIPE LOCATIONS, SIZES, AND DEPTHS AT POINT OF PROPOSED CONNECTIONS AND VERIFY PROPOSED UTILITY ROUTES ARE CLEAR (PER CODE) OF ALL EXISTING UTILITIES AND OTHER OBSTRUCTIONS PRIOR TO CONSTRUCTION. COSTS INCURRED FOR FAILURE TO DO SO SHALL BE THE CONTRACTORS RESPONSIBILITY.
- B. ALL PROPOSED EXTERIOR SANITARY PIPE SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL SCHEDULE ON CO.1 OF THE PROPOSED PLANSET.

 C. SANITARY MANUALES SHALL BE 48" DECAST AND CONFORM TO STATE AND LOCAL PROLITEMENTS LINESS OTHERWISE DIRECTED BY THE
- C. SANITARY MANHOLES SHALL BE 48" PRECAST AND CONFORM TO STATE AND LOCAL REQUIREMENTS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SANITARY MANHOLE FRAME AND GRATE TO BE NEENAH R-1550-A OR EQUAL, RIM ELEVATION TO BE SET AT FINISHED GRADE IN DEVELOPED AREAS AND 12" ABOVE FINISHED GRADE IN UNDEVELOPED AREAS EXCEPT AS OTHERWISE DIRECTED BY THE ENGINEER.
- D. CLEANOUTS SHALL BE PROVIDED FOR THE SANITARY AND STORM SERVICES AT LOCATIONS INDICATED ON THE UTILITY PLAN. THE CLEANOUT SHALL CONSIST OF A COMBINATION WYE FITTING IN LINE WITH THE SANITARY/STORM SERVICE WITH THE CLEANOUT LEG OF THE COMBINATION WYE FACING STRAIGHT UP. THE CLEANOUT SHALL CONSIST OF A 4" OR 6" (4" FOR 5" AND SMALLER PIPE ONLY) VERTICAL PVC PIPE WITH A WATER TIGHT REMOVABLE CLEANOUT PLUG. AN 8" PVC FROST SLEEVE SHALL BE PROVIDED. THE BOTTOM OF THE FROST SLEEVE SHALL TERMINATE 12" ABOVE THE TOP OF THE SANITARY LATERAL OR AT LEAST 6" BELOW THE PREDICTED FROST DEPTH, WHICHEVER IS SHALLOWER. THE CLEANOUT SHALL EXTEND JUST ABOVE THE SURFACE GRADE IN LAWN OR LANDSCAPE AREAS WITH THE FROST SLEEVE TERMINATING AT THE GRADE SURFACE. THE CLEANOUT SHALL EXTEND TO 4 INCHES BELOW SURFACE GRADE IN PAVED SURFACES WITH A ZURN (Z-1474-N) HEAVY DUTY CLEANOUT HOUSING PLACED OVER THE TOP OF THE CLEANOUT FLUSH WITH THE SURFACE GRADE. IN PAVED SURFACES, THE FROST SLEEVE SHALL TERMINATE IN A CONCRETE PAD AT LEAST 6" THICK AND EXTENDING AT LEAST 9" FROM THE SLEEVE ON ALL SIDES, SLOPING AWAY FROM THE SLEEVE. THE CLEANOUT HOUSING SHALL BE CONSTRUCTED PER MANUFACTURERS REQUIREMENTS.
- E. ALL PROPOSED WATER PIPE SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL SCHEDULE ON C0.1 OF THE PROPOSED PLANSET. 5' MINIMUM COVER SHALL BE PROVIDED OVER ALL WATER PIPING UNLESS OTHERWISE SPECIFIED.
- F. ALL PROPOSED STORM PIPE SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL SCHEDULE ON C0.1 OF THE PROPOSED PLANSET. SEE UTILITY PLANS FOR ALL STORM PIPE MATERIAL TYPES TO BE USED. PIPE SHALL BE PLACED MIN. 8' HORIZONTALLY FROM FOUNDATION WALLS.
 G. SANITARY, STORM, AND WATER UTILITY PIPE INVERTS SHALL BE CONSTRUCTED WITHIN 0.10' OF DESIGN INVERT ELEVATIONS ASSUMING PIPE SLOPE
- AND SEPARATION IS MAINTAINED PER THE UTILITY DESIGN PLANS AND STATE REQUIREMENTS.

 H. SITE UTILITY CONTRACTOR SHALL RUN SANITARY SERVICE TO A POINT WHICH IS A MINIMUM OF 5' FROM THE EXTERIOR WALL OF THE FOUNDATION. SITE UTILITY CONTRACTOR SHALL RUN STORM SEWER FOR INTERNALLY DRAINED BUILDINGS TO A POINT WHICH IS A MINIMUM OF 5' FROM THE EXTERIOR WALL OF THE FOUNDATION. SITE UTILITY CONTRACTOR SHALL RUN DOWNSPOUT LEADS TO BUILDING FOUNDATION AND UP 6" ABOVE SURFACE GRADE FOR CONNECTION TO DOWNSPOUT. ALL DOWNSPOUT LOCATIONS SHOULD BE VERIFIED WITH ARCHITECTURAL PLANS AND DOWNSPOUT CONTRACTOR/GC PRIOR TO INSTALLATION OF DOWNSPOUT LEADS. DOWNSPOUT LEADS SHALL NOT UNDERMINE BUILDING
- FOUNDATIONS. SITE UTILITY CONTRACTOR SHALL RUN WATER SERVICE TO A POINT WITHIN THE FOUNDATION SPECIFIED BY THE PLUMBING PLANS. CONTRACTOR TO CUT AND CAP WATER SERVICE 12" ABOVE FINISHED FLOOR ELEVATION.

 I. ALL UTILITIES SHALL BE INSTALLED WITH PLASTIC COATED TRACER WIRE (10 TO 14 GAUGE SOLID COPPER, OR COPPER COATED STEEL WIRE). PLASTIC WIRE MAY BE TAPED TO PLASTIC WATER OR SEWER PIPE. IF ATTACHED, THE TRACER WIRE SHALL BE SECURED EVERY 6 TO 20 FEET AND AT ALL BENDS.

TRACER WIRE SHALL HAVE ACCESS POINTS AT LEAST EVERY 300 FEET. TRACER WIRE SHALL TERMINATE IN ACCORDANCE WITH MANUFACTURER

- SPECIFICATIONS AT GRADE OR IN TERMINATION BOX PER LOCAL/STATE REQUIREMENTS.

 J. ALL UTILITIES SHALL BE INSTALLED PER STATE, LOCAL, AND INDUSTRY STANDARDS. THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR OBTAINING STATE PLUMBING REVIEW APPROVAL. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL OTHER PERMITS REQUIRED TO INSTALL WATER, SANDARD AND STORM STORM
- Sanitary and Storm sewer. $\hbox{K. SEE PLANS FOR ALL OTHER UTILITY SPECIFICATIONS AND DETAILS.}$

Dunham's Sports Sporting goods store AutoZone Auto Parts Auto parts store Pizza Hut Pizza Belivery: \$ Company - Massillon Barbecue - \$\$ Dinny's Music Shoppe Music store West Food: 3 Chipotle Mexican Grill Mexican - \$ Oak-Rark Center Store Oak-Rark Center Oak-Rark Center

Meadow Wind

NORTH

PROJECT LOCATION MAP

Utility	Material	Pipe Code	Fitting Code	Joint Code	
Water Lateral	C901/906 PE	AWWA C901/C906	ASTM D2609, ASTM D2683, ASTM D3261	Heat fusion: ASTM D2657	
Fire Hydrant Lateral	C900 PVC	AWWA C900, ASTM D1785, ASTM D2241	AWWA C110, AWWA C153, ASTM D2464, ASTM D2466, ASTM D2467, ASTM D3311, ASTM F409, ASTM F1336, ASTM F1866	Joint: ASTM D3139 Integral Bell & Spigot Elastomeric Seal: ASTM F477	
Sanitary Sewer	SDR 35 PVC	ASTM D1785, ASTM D2665, ASTM D3034, ASTM F891	ASTM F1336	Push On: ASTM D3212 for Tightness Elastomeric Gasket: ASTM F477	
Storm Sewer	HDPE	ASTM F2648	ASTM F2306 Saddle Gasket	Joint: ASTM F2648 Bell & Spigot Elastomeric Seal: ASTM F477	
Storm Sewer	SDR 35 PVC	ASTM D1785, ASTM D2665, ASTM D3034, ASTM F891	ASTM F1336	Push On: ASTM D3212 for Tightness Elastomeric Seal: ASTM F477	

GENERAL PROJECT NOTES

- ALL DRIVEWAYS AND CURB CUTS TO BE CONSTRUCTED ACCORDING TO LOCAL ORDINANCES. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS.

 THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL WORK IN ROW PERMITS.
- APPROVED BY THE MASSILLON CITY ENGINEER THIS ______ DAY OF_____, 2023

CITY ENGINEER

APPROVED BY THE STARK COUNTY SOIL & WATER CONSERVATION DISTRICT THIS _____ DAY OF ______, 2023

STORMWATER MANAGER

ONLY APPROVED SIGNED PLANS BY THE CITY ENGINEER ARE TO BE USED FOR CONSTRUCTION.

CONSTRUCTION SEQUENCE

PHASE	TIPE OF ACTION
1. PRE-CONSTRUCTION ACTION	1. CONTRACTOR TO CONTACT STARK SOIL & WATER CONSERVATION DISTRICT TO SCHEDULE A PRE-CONSTRUCTION MEETING AT (330) 451-7645 PRIOR TO ANY EARTH MOVING ACTIVITY.
	2. CONTRACTOR TO CALL OUPS AT A MINIMUM OF 2 DAYS PRIOR TO CONSTRUCTION.
	3. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES.
	4. PLACE ALL TEMPORARY SILT FENCE AND INLET PROTECTION.
	5. CONSTRUCT TRACKING STONE ENTRANCES AND ANY TEMPORARY CONSTRUCTION ROADWAYS AS NEEDED.
	6. CONSTRUCT PERMANENT STORMWATER DETENTION SYSTEMS AND PERMANENT STORMWATER CONVEYANCE SYSTEMS INCLUDING THE
	UNDERGROUND DETENTION SYSTEM AND ASSOCIATED STORMWATER TREATMENT STRUCTURE AND OUTLET DEVICES.
	7. CONSTRUCT ANY TEMPORARY STORMWATER CONVEYANCE SYSTEMS AS NEEDED.
	8. STABILIZE ALL TEMPORARY AND PERMANENT EROSION CONTROL AND STORMWATER CONVEYANCE SYSTEMS BEFORE TOPSOIL CAN BE STRIPPED.
2. CONSTRUCTION	1. SITE DEMOLITION AS REQUIRED.
ACTION	2. STRIP AND RELOCATE TOPSOIL TO THE DESIGNATED TOPSOIL STOCKPILE. FINAL LOCATION BY OWNER/CONTRACTOR. PROVIDE PERIMETER SILT FENCE UNTIL STABILIZED.
	3. BEGIN MASS EARTH WORK FOR THE BUILDING PAD AND PAVEMENT AREAS.
	4. CONSTRUCT ANY REMAINING STORMWATER CONVEYANCE SYSTEMS, AND INSTALL ALL OTHER UTILITIES ON SITE.
	5. DIG AND POUR ALL BUILDING FOOTINGS.
	6. PLACE GRAVEL FOR ALL PROPOSED PAVEMENT AREAS.
	7. TOPSOIL, SEED, AND MULCH ALL DISTURBED AREAS OUTSIDE THE BUILDING AND PROPOSED PAVEMENT AREAS.
	8. CONSTRUCT BUILDING.
	9. PAVE DRIVEWAYS AND PARKING AREAS.
	10. TOPSOIL, SEED, AND MULCH ALL OTHER DISTURBED AREAS. PLACE EROSION MATTING AS NEEDED.
3. POST CONSTRUCTION	1. CONTRACTOR TO REMOVE TEMPORARY EROSION CONTROL MEASURES UPON SITE STABILIZATION.

CONTRACTOR TO FOLLOW THE EROSION CONTROL SPECIFICATIONS FOR CONSTRUCTION EROSION CONTROL INSPECTION AND MAINTENANCE.

SEE THE POST CONSTRUCTION MAINTENANCE PLAN FOR PERMANENT STORMWATER MANAGEMENT SYSTEMS.

CIVIL COVER AND SPECIFICATION SHEET



Always a Better Plan

100 Camelot Drive Fond du Lac, WI 54935 920-926-9800 excelengineer.com

PROJECT INFORMATION

ESS

A EXPRE

S & PANDA E

FESSIONAL SEAL

FESSIONAL SEAL

JASON

DAME

JAN. 20, 2023
MAR. 24, 2023

JOB NUMBER 2178020

SHEET NUMBER

2021 © EVCEL ENGINEERING

PROTECT EXISTING UTILITY POLES AND OTHER UTILITY INFRASTRUCTURE THROUGHOUT CONSTRUCTION. (TYP.) - ADJUST STRUCTURE RIM REMOVE AND
REPLACE EXISTING
STRUCTURE. SEE
SHEET C1.3A CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT, CONCRETE PAVEMENT, AND CONCRETE CURB AND GUTTER WITHIN HATCHED AREA PER LOCAL STANDARDS. COORDINATE WITH SITE IMPROVEMENTS ON C1.1. ELEVATIONS. SEE SHEET C1.3A

SPECIFICATION NOTE: SEE SHEET CO.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

EXISTING CONDITIONS NOTE:

EXISTING CONDITIONS SURVEY WAS PROVIDED TO EXCEL BY ALBAN SURVEYING CO. DATED 04/20/2022. APPLICABLE SURVEY NOTES & LEGEND ARE PROVIDED BELOW FOR REFERENCE.

SURVEY CONTACT: JOHN ALBAN ALBAN SURVEYING CO. 38052 EUCLID AVENUE, SUITE 200 WILLOUGHBY, OHIO 44094 216-702-7875

DEMOLITION NOTE:

DEMOLITION PLAN IS AN OVERVIEW OF DEMOLITION TO TAKE PLACE ON SITE. CONTRACTOR TO FIELD VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE, REPLACE, OR DEMOLISH ALL ITEMS AS NEEDED DURING CONSTRUCTION.

UTILITY NOTES:

The size and location, both horizontal and vertical of the underground utilities shown hereon, have been obtained by a search of available records. Verification by field observation has been conducted where practical. This survey is subject to change upon receipt of any additional obtainable underground utility information.
Therefore, Alban Surveying Company can not guarantee the completeness nor

Before excavating in this area, call "OUPS" at 800-362-2764 for field locations of any underground utility facilities.

BASIS OF BEARING:

Bearings are based on Ohio State Plane North Zone (NAV88) by GPS observations.

All pins set are 5/8" x 30" rebar with yellow cap marked "J. Alban 7651".

FLOOD ZONE INFORMATION:

CIVIL EXISTING SITE AND DEMOLITION PLAN

The subject parcel is located in Flood Zone "X", 'areas determined to be outside of the 0.2% annual chance floodplain', as shown on FEMA #39151C0191F, with an effective date of September 14, 2018.

Symbol Legend

- Catch Basin
- ₩ Water Valve Power Pole
- 7 Traffic Signal Pole
- ூ Storm Manhole
- Sanitary Manhole

Always a Better Plan

100 Camelot Drive Fond du Lac, WI 54935 920-926-9800 excelengineer.com

PROJECT INFORMATION

EXP & PANDA

FOR:

PROPOSED UCKS 8

PRELIMINARY DATES JAN. 17, 2023 JAN. 20, 2023 MAR. 24, 2023

2178020

SPECIFICATION NOTE: SEE SHEET CO.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

SITE INFORMATION:

EXISTING SITE PARCEL NUMBERS: 600764, 607402, 612594, 601670

PROPERTY AREA (TOTAL): 98,935 S.F. (2.27 ACRES) PROPOSED PANDA SITE = 52,720 S.F. (1.21 AC)PROPOSED STARBUCKS SITE = 46,215 S.F. (1.06 AC)

EXISTING ZONING: RM-1

PROPOSED ZONING: B-3 (REZONE COMPLETED)

PROPOSED USE: QUICK SERVE RESTAURANTS WITH DRIVE-THRU SERVICE

AREA OF SITE DISTURBANCE: 103,181 SF (2.37 AC)

SETBACKS: BUILDING: FRONT = 60' SIDE = 10'REAR = 20'

PAVEMENT: OFF-STREET PARKING PERMITTED IN REQUIRED YARDS

63,252

35,683

63.9%

36.1%

MAX. BLDG HEIGHT ALLOWED: 30'

PARKING REQUIRED: 1 SPACE PER 150 S.F. GFA

STARBUCKS: 2230 SF = 15 SPACES REQUIRED PANDA EXPRESS: 2664 SF = 18 SPACES REQUIRED

PARKING PROVIDED:

STARBUCKS: 34 TOTAL SPACES PROVIDED; 2 HC STALLS PANDA EXPRESS: 36 TOTAL SPACES PROVIDED; 2 HC STALLS

EXISTING SITE DATA (O	verall deve	<u>LOPMENT)</u>	
	AREA (AC)	AREA (SF)	RATIO
PROJECT SITE	2.27	98,935	
BUILDING FLOOR AREA	0.00	0	0.0
PAVEMENT (ASP. & CONC.)	0.00	0	0.0
TOTAL IMPERVIOUS	0.00	0	0.0
LANDSCAPE/ OPEN SPACE	2.27	98,935	100.0
PROPOSED SITE DATA (OVERALL DEV	/ELOPMENT)	
	AREA (AC)	AREA (SF)	RATI
PROJECT SITE	2.27	98,935	
BUILDING FLOOR AREA	0.11	4,965	5.0
PAVEMENT (ASP. & CONC.)	1.34	58.287	58.9

PAVEMENT HATCH KEY: CURB & GUTTER MARKING KEY: STANDARD ASPHALT INVERTED CURB & GUTTER CONCRETE; SEE PLAN SHEDDING CURB & GUTTER & C0.1 FOR DETAILS/SPECIFIED THICKNESS

1.45

0.82

TOTAL IMPERVIOUS

LANDSCAPE/ OPEN SPACE

- A KNOX BOX (MODEL 3200) SHALL BE PROVIDED AT THE PRIMARY ENTRANCE TO ALL NEW BUILDINGS AT A HEIGHT OF 4-6' FROM FINAL GRADE. COORDINATE ADDITIONAL REQUIREMENTS WITH LOCAL BUILDING INSPECTOR/FIRE DEPARTMENT AS NEEDED.
- GC TO COORDINATE WITH SITE SPECIFIC OWNER/TENANT PRIOR TO CONSTRUCTION TO REVIEW ANY ADDITIONAL SITE SPECIFIC REQUIREMENTS/SCOPES OF WORK AS NEEDED.

31	DETECTABLE WARNING PLATE
32	TRAFFIC FLOW ARROWS. COLOR TO MATCH PARKING STALL STRIPING
33	PAINT STRIPING (TYP). COLOR TO MATCH PARKING STALL STRIPING.
34	REPLACE ASPHALT PAVEMENT PER CITY OF MASSILON/OH DOT STANDARDS AS NEEDED FOR PROPOSED SITE IMPROVEMENTS. SEE DETAIL ON C2.0. (TYP.)
35	CONCRETE SIDEWALK PER LOCAL STANDARDS. (TYP.)
36	VERSA-LOK OR EQUIVALENT MODULAR BLOCK RETAINING WALL SYSTEM. COLOR/STYLE TO BE COORDINATED WITH OWNER/TENANT. REFERENCE SHEET C1.2 FOR PROPOSED WALL HEIGHTS AND C2.0 FOR GENERAL RETAINING WALL DETAIL. FINAL DESIGN DETAILS & SPECIFICATIONS BY WALL SUPPLIER. WALL DESIGNER TO ACCOUNT FOR SITE FEATURES SUCH AS LIGHT POLES, FENCES, UTLITIES, ETC NEAR OR ADJACENT TO RETAINING WALL.
37	6' TALL MINIMUM OPAQUE FENCE. FINAL COLOR/STYLE BY OWNER/TENANT. CONTRACTOR TO COORDINATE FENCING REQUIREMENTS WITH RETAINING WALL SUPPLIER AS NEEDED.
38	DEDICATED MOBILE ORDER PICK-UP PARKING SPACE. COORDINATE WITH OWNER/TENANT FOR SPECIFIC SIGNAGE AND/OR PAVEMENT MARKINGS. (TYP.)
39	COLUMN. (TYP.) (SEE ARCH/STRUCT PLANS FOR DETAILS)

CANOPY. (TYP.) (SEE ARCH PLANS)

CLEARANCE BAR. COORDINATE WITH OWNER/TENANT FOR SITE SPECIFIC DRIVE—THRU EQUIPMENT REQUIREMENTS.

MENU BOARD & SPEAKER POST SYSTEM. COORDINATE WITH OWNER/TENANT FOR FINAL LOCATIONS, FOUNDATION DETAILS, CONDUIT REQUIREMENTS, ETC.

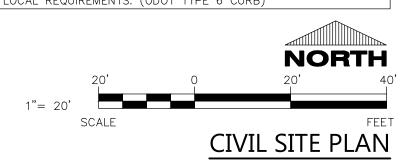
CONTRACTOR TO COORDINATE WITH OWNER/TENANT FOR FINAL PATIO LAYOUT. SEE SHEET C1.2 FOR PROPOSED PATIO GRADING/DRAINAGE.

44 6" DRIVE-THRU VERTICAL CURB. (TYP.)

(45) 6" CURB, SEE SHEET C1.2 FOR PROPOSED GRADES.

CONCRETE WALL, SEE ARCH/STRUCT PLANS. PROVIDE THRU-WALL DRAINAGE OPENINGS AS NEEDED TO DRAIN PATIO AREA. APPROXIMATE EXTENT OF UNDERGROUND DETENTION AREA. SEE

CURB WITHIN ROW SHALL BE 6" WIDE X18" DEEP STRAIGHT CURB PER LOCAL REQUIREMENTS. (ODOT TYPE 6 CURB)





Always a Better Plan 100 Camelot Drive

Fond du Lac, WI 54935

920-926-9800 excelengineer.com

PROJECT INFORMATION

FOR

S 0

PROFESSIONAL SEAL

PRELIMINARY DATES	
DEC. 8, 2022 AN. 10, 2023 AN. 17, 2023 AN. 20, 2023 MAR. 24, 2023	FOR CONSTRUCTION
	101

JOB NUMBER 2178020

SHEET NUMBER

Always a Better Plan

100 Camelot Drive Fond du Lac, WI 54935 920-926-9800 excelengineer.com

PROJECT INFORMATION

FOR LOPMENT

VE 4

Ш

S

0

PROFESSIONAL SEAL

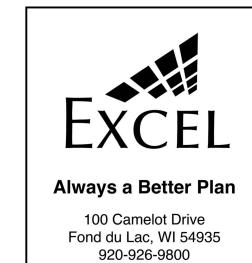
PRELIMINARY DATES DEC. 19, 2022 JAN. 10, 2023 JAN. 17, 2023 JAN. 20, 2023 MAR. 24, 2023

JOB NUMBER 2178020

SHEET NUMBER

1131.48

20 25 1130



PROJECT INFORMATION

excelengineer.com

FOR: & PANDA

PROPOSED

PROFESSIONAL SEAL

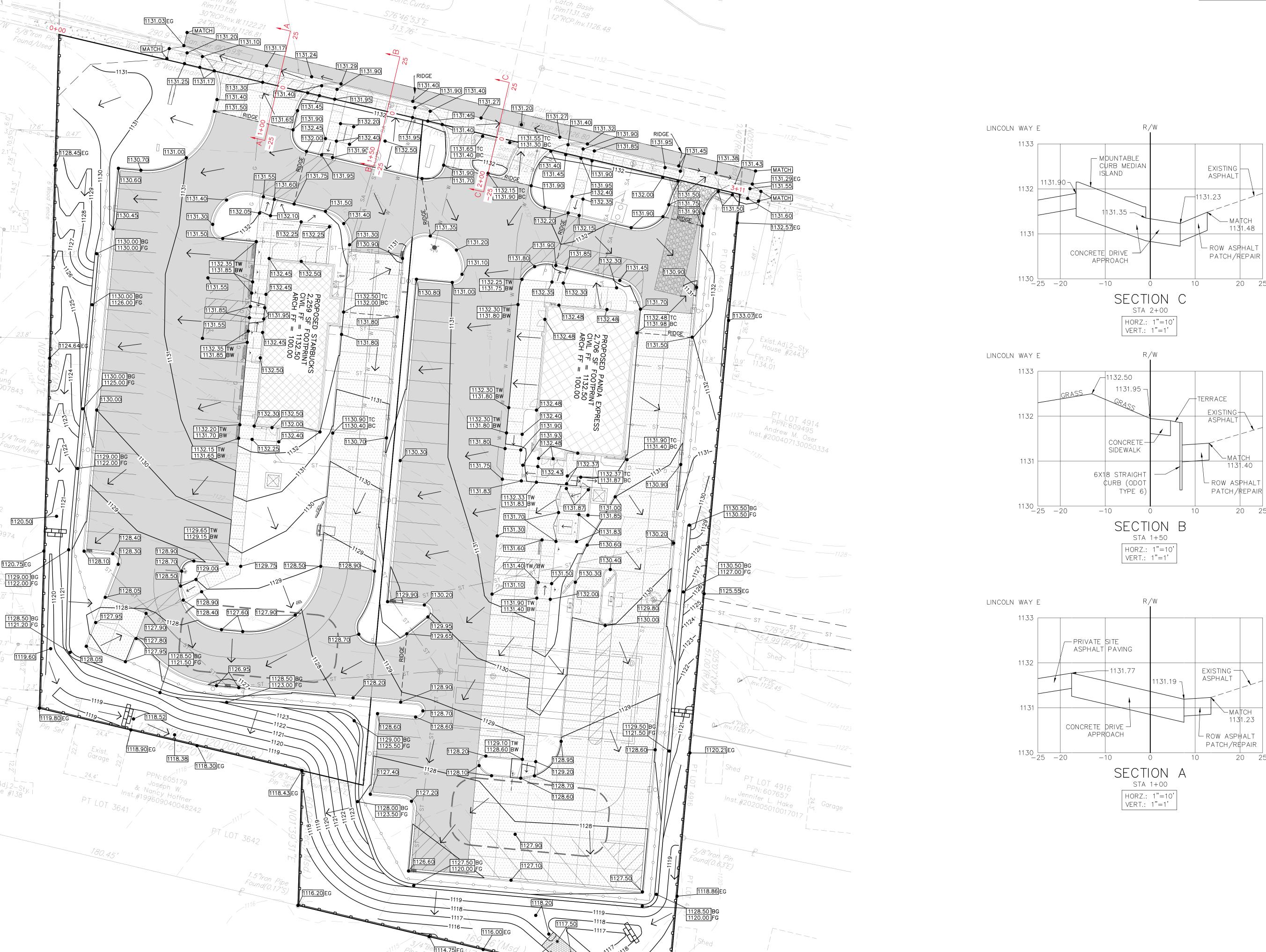
PRELIMINARY DATES DEC. 19, 2022 JAN. 10, 2023 JAN. 17, 2023 JAN. 20, 2023 MAR. 24, 2023

JOB NUMBER 2178020

SHEET NUMBER

NORTH

CIVIL GRADING AND EROSION CONTROL PLAN - CROSS SECTION VIEWS



SPECIFICATION NOTE: SEE SHEET CO.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

> LOCATIONS. MAKE CONNECTION TO DS WITH 6" PVC ABOVE GRADE. ALL DOWNSPOUTS SHALL BE CONNECTED TO STORM SEWER. SEE ARCH PLANS

= DENOTES LOCATIONS WHERE CONTRACTOR SHALL INSTALL CLEANOUTS, SEE

NOTE: EXISTING SANITARY AND WATER LATERALS FROM PREVIOUS RESIDENTIAL HOMES MAY EXIST ON THE SUBJECT SITE. IF THESE SERVICES ARE ENCOUNTERED, CAP/ABANDON SERVICES PER

SITE UTILITY CONTRACTOR SHALL COORDINATE FINAL UTILITY REQUIREMENTS, LOCATIONS, AND DEPTHS WITH EACH SPECIFIC OWNER/TENANT'S INTERNAL PLUMBING

WORK LETTER AND/OR TENANT'S FINAL CONSTRUCTION DOCUMENT PLAN SET FOR SPECIFIC SITE REQUIREMENTS RELATING TO THE EACH OWNER/TENANT'S SCOPES OF WORK.

OR PRIOR TO MAKING ANY UTILITY TAPS/CONNECTIONS. CONTRACTOR SHALL CONTACT APPROPRIATE PUBLIC UTILITY DEPARTMENTS TO FACILITATE ANY NECESSARY INSPECTIONS,

TO BE COMPLETED TO LOCATE UNDERGROUND UTILITIES AS NEEDED. EXISTING UTILITIES SHALL BE FIELD VERIFIED AND INFORMATION PROVIDED TO THE DESIGN ENGINEER AS NEEDED. DOWNSTREAM UTILITY CONNECTIONS MUST BE VERIFIED PRIOR TO CONSTRUCTION. NOTIFY DESIGN ENGINEER

UNDERDRAINS EXTENDED 20' OUT FROM STRUCTURE BELOW SITE CURB LINES. UNDERDRAINS SHALL BE 4" DIA AND SHALL BE PLACED AT AN INVERT ELEVATION OF 2' BELOW RIM ELEVATION OF EACH STRUCTURE. SLOPE UNDERDRAIN AT 1% TOWARD INLET. REFER TO PAVING WITH UNDERDRAIN

1"= 20'

SCALE

CIVIL UTILITY PLAN

Always a Better Plan

100 Camelot Drive

Fond du Lac, WI 54935

920-926-9800

excelengineer.com

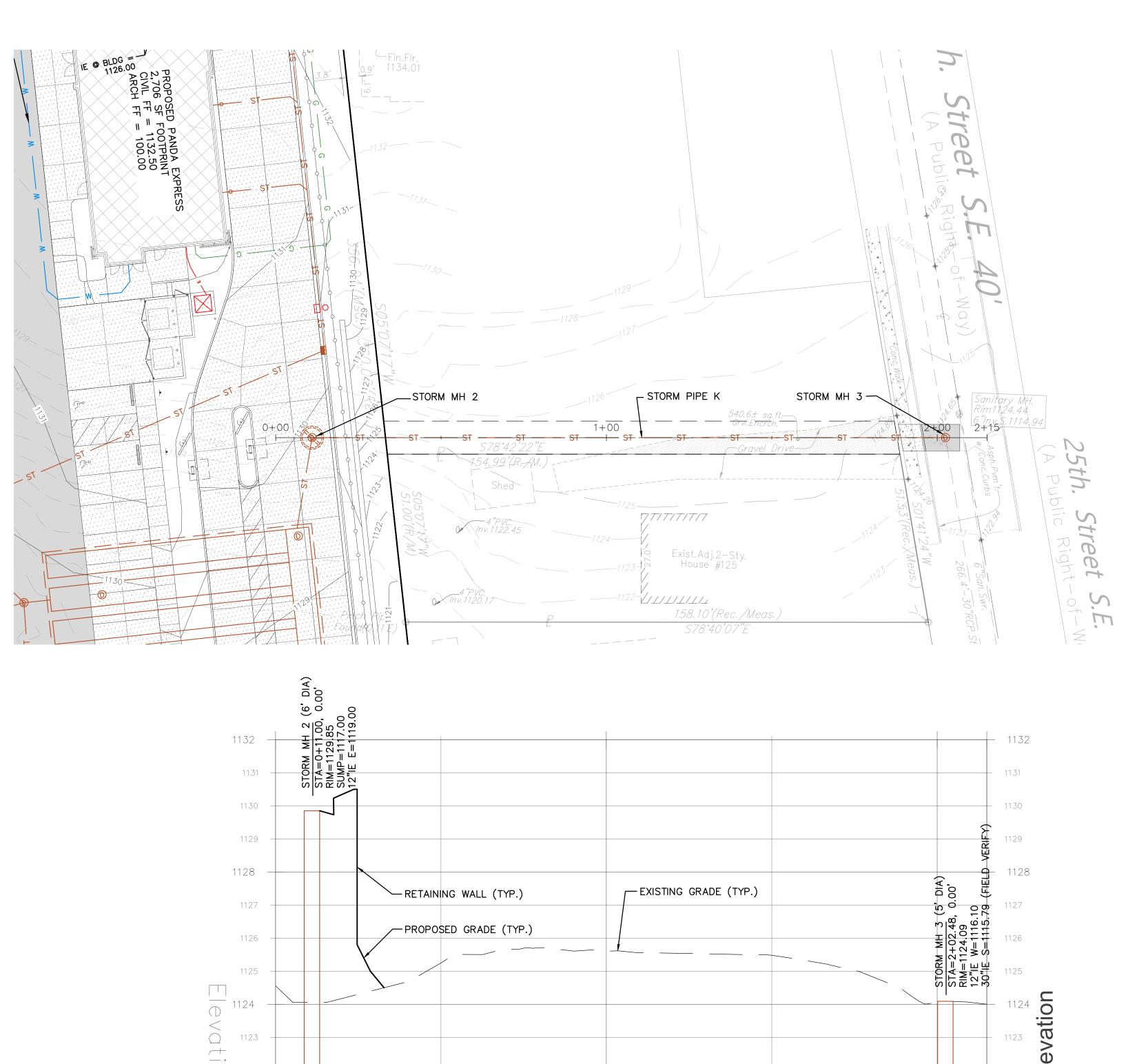
PROJECT INFORMATION

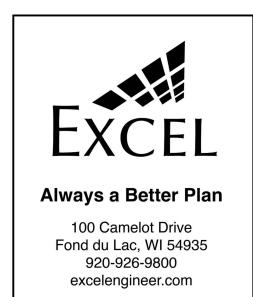
PROFESSIONAL SEAL

PRELIMINARY DATES JAN. 10, 2023 JAN. 17, 2023 JAN. 20, 2023 MAR. 24, 2023

JOB NUMBER 2178020

SHEET NUMBER





PROJECT INFORMATION

BUCKS & PANDA

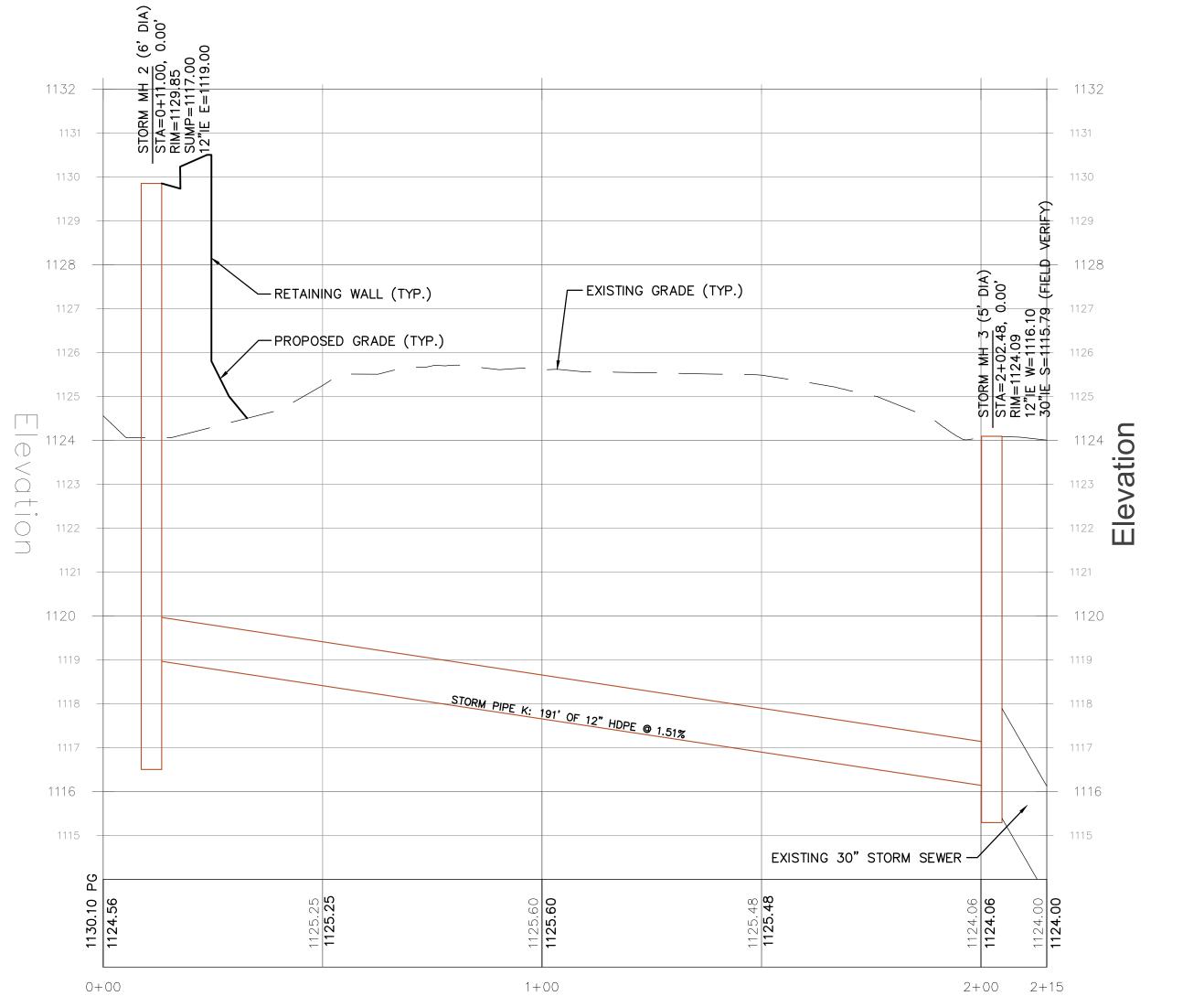
PROFESSIONAL SEAL

PRELIMINARY DATES JAN. 10, 2023 JAN. 17, 2023 JAN. 20, 2023 MAR. 24, 2023

JOB NUMBER 2178020

SHEET NUMBER

HORIZONTAL SCALE: 1"=20'-0" VERTICAL SCALE: 1"=2'-0" SCALE



LIMITS OF DISTURBED SITE AREA. — DECORATIVE STONE
MULCH W/ EDGING (TYP.) DECORATIVE STONE
MULCH W/ EDGING (TYP.) — DECORATIVE STONE
MULCH W/ EDGING (TYP.) - DECORATIVE STONE/-MULCH (TYP.) — DECORATIVE STONE \ MULCH (TYP.) DECORATIVE STONE < MULCH (TYP.) - DECORATIVE STONE MULCH (TYP.) DECORATIVE STONE
MULCH W/ EDGING
(TYP.)

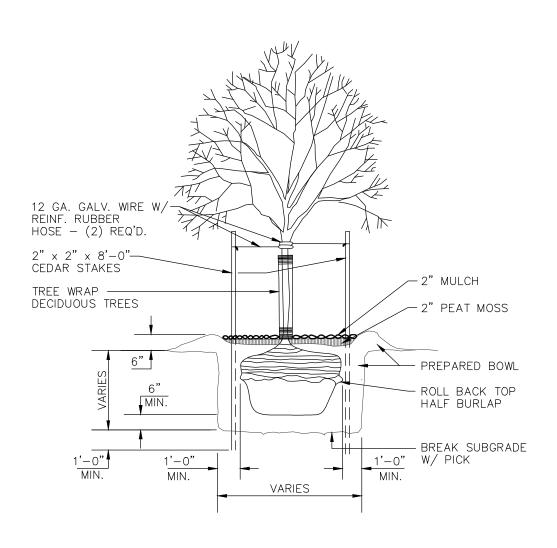
SPECIFICATION NOTE:
SEE SHEET CO.1 FOR PLAN
SPECIFICATIONS AND REQUIREMENTS

EROSION MATTING LOCATION

	LANDSCAPINO	PLANTING SCHEDULE		
SYMBOL	COMMON NAME	BOTANICAL NAME	PLANTED SIZE	QUANTIT`
	DECIDUO	US TREES		
€	Jack Flowering Pear	Pyrus calleryana 'Jaczam'	2" CAL	6
	DECIDUOU	IS SHRUBS		
\Box	Gro-Low Fragrant Sumac	Rhus aromatica 'Gro—Low'	12"-24"	9
®	Knockout Rose Bush	Rosa 'Radtko'	12"-24"	15
0	Little Lime Hydrangea	Hydrangea paniculata 'Jane'	12"-24"	9
**	Show Off Sugar Baby	Forsythia 'Nimbus'	12"-24"	41
	<u>EVERGREE</u>	N SHRUBS		
	Taunton Yew	Tauntonii	24"	51
	<u>PEREI</u>	<u>NNIALS</u>		
**	Karl Foerster Feather Reedgrass	Calamagrotis x acutiflora 'Karl Foerster'	24"	26
	Landscaper to provide a variety of Gras	es species for diversity and disease resistar	nce	
*	Daylilies 'Stella de Oro'	Hemerocallis 'Stella de Oro'	1 gal pot	67
	Landscaper to provide a variety of Dayl	ily species for diversity and disease resista	nce	

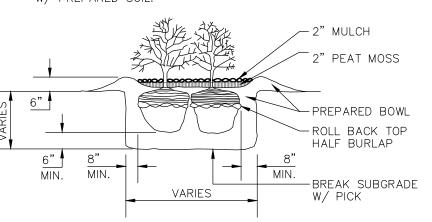
NOTE: LANDSCAPE CONTRACTOR SHALL REVIEW PROPOSED PLANTINGS WITH OWNER/TENANT PRIOR TO INSTALLATION. PROVIDE ALTERNATE PLANTINGS OR SUBSTITUTIONS AS DIRECTED BY THE OWNER/TENANT.

IRRIGATION NOTE: IRRIGATION SYSTEM SHALL BE PROVIDED ONSITE IN ACCORDANCE WITH OWNER/TENANT'S SPECIFIC IRRIGATION REQUIREMENTS. DESIGN—BUILD LANDSCAPE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL DESIGN AND LAYOUT OF THE IRRIGATION SYSTEM.



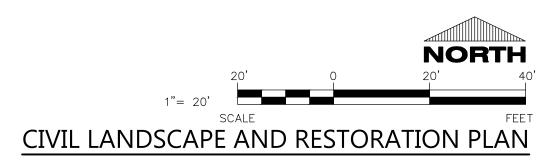
TREE PLANTING DETAIL

NOTE: FOR MASS PLANTINGS EXCAVATE ENTIRE BED & BACKFILL W/ PREPARED SOIL.



SHRUB PLANTING DETAIL

NO SCALE





PROJECT INFORMATION

excelengineer.com

LESS

BUCKS & PANDA E

NCOLN WAY E • MASSILLON, OH 4

PROFESSIONAL SEAL

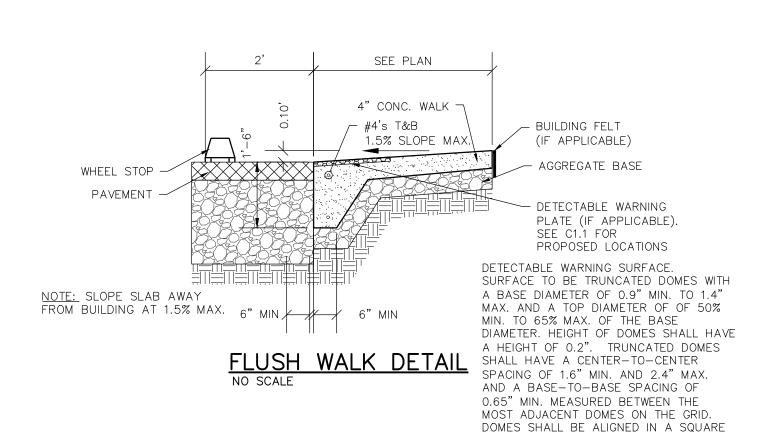
ST

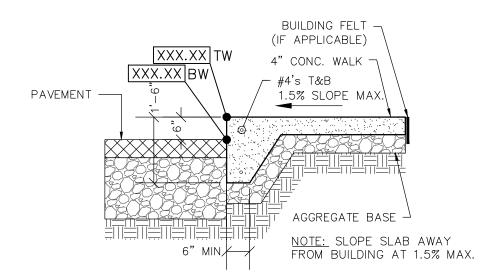
PRELIMINARY DATES	
JAN. 20, 2023 MAR. 24, 2023	CONSTRUCTION
	NOT FOR

ЈОВ NUMBER2178020

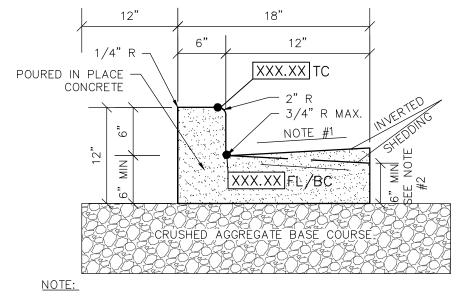
SHEET NUMBER

C1.4





RAISED WALK DETAIL NO SCALE

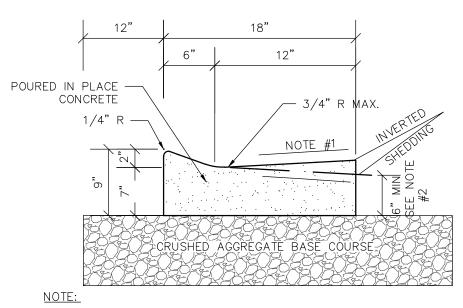


 USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
 THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MIN. GUTTER THICKNESS IS MAINTAINED.

3. SEE SITE PLAN & GRADING PLAN FOR INVERTED & SHEDDING CURB LOCATIONS

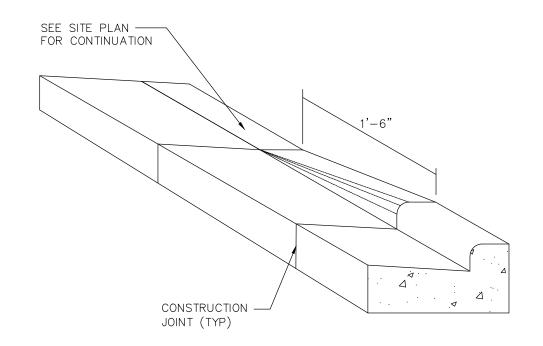
18" CONCRETE CURB & GUTTER DETAIL

NO SCALE

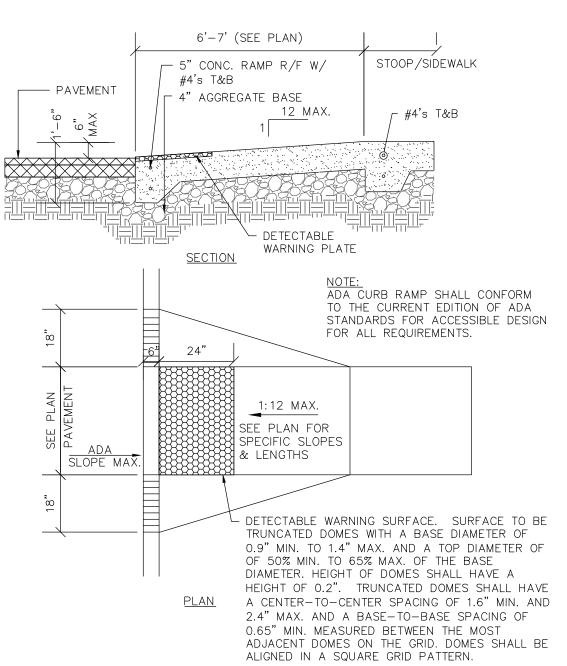


1. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS. 2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MIN. GUTTER THICKNESS IS MAINTAINED. 3. SEE SITE PLAN & GRADING PLAN FOR INVERTED & SHEDDING CURB LOCATIONS

18" MOUNTABLE CURB & GUTTER DETAIL NO SCALE

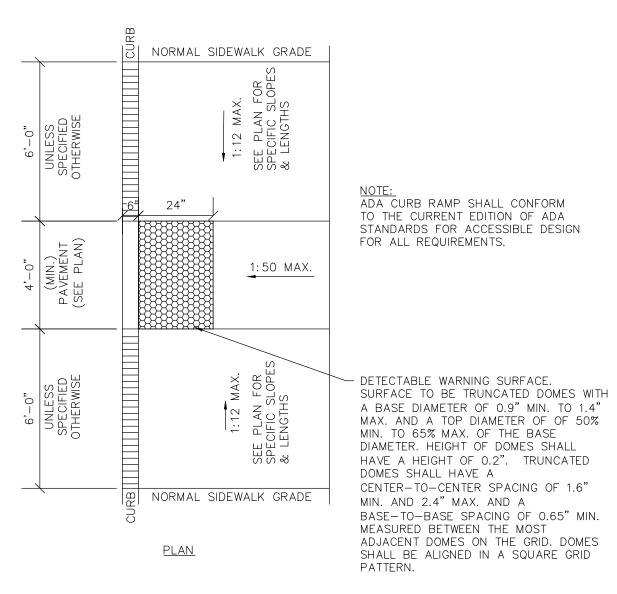


CURB TAPER DETAIL NO SCALE

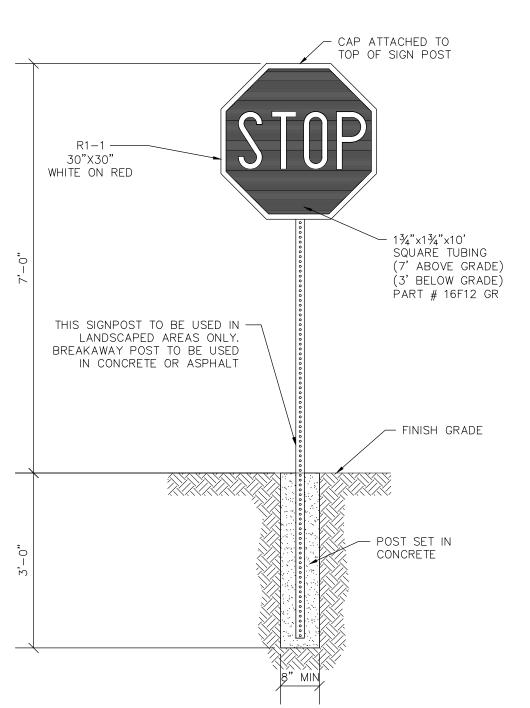


CURB RAMP DETAIL

NO SCALE



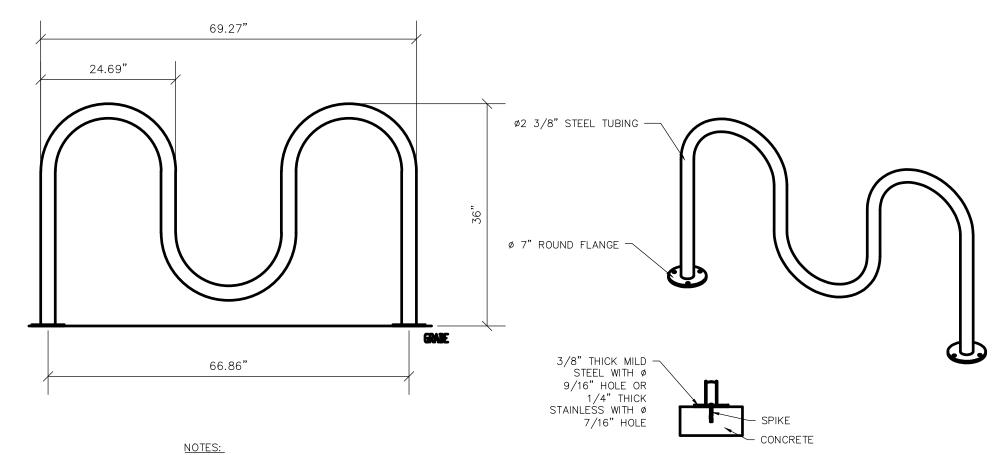
ADA SIDEWALK RAMP DETAIL NO SCALE



STOP SIGN WITH CONCRETE BASE DETAIL

GALVANIZED ROUND CAP PAINTED BLACK VAN - ADD VAN SIGN AT VAN ACCESSIBLE SPACES - 2 3/8" DIA. STEFL PIPÉ-PAINTED BLACK - FINISH GRADE CONCRETE

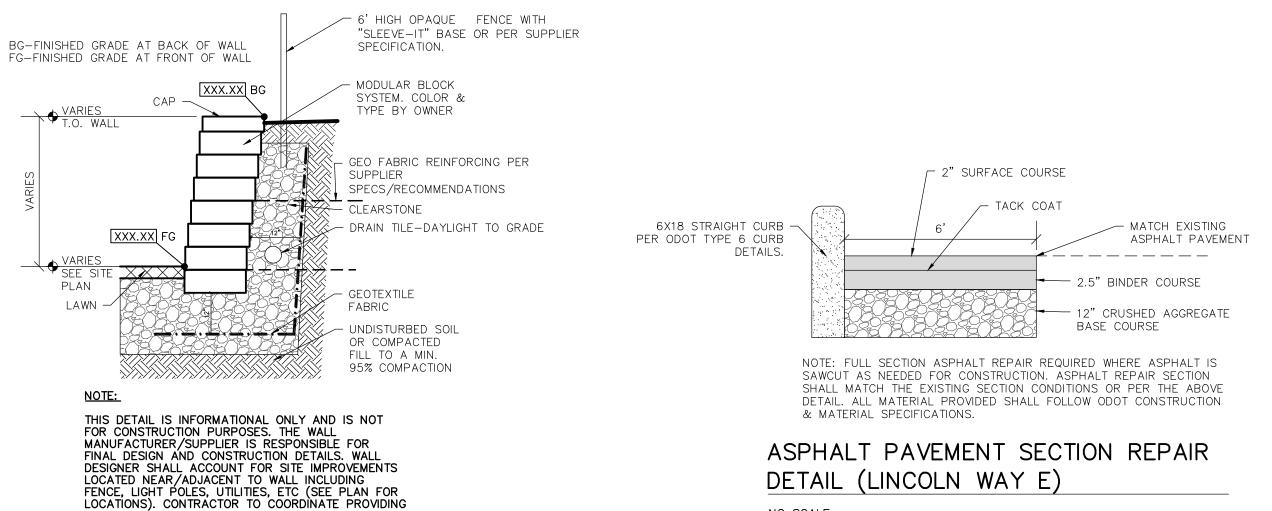
HANDICAP SIGNAGE WITH CONCRETE BASE DETAIL



INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS. OWNER SHALL SELECT COLOR & FINISH 3. SEE SITE PLAN FOR APPROX. LOCATION. COORDINATE W/ OWNER PRIOR TO CONSTRUCTION.
4. MANUFACTURED BY MADRAX; PRODUCT: CS200-5-IG(SF); DESCRIPTION: CAPITAL SQUARE BIKE RAKE 5 BIKE

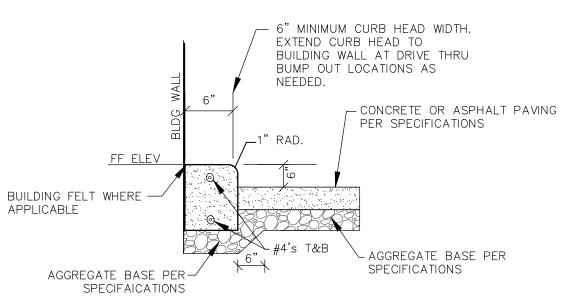
5 BIKE RACK DETAIL-WAVE TYPE

NO SCALE

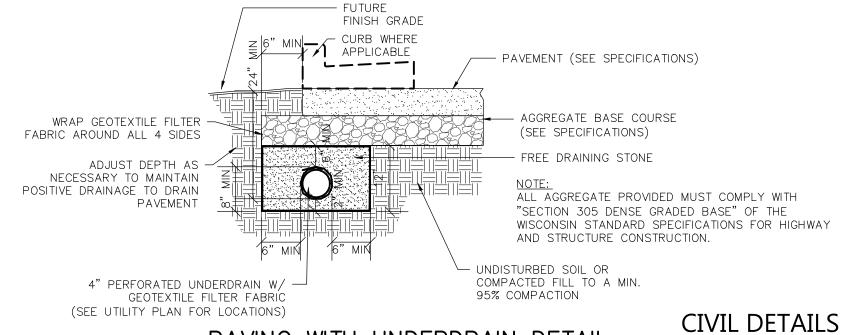


RETAINING WALL DETAIL

STAMPED PLANS TO AHJ AS REQUIRED.



DRIVE THRU VERTICAL CURB DETAIL NO SCALE



NO SCALE

NO SCALE

PAVING WITH UNDERDRAIN DETAIL



SPECIFICATION NOTE: SEE SHEET CO.1 FOR PLAN

SPECIFICATIONS AND REQUIREMENTS

excelengineer.com

PROJECT INFORMATION

9 FOR DEVELOPMENT 1

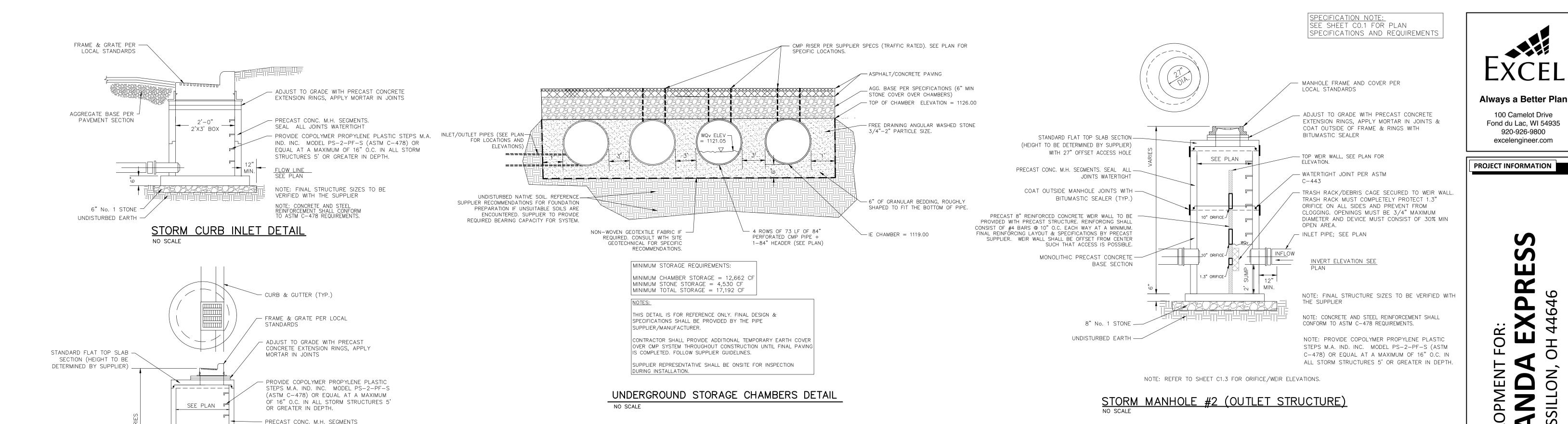
S 0 4

PROFESSIONAL SEAL

PRELIMINARY DATES JAN. 20, 2023 MAR. 24, 2023

JOB NUMBER 2178020

SHEET NUMBER



PRECAST CONC. M.H. SEGMENTS SEAL ALL JOINTS WATERTIGHT

MONOLITHIC PRECAST CONCRETE

VERIFIED WITH THE SUPPLIER

NOTE: FINAL STRUCTURE SIZES TO BE

BASE SECTION ASTM C-478

- WATERTIGHT JOINT PER

ASTM C-443

SEE PLAN

6" No. 1 STONE

UNDISTURBED EARTH -

NOTE: RIM ELEVATION TO BE SET TO GRADE

ADJACENT GROUND IN UNDEVELOPED AREAS

EXCEPT WHERE OTHERWISE DIRECTED BY

(HEIGHT TO BE DETERMINED BY SUPPLIER)

IN DEVELOPED AREAS AND 6" ABOVE

NOTE: FINAL STRUCTURE SIZES TO BE

STANDARD FLAT TOP SLAB SECTION

WITH 27" OFFSET ACCESS HOLE

MONOLITHIC PRECAST CONCRETE

BASE SECTION ASTM C-478

6" No. 1 STONE

UNDISTURBED EARTH —

GRAVEL -

SLEEVE

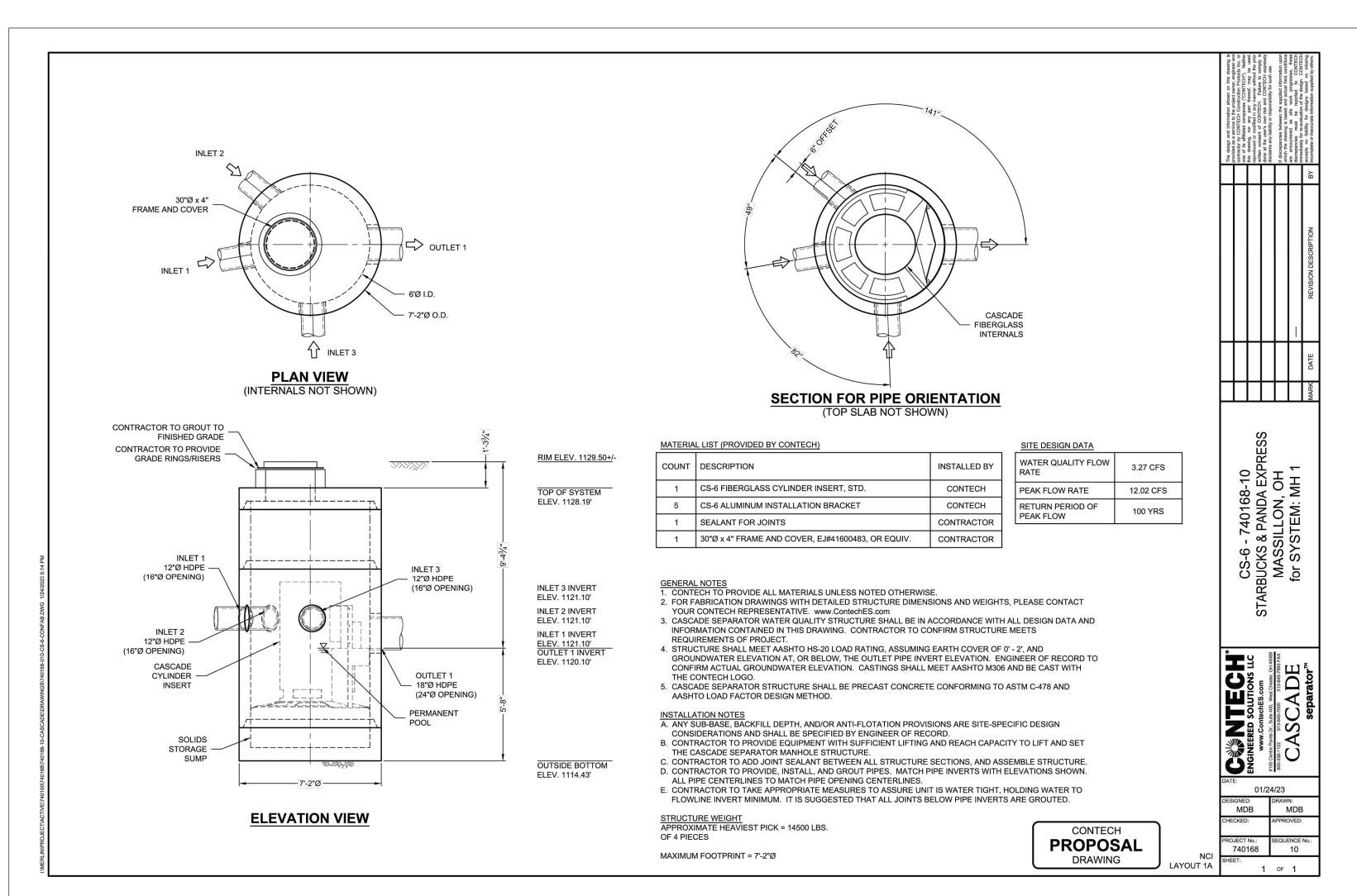
CLEANOUT TO GRADE DETAIL
NO SCALE

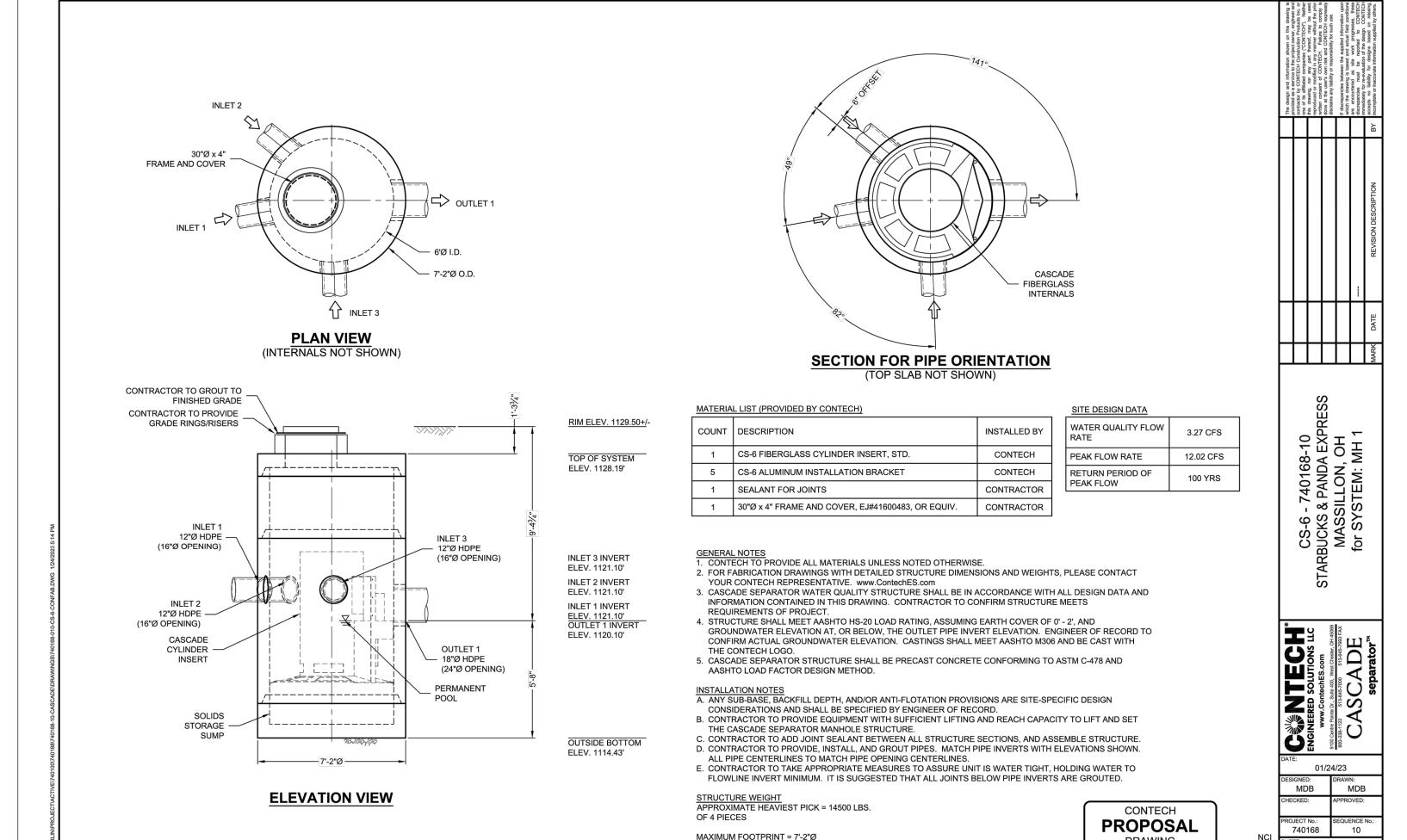
8" PVC FROST

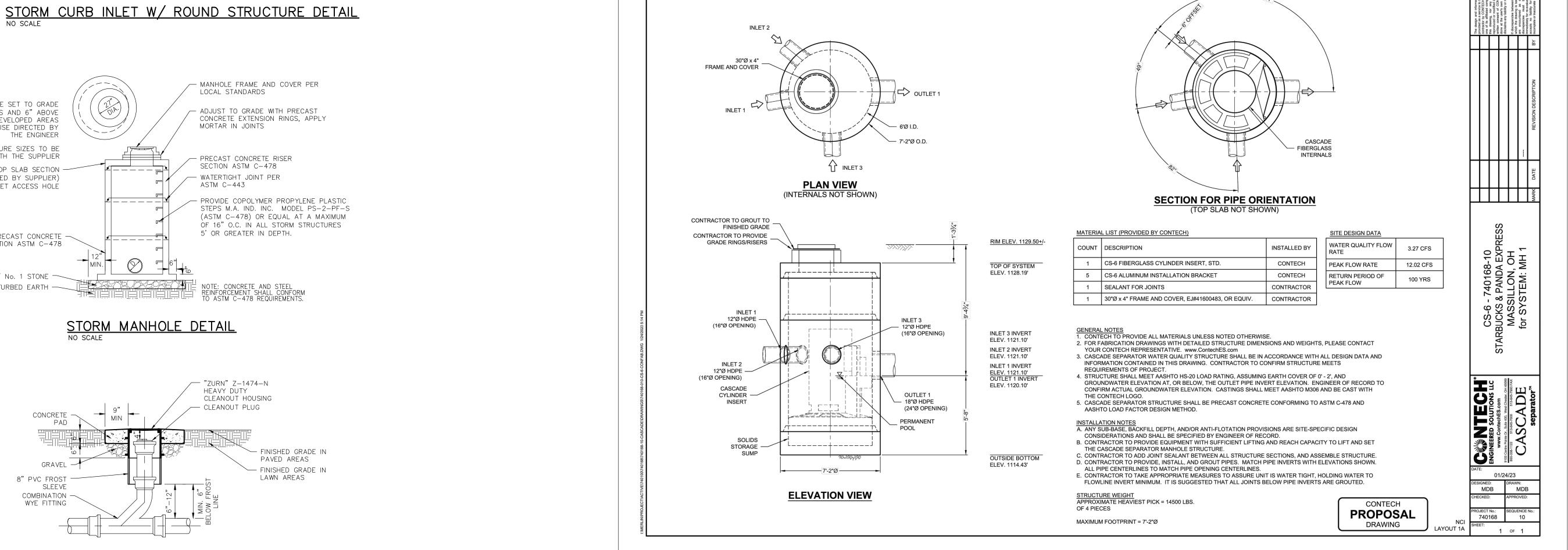
COMBINATION WYE FITTING

VERIFIED WITH THE SUPPLIER

THE ENGINEER







STORM MANHOLE #1 DETAIL
NO SCALE

JOB NUMBER 2178020 **SHEET NUMBER**

2021 © EXCEL ENGINEERING, INC.

>

S

0

PROFESSIONAL SEAL

PRELIMINARY DATES

JAN. 20, 2023

MAR. 24, 2023

 \Box

TYPICAL PANDA EXPRESS ACCESSIBLE AREA DETAIL (REFERENCE PLANS FOR SITE SPECIFIC INFORMATION)

PANDA EXPRESS GENERAL CONSTRUCTION NOTES:

CONTINUATION.

CONTRACTOR SHALL COORDINATE FINAL LOCATION WITH SIGN COMPANY AND PANDA EXPRESS PM FOR FINAL LOCATION OF DRIVE THRU ELEMENTS MENU BOARD, ORDER CANOPY, CLEARANCE BAR, AND DIRECTIONAL SIGNAGE) PRIOR TO INSTALLATION. CONTRACTOR SHALL ENSURE THAT PROPOSED UTILITIES, INCLUDING SITE LIGHTING CONDUIT ARE NOT INSTALLED SO THAT THEY WOULD CONFLICT WITH THE PLACEMENT OF THE DRIVE THRU

CONTRACTOR SHALL PROVIDE CONCRETE PAVING BETWEEN FACE OF BUILDING AND BACK OF CURB ALONG DRIVE-THRU LANE AND ENSURE POSITIVE

CONTRACTOR SHALL COORDINATE AND ADJUST LOCATION OF LOOP DETECTORS TO AVOID UTILITY CONFLICTS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL INSTALL GENERAL UTILITY CONDUITS TO PLANTERS AROUND BUILDING AND PATIO. SEE ARCHITECTURAL/MEP PLANS FOR

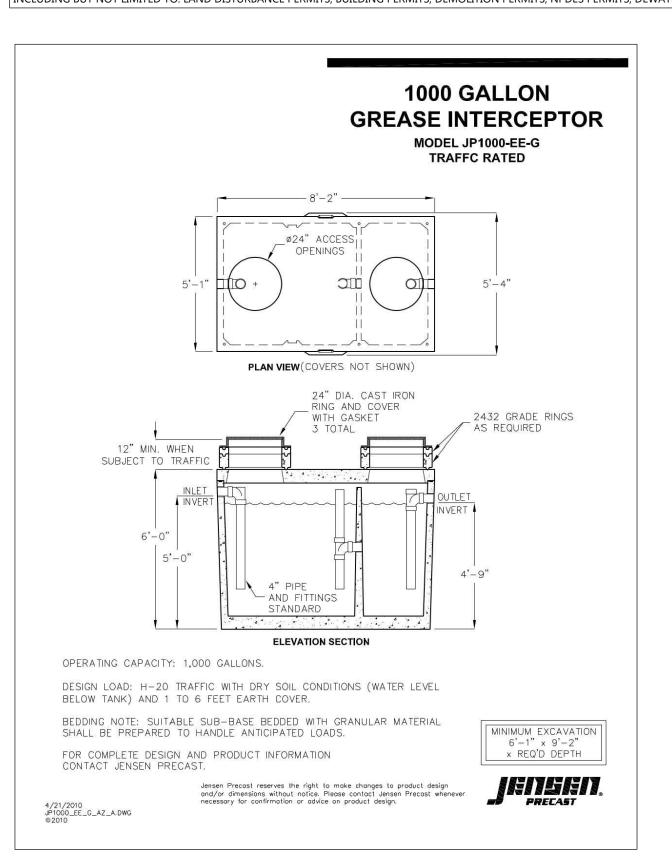
CONTRACTOR SHALL ENSURE 100% COVERAGE OF ALL LANDSCAPED AREAS WITHIN LIMITS OF WORK, INCLUDING POTENTIAL OFFSITE AREAS. COVERAGE SHALL INCLUDE BOTH LANDSCAPING AND IRRIGATION.

CONTRACTOR SHALL PROTECT ALL ITEMS OUTSIDE LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED IN THE CONSTRUCTION PLANS OR

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES (LOCATIONS AND ELEVATIONS) PRIOR TO STARTING CONSTRUCTION AND ALERT ENGINEER TO

THE GEOTECHNICAL INVESTIGATION AND ANY SUBSEQUENT ADDENDUMS IS CONSIDERED PART OF THE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE REPORT'S RECOMMENDATIONS AND FINDINGS WITH THE OWNER, ENGINEER AND ARCHITECT PRIOR TO CONSTRUCTION. IMPLEMENTATION OF THE REPORT'S RECOMMENDATIONS MAY REOUIRE THE CONTRACTOR TO PERFORM ADDITIONAL WORK NOT SHOWN ON THE CIVIL PLANS INCLUDING BUT NOT LIMITED TO EXCAVATION, REMEDIATION, DEWATERING, COMPACTION ETC.

I'HE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL LOCAL, STATE, AND FEDERAL CERTIFICATION AND LICENSING REQUIREMENTS FOR CONSTRUCTION, INCLUDING BUT NOT LIMITED TO: LAND DISTURBANCE PERMITS, BUILDING PERMITS, DEMOLITION PERMITS, NPDES PERMITS, DEWATERING PERMITS, ETC.



1000 GAL GREASE TRAP

PANDA EXPRESS IRRIGATION SPECIFICATIONS

PRIOR TO SUBMITTING A BID FOR IRRIGATION DESIGN/BUILD SERVICES.

GENERAL

- AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATIONAL BY THE TIME OF FINAL INSPECTION. THE ENTIRE IRRIGATION SYSTEM SHALL BE INSTALLED BY A LICENSED AND QUALIFIED IRRIGATION CONTRACTOR.
- THE IRRIGATION SYSTEM WILL OPERATE ON POTABLE WATER, AND THE SYSTEM SHALL HAVE A REDUCED-PRESSURE BACKFLOW PREVENTION DEVICE INSTALLED TO PREVENT CONTAMINATION OF THE
- POTABLE SOURCE. THE BACKELOW DEVICE SHALL BE ENCLOSED IN A VANDAL-RESISTANT ENCLOSURE. ALL NON-TURF PLANTED AREAS SHALL BE DRIP IRRIGATED. SODDED AND SEEDED AREAS SHALL BE
- IRRIGATED WITH SPRAY OR ROTOR HEADS AT 100% HEAD-TO-HEAD COVERAGE ALL PLANTS SHARING SIMILAR HYDROZONE CHARACTERISTICS (WATER NEEDS, SUN EXPOSURE, ETC.) SHALL BE PLACED ON A VALVE DEDICATED TO PROVIDE THE NECESSARY WATER REQUIREMENTS SPECIFIC TO THAT HYDROZONE. THE PLANTING PLAN SHALL BE THE BASIS OF IRRIGATION DESIGN, AND THE IRRIGATION CONTRACTOR SHALL OBTAIN AND THOROUGHLY REVIEW A COPY OF THE PLANTING PLAN
- THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED, TO THE MAXIMUM EXTENT POSSIBLE, TO CONSERVE WATER BY USING THE FOLLOWING DEVICES AND SYSTEMS: MATCHED PRECIPITATION RATE TECHNOLOGY ON ROTOR AND SPRAY HEADS, RAIN SENSORS, AND MULTI-PROGRAM COMPUTERIZED IRRIGATION CONTROLLERS FEATURING SENSORY INPUT CAPABILITIES THE DESIGN OF SPRAY AND ROTOR AREAS SHALL ACHIEVE A DISTRIBUTION UNIFORMITY OF 0.7 OR
- B. SCOPE OF WORK WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES, FEES, AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND/OR SHOWN ON
 - THE IRRIGATION PLANS, NOTES, AND DETAILS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS. IN CASE OF CONFLICT BETWEEN THESE PLANS AND LOCAL AND/OR STATE CODES, CODES SHALL PREVAIL.
 - THE INTENT OF THE IRRIGATION SYSTEM IS TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS. THE IRRIGATION PLAN IS GENERALLY DIAGRAMMATIC: COORDINATE IRRIGATION INSTALLATION WITH UTILITY INSTALLATIONS. ACTUAL LOCATION OF CONTROLLER, BACKFLOW DEVICE, PIPING, VALVES, SPRAY HEADS, DRIP IRRIGATION, AND RELATED EQUIPMENT MAY NEED TO BE ADJUSTED BASED ON ACTUAL SITE
- C. QUALIFICATIONS OF IRRIGATION CONTRACTOR
 - ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE IRRIGATION CONTRACTING FIRM SPECIALIZING IN IRRIGATION SYSTEMS. SEE THE IRRIGATION PLAN FOR SPECIFIC EQUIPMENT AND SYSTEM THE IRRIGATION CONTRACTOR MUST HAVE ON ITS STAFF A TEXAS LICENSED IRRIGATOR, AS REGULATED
 - BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. A LICENSED IRRIGATOR OR LICENSED IRRIGATION INSTALLER SHALL BE PRESENT AT THE PROJECT SITE AT ALL TIMES AS WORK IS IN PROGRESS. THE OWNER MAY DEMAND THAT WORK STOP UNTIL THE CONTRACTOR PROVIDES FOR A LICENSED IRRIGATOR OR LICENSED IRRIGATION INSTALLER TO BE PRESENT AT THE PROJECT SITE AND SUPERVISING ALL IRRIGATION WORK.
 - 3. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.

<u>PRODUCTS</u>

- A. ALL MATERIALS SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS OF ANY TYPE AND SHALL BE THE BEST OF THEIR CLASS AND KIND. ALL MATERIALS SHALL HAVE A MINIMUM GUARANTEE OF ONE YEAR AGAINST MATERIAL DEFECTS OR DEFECTIVE WORKMANSHIP. ALL MATERIALS SHALL BE OF THE FOLLOWING BRANDS: RAINBIRD, TORO, NETAFIM. OTHER MANUFACTURERS MAY BE PROPOSED TO THE OWNER, AS MAY BE
- THE BACKFLOW PREVENTION DEVICE SHALL BE REDUCED-PRESSURE TYPE, SIZED TO MEET IRRIGATION DEMAND AND MINIMIZE PRESSURE LOSSES. INSTALL BACKFLOW PREVENTION UNITS IN ACCORDANCE WITH IRRIGATION CONSTRUCTION DETAILS AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
- PRESSURE SUPPLY LINES, DOWNSTREAM OF THE POINT-OF-CONNECTION: a. SCHEDULE 40 PVC FOR ALL PIPE 1-1/2" OR LESS
 - CLASS 315 PVC FOR ALL PIPE 2" TO 2-1/2" CLASS 200 PVC, GASKETED, FOR ALL PIPE 3" AND LARGER
 - NON-PRESSURE LATERAL LINES (DOWNSTREAM FROM VALVES): CLASS 200 PVC
 - SLEEVES: SCHEDULE 40 PVC FITTINGS: SCH. 40 PVC, EXCEPT AS NOTED OTHERWISE.
- VALVES AND DRIP VALVE ASSEMBLIES: EACH VALVE SHALL BEAR A PRE-MANUFACTURED, NUMBERED WATERPROOF TAG BEARING A NUMBER CORRESPONDING TO ITS VALVE SEQUENCE OF OPERATION ON THE VALVES FOR SPRAY AND ROTOR CIRCUITS SHALL BE COMMERCIAL-GRADE, GLOBE-TYPE, NORMALLY
- VALVES SHALL HAVE A ONE-PIECE SOLENOID DESIGN AND FLOW CONTROL HANDLE
- QUICK COUPLERS: $\frac{3}{4}$ ", TWO-PIECE BODY, WITH LATCHING COVER. BALL VALVES:
- BRASS BALL VALVES SHALL BE INSTALLED WHEREVER PRESSURIZED MAINLINE CROSSES VEHICULAR AREAS, AND INSTALLED ON THE UPSTREAM SIDE OF THE MAINLINE. PVC BALL VALVES SHALL BE INSTALLED AT THE ENDS OR DRIP RUNS, FOR FLUSHING DRIP LINES. ALL BALL VALVES SHALL BE FULL-PORT, LINE SIZE, AND INSTALLED IN THEIR OWN 9" ROUND VALVE BOXES.
- G. VALVE BOXES: ALL VALVES BOXES SHALL BE LOCKING BOLT-DOWN TYPE, FURNISHED WITH LIDS AND BOLTS. BOXES SHALL BE OF A SIZE TO CONTAIN THE ENTIRE VALVE AND/OR VALVE ASSEMBLY. THE VALVE BOX LID SHALL HAVE THE VALVE STATION NUMBER HEAT-BRANDED INTO THE LID WITH 2" HIGH LETTERS. ONLY ONE VALVE SHALL BE INSTALLED PER VALVE BOX. H. FIXED SPRAY HEADS AND ROTORS: PLASTIC BODY POP-UP, WITH A REMOVABLE PLASTIC SPRAY NOZZLE.
- NOZZLES SHALL BE HIGH-EFFICIENCY. INTEGRAL EMITTER DRIP TUBING: TUBING WITH INTEGRAL EMITTERS WELDED TO THE INSIDE WALL OF THE TUBING AS AN INTEGRAL PART OF THE TUBING ASSEMBLY.
- 1. IN GENERAL, THE FOLLOWING EMITTER FLOW RATES AND SPACING SHALL BE USED: a. CLAY AND CLAY LOAM SOILS: 0.6 GPH, EMITTERS SPACED AT 12" O.C., PARALLEL TUBING RUNS
- MEDIUM-TEXTURE LOAM SOILS: 0.9 GPH, EMITTERS SPACED AT 12" O.C., PARALLEL TUBING RUNS SPACED AT 18" O.C SANDY AND SANDY LOAM SOILS: 0.9 GPH, EMITTERS SPACED AT 12" O.C., PARALLEL TUBING RUNS
- SPACED AT 12" O. CONTRACTOR SHALL GUARANTEE A MINIMUM OF TWO EMITTERS PER #1 OR #5 CONTAINER PLANT.

- AUTOMATIC CONTROLLER: COMMERCIAL-GRADE MODULAR CONTROLLER, SIZE AS APPROPRIATE FOR THE NUMBER OF PERMANENT VALVES, PLUS ADDITIONAL MODULES AS NEEDED FOR ANY TEMPORARY IRRIGATED AREAS (SUCH AS NATIVE SEED). PROVIDE VANDAL-PROOF ENCLOSURE FOR ALL EXTERIOR INSTALLATIONS.
- PROVIDE LINE-VOLTAGE DISCONNECT SWITCH WITH GROUND FAULT PROTECTION 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR IRRIGATION WIRE. EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR STATION AND COMMON

DOUBLE YELLOW STRIPING

YELLOW-LEFT EDGE ON MULTILANE

DIVIDED ROADWAYS AND CENTERLINE

STRIPE

WHITE LINE (PARKING STRIPE)

BROKEN YELLOW CENTER

ONSITE WHITE CROSSWALK LINE

WHITE STOP

LINE SPECIFICATIONS

ALL ON-SITE STRIPING SHALL BE WHITE, APART FROM ADA BLUE

STRIPING, UNLESS OTHERWISE NOTED.

COMMON WIRE - WHITE EXTRA COMMON WIRES - BLUE

NO SCALE

- WIRE SPLICES SHALL BE ENCASED IN A WATERPROOF COMPOUND OR GEL. ALL FIELD SPLICES SHALL BE
- LOCATED IN A 6 INCH ROUND VALVE BOX. RAIN SENSOR: WIRELESS RAIN/FREEZE SENSOR.

STATION WIRE - RED

- THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REOURED TO MOVE SUCH ITEMS AT HIS OWN COST. ENSURE FIELD COORDINATION IS MADE EARLY ON IN THE CONSTRUCTION PHASE SO PLACEMENT LOCATION IS CORRECT.
- THE IRRIGATION CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK, AND SHALL OBTAIN ALL ENGINEERING, LANDSCAPE, AND OTHER APPLICABLE PLANS & DOCUMENTS. THE CONTRACTOR SHALL THOROUGHLY REVIEW THE PLANS AND REPORT ANY CONFLICTS OR DISCREPANCIES TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- THE IRRIGATION CONTRACTOR SHALL NOT WILFULLY INSTALL ANY PORTION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS. GRADES OR DIMENSIONS EXIST. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS AND NECESSARY COSTS.
- SEE UTILITY PLANS FOR IRRIGATION POINTS OF CONNECTION (TAP) AND DOMESTIC WATER SUPPLY. THE IRRIGATION CONTRACTOR SHALL PAY ANY AND ALL FEES AND PERMITS ASSOCIATED WITH THE
- INSTALLATION OF THE IRRIGATION SYSTEM. AT LEAST SEVEN DAYS BEFORE BEGINNING WORK. CONFIRM THE STATIC WATER PRESSURE IS AT LEAST 55 PSI
- AND LESS THAN 70 PSI. IF STATIC WATER PRESSURE IS OUTSIDE OF THE STATED RANGE. DO NOT PROCEED WITHOUT FIRST NOTIFYING THE OWNER IN WRITING, AND OBTAINING SUBSEQUENT DIRECTION FOR CORRECTIONAL MEASURES. SHOULD THE IRRIGATION CONTRACTOR CHOOSE TO BEGIN THE INSTALLATION NITHOUT SUCH NOTIFICATION, THE IRRIGATION CONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR ALL COSTS INCURRED TO ENSURE THE SYSTEM IS WORKING PROPERLY. NO CHANGE ORDERS WILL BE AUTHORIZED IN SUCH CIRCUMSTANCES.
- SHOULD STATIC WATER PRESSURE BE BELOW 55 PSI. A PUMP MAY BE REQUIRED FOR PROPER OPERATION OF THE IRRIGATION SYSTEM. THE IRRIGATION CONTRACTOR SHALL DISCUSS THE NEED FOR A PUMP WITH THE OWNER, AND PROPOSE OPTIONS FOR THE PROPER FUNCTIONING OF THE IRRIGATION SYSTEM. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, STRUCTURES AND
- COORDINATE WITH THE OWNER THE PROPOSED LOCATIONS OF THE AUTOMATIC CONTROLLER AND ANY REQUIRED SLEEVES THROUGH THE BUILDING FOR CONTROL WIRES.
- TRENCHING NEAR EXISTING TREES:
- CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
- ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
- ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
- 4. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.
- ALL BACKFILL MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE OWNER. BACKFILL MATERIAL SHALL BE FREE FROM RUBBISH, ROCK LARGER THAN 1", LARGE STONES, BRUSH, SOD, FROZEN MATERIAL OR OTHER UNSUITABLE SUBSTANCES THAT MAY DAMAGE PIPE DURING THE BACKFILLING OPERATIONS. SEPARATE OUT ROCKS LARGER THAN 1 INCH IN ANY DIRECTION FROM EXCAVATED MATERIAL, AND REMOVE FROM AREAS TO RECEIVE LANDSCAPING. COVER FOR BOTH TOP AND SIDES OF PIPE SHALL BE A MINIMUM OF 2 INCHES OF ROCK-FREE SOIL, SAND, OR OTHER APPROVED MATERIAL IN THE EVENT THAT THE MATERIAL FROM THE EXCAVATION OR TRENCHING IS FOUND TO BE UNSUITABLE
- FOR USE IN BACKFILL, IT SHALL BE REMOVED FROM THE SITE AND PROPERLY AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL THEN PURCHASE AND AND FURNISH SUITABLE BACKFILL MATERIAL CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND OR OTHER APPROVED MATERIALS FREE OF DEBRIS. BACKFLOW PREVENTER INSTALLATION: CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER
- SOURCES AT LOCATION SHOWN ON PLANS AND AS APPROVED BY THE OWNER, AND SHALL MAKE ANY MINOR CHANGES IN LOCATION AS MAY BE NECESSARY DUE TO ACTUAL SITE CONDITIONS. BACKFLOW PREVENTER HEIGHT SHALL BE AS PER LOCAL CODES AND MANUFACTURER'S INSTRUCTIONS. INSTALL A BRASS BALL VALVE IMMEDIATELY UPSTREAM OF THE BACKFLOW DEVICE TO SERVE AS AN ISOLATION VALVE. TO EVERY EXTENT POSSIBLE, INSTALL BACKFLOW PREVENTER IN A LOCATION SCREENED FROM PUBLIC VIEW (SUCH AS BEHIND A SHRUB ROW).
- PIPE SIZE SHALL CONFORM TO THE STANDARD OF CARE FOR PIPE SIZES. THE IRRIGATION CONTRACTOR SHALL ENSURE THAT THE FLOW THROUGH ANY PIPE DOES NOT EXCEED 5 FPS. MAINLINE PIPE AND WIRES SHALL BE INSTALLED WITH A MINIMUM COVER OF 18 INCHES. LATERAL PIPE
- SHALL BE INSTALLED WITH A MINIMUM COVER OF 12 INCHES.
- ASSEMBLE ALL THREADED FITTINGS WITH TEFLON TAPE, WHICH SHALL BE APPLIED TO MALE THREADS ALL SOLVENT-WELD CONNECTIONS SHALL BE MADE WITH APPROVED SOLVENT-WELD PRIMER AND GLUE.
- PIPE SHALL BE INSTALLED WITH A MINIMUM OF 4" HORIZONTAL CLEARANCE FROM ANY OTHER PIPE AND 2" VERTICAL CLEARANCE FROM ANY PIPES THAT CROSS OVER OR UNDER.

- VALVE BOXES SHALL BE INSTALLED FLUSH WITH THE GRADE, WITH CLEAN PEA GRAVEL LOCATED BELOW THE VALVE. LOCATE BOXES WITHIN 12 TO 24" OF SIDEWALKS OR LANDSCAPE EDGES, WITH TOPS OF BOXES 1" ABOVE FINISH GRADE IN TURF, AND 3" ABOVE FINISH GRADE IN SHRUB AREAS (TO AVOID BEING COVERED BY MUI CHY EACH VALVE BOX COVER SHALL BE HEAT-BRANDED WITH THE CONTROLLER STATION NUMBER.
- N. DRIP IRRIGATION EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS. DRIP LINES IN AREAS WITH ORGANIC MULCH, SUCH AS SHREDDED WOOD, SHALL BE BURIED, NO MORE
- THAN 2" BELOW FINISH GRADE. DRIP LINES IN AREAS WITH ROCK MULCH SHALL BE MOUNTED ON GRADE AND BENEATH LANDSCAPE FABRIC, AND SECURED IN PLACE WITH WIRE STAPLES AT A MAXIMUM OF 48" ON CENTER.
- ALL SPRAY AND ROTOR HEAD LOCATIONS SHALL BE STAKED, FLAGGED AND/OR OTHERWISE CLEARLY MARKED ON THE GROUND PRIOR TO INSTALLATION. SPRINKLER HEAD STAKING SHALL BE INSPECTED
- BOULDERS. AND HARDSCAPE, UNLESS OTHERWISE SPECIFIED.
- 4. ALL ROTOR, SPRAY AND BUBBLER HEADS AND VALVES SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ON WALKS, STREETS, WALLS, ETC. AUTOMATIC CONTROLLER: INSTALL THE CONTROLLER AT THE LOCATION INDICATED BY THE OWNER. INSTALL CONTROLLER WITH A
- BACKUP BATTERY AS RECOMMENDED BY THE MANUFACTURER. DEDICATE ONE (1) 20-AMP BREAKER FOR EACH CONTROLLER. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL SOURCE TO THE CONTROLLER UNIT ONLY.
- NO WIRE SPLICES SHALL BE ALLOWED EXCEPT AT VALVES AND CONTROLLER. WHERE SPLICES MAY BE NECESSARY DUE TO EXCESSIVELY LONG WIRE RUNS, THE CONTRACTOR SHALL MAKE ALL SPLICES IN 6" ROUND VALVE BOXES WITH 3M'S "DBY-DIRECT BURIAL SPLICE KIT". THE CONTRACTOR SHALL LABEL ALL WIRES WITH WATERPROOF TAGS AND MARKERS AT ALL SPLICES AND VALVE MANIFOLDS, AND SHALL
- LEAVE A 24" COIL OF EXCESS WIRE AT EACH CONNECTION. PROVIDE #10 COMMON WIRE, DIRECT BURIAL, TO ALL REMOTE CONTROL VALVES.
- PIPE SLEEVES UNDER PAVED AREAS PRIOR TO PAVING SEE SLEEVING NOTES INSTALL THE RAIN SENSOR IN THE VICINITY OF THE CONTROLLER, AND COORDINATE LOCATION WITH THE
- COST TO THE OWNER. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- QUALITY CONTROL PERFORM COVERAGE TESTS AFTER IRRIGATION SYSTEM IS COMPLETED, BUT PRIOR TO ANY PLANTING AND
- PERFORM TESTING IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. TEST SYSTEM TO ASSURE THAT ALL PLANTING AREAS ARE WATERED COMPLETELY AND UNIFORMLY.
- 1. DURING IRRIGATION EXCAVATION AND INSTALLATION, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
- INSPECTION AND ACCEPTANCE
- THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY. WHEN THE INSPECTED WORK DOES NOT COMPLY WITH THESE REQUIREMENTS, THE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
- THE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE. CONTROLLER CHART: THE IRRIGATION CONTRACTOR SHALL PROVIDE A 11" X 17" COLOR-CODED, LAMINATED COPY OF THE IRRIGATION LAYOUT AND PLACE IT IN THE CONTROLLER'S COVER. THE CONTROLLER CHART SHALL CLEARLY DELINEATE THE AREAS COVERED BY EACH VALVE, USING A SEPARATE COLOR FOR EACH ZONE.
- a. OUICK COUPLER KEYS (2)
- A MINIMUM OF (2) COPIES OF RECORD DRAWINGS. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS. ADDENDA. OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.
- THE MAINTENANCE PERIOD, AS MAY BE APPROPRIATE. WARRANTY
- REMAIN OPERATIONAL FOR A PERIOD OF 12 MONTHS AFTER THE DATE OF FINAL ACCEPTANCE. DURING THIS PERIOD. THE CONTRACTOR SHALL ALSO REPAIR ANY SETTLEMENT OF THE IRRIGATION TRENCHES. BY THE END OF THE WARRANTY PERIOD. ANY IRRIGATION PART THAT IS EITHER NON-OPERATIONAL OR THAT IS OPERATING BELOW STANDARDS AS DETERMINED BY THE OWNER, SHALL BE REMOVED FROM THE
- IRRIGATION PARTS DAMAGED OR IMPAIRED DUE TO ACTS OF GOD, VANDALISM, AND/OR THE OWNER'S IMPROPER MAINTENANCE SHALL NOT BE COVERED BY THIS WARRANTY.
- SHOULD THE PERMITTING JURISDICTION REQUIRE AN IRRIGATION AUDIT, THE IRRIGATION CONTRACTOR SHALL RETAIN THE SERVICES OF A THIRD-PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR, AT NO ADDITIONAL COST TO THE OWNER.

VALVES SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS.

O SPRAY ROTOR AND BURBLER HEADS: AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.

- ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12 INCH MINIMUM LENGTH OF $\frac{1}{2}$ INCH FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND P-70 PRIMER. ALL ROTORS SHALL BE CONNECTED TO LATERAL LINES WITH PRE-MANUFACTURED SWING#
- 3. ALL ROTOR, SPRAY AND BUBBLER HEADS SHALL BE SET PERPENDICULAR AND FLUSH TO FINISH GRADE AND WITH A CLEARANCE OF FOUR INCHES (MINIMUM) FROM THE EDGE OF ANY BUILDINGS, WALLS,
- THE IRRIGATION CONTRACTOR SHALL COORDINATE 120 V.A.C. ELECTRICAL POWER TO CONTROLLER AND
- CONNECT ALL DIRECT BURIAL WIRES TO VALVES USING 3M'S "DBY-DIRECT BURIAL SPLICE KIT" (UNLESS
- PROVIDE THREE ADDITIONAL IRRIGATION CONTROL WIRES ALONG EACH BRANCH OF MAINLINE FOR FUTURE EXPANSION. STUB ADDITIONAL CONTROL WIRES INTO BACK OF IRRIGATION CONTROLLERS. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONTROL WIRE SLEEVES AND
- OWNER. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THE RAIN SENSOR IS PLACED IN A LOCATION WHERE IT CAN RECEIVE ADEQUATE RAINFALL WITHOUT OBSTRUCTIONS. IF IT IS PLACED IN AN INADEQUATE LOCATION, THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO RELOCATE IT AT NO ADDITIONAL
- MAKE ALL NECESSARY ADJUSTMENTS TO PROVIDE COMPLETE COVERAGE, INCLUDING REALIGNMENT OF HEADS AND REPLACEMENT OF NOZZLES.
- DISPOSED LEGALLY OF ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.
- UPON COMPLETION OF THE WORK, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE IRRIGATION CONTRACTOR SHALL
- 5. TURN THE FOLLOWING ITEMS IN TO THE OWNER UPON COMPLETION OF THE INSTALLATION:
- CONTROLLER MANUAL (1) CONTROLLER KEYS (2)
- V. REFER TO THE PLANTING SPECIFICATIONS FOR ADDITIONAL CONDITIONS OF FINAL ACCEPTANCE AND START OF
- 1. THE IRRIGATION SYSTEM SUPPLIED AND INSTALLED SHALL BE WARRANTED (LABOR AND MATERIALS) TO
- SITE AND SHALL BE REPLACED. REPLACEMENTS SHALL BE OF THE SAME KIND AS SPECIFIED IN THE IRRIGATION LEGEND, AND SHALL BE INSTALLED AS ORIGINALLY SPECIFIED.

PANDA EXPRESS SITE NOTES & DETAILS

Always a Better Plan 100 Camelot Drive

SEE SHEET CO.1 FOR PLAN

SPECIFICATIONS AND REQUIREMENTS

VARIES (OR SEE PLAN)

"NO PARKING ZONE" STRIPING

ONSITE

CROSSWALK SPECIFICATION

TYPICAL PANDA EXPRESS PAVEMENT STRIPING AND MARKING

excelengineer.com

PROJECT INFORMATION

Fond du Lac, WI 54935 920-926-9800

S 0

PROFESSIONAL SEAL

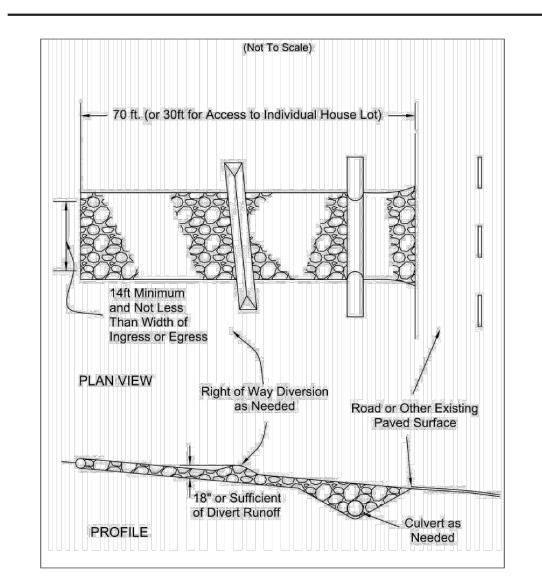
PRELIMINARY DATES JAN. 20, 2023 MAR. 24, 2023

2178020

SHEET NUMBER

Specifications

Construction Entrance



Construction Entrance

- 1. Stone Size—ODOT # 2 (1.5-2.5 inch) stone shall be used, or 6. Timing—The construction entrance shall be installed as 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 8. Water Bar -A water bar shall be constructed as part of the for light duty entrances or at least 10 inches for heavy duty
- 4. Width -The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress

 9. Maintenance -Top dressing of additional stone shall be
- 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:

Figure 7.4.1	
Geotextile Specification for 0	Construction Entra
Minimum Tensile Strength	200 lbs

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 < 0.6 mm.
Permittivity	1×10-3 cm/sec.

Specifications

onto paved surfaces.

scraping or sweeping.

from muddy areas.

roadway or entrance.

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

construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out

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

10. Construction entrances shall not be relied upon to remove

1. Removal—the entrance shall remain in place until the

disturbed area is stabilized or replaced with a permanent

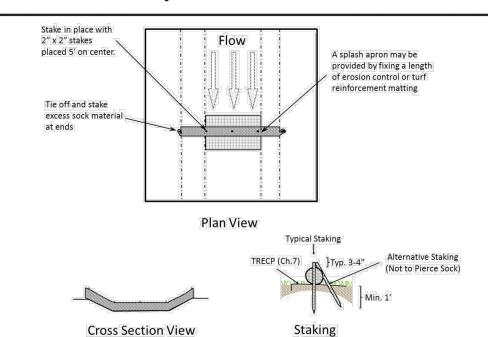
mud from vehicles and prevent off-site tracking. Vehicles

that enter and leave the construction-site shall be restricted

across the entrance or to prevent runoff from being directed

Compost Sock Check Dam

Specifications



Specifications

Filter Sock

(Not to Scale)

SECTION

situations or in runoff channels.

6. Routinely inspect filter socks after each significant rain,

maintaining filter socks in a functional condition at all

7. Remove sediments collected at the base of the filter

8. Where the filter sock deteriorates or fails, it will be

socks when they reach 1/3 of the exposed height of the

repaired or replaced with a more effective alternative.

longer required in such as way as to facilitate and not

1. Materials – Compost used for filter socks shall be weed, 5. Filter Socks are not to be used in concentrated flow

2" x 2" Wooden Stake

- 1. Compost sock netting shall use a knitted mesh fabric with 6. Place compost sock check dams so that the ends extend to 1/8-3/8 inch openings, and compost media with particle sizes 99% < 3 inches, and 60% > 3/8 inches (conforming to media described in Chapter 6 Filter Sock).
- 2. Compost sock check dams shall be used in areas that drain 5 acres or less. 3. Sediment shall be removed from behind the sock when it
- reaches ½ the height of the check dam.
- 4. Compost sock check dams shall be constructed with 12, 18, or 24 in diameter compost socks, and shall completely cover the width of the channel. The midpoint of the compost sock check dam shall be a minimum of 6 inches lower than the sides in order to direct flow across the center and away from the channel sides. Filter sock check dams shall be filled to a density such that they shall reach their intended height (diameter). After installation and use, they shall be considered unsuitable and in need of replacement after falling below 80% of their minimum required height (diameter).
- 5. Although no trenching is necessary, compost sock check dams shall be placed on a graded surface where consistent contact with the soil surface is made without bridging over gaps, rills, gullies, stones or other irregularities.
- 6 CHAPTER 5 Temporary Runoff Control

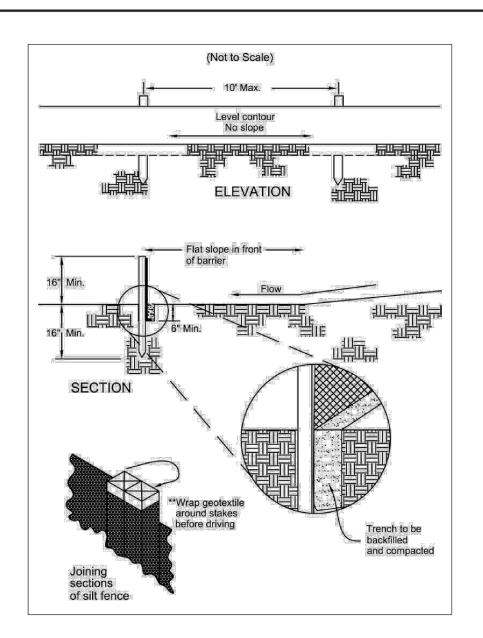
the top of bank. Staking for compost sock check dams shall use 2 inch x 2 inch wooden stakes, placed 5 foot on center. Stake length shall allow them to be driven 12 inches into existing soil and allow at least 2 inches above the sock.

- 7. Space compost sock check dams so that the toe of the upstream dam is at the same elevation or lower elevation as the top of the downstream compost sock check dam (at the center of the channel). This will be influenced by the height of the sock and gradient of the waterway.
- 8. A splash apron may be needed where flows over the sock may erode the channel and undercut the compost sock check dam. Create the apron by fixing a length of Temporary Rolled Erosion Control Product (Erosion Control Matting) or Turf Reinforcement Matting starting upstream of the sock a distance equal to the sock height and extending a length two times the height of the compost sock check dam. See Chapter 7 for information regarding these materials. Materials used should be able to be left in place (e.g. biodedegradable/photodegradable TRECP) without creating problems for future mowing or maintanance of the channel.

Page updated on 3-3-14

CHAPTER 7 Soil Stabilization 19

for **Silt Fence**



CHAPTER 6 Sediment Controls 33

1. Silt fence shall be constructed before upslope land distur- 9. Seams between sections of silt fence shall be spliced bance begins.

20 CHAPTER 7 Soil Stabilization

- 2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points 10. Maintenance—Silt fence shall allow runoff to pass only in the fence and so that small swales or depressions that may carry small concentrated flows to the silt fence are dissipated along its length.
- 3. Ends of the silt fences shall be brought upslope slightly so that water ponded by the silt fence will be prevented from flowing around the ends.
- 4. Silt fence shall be placed on the flattest area available. 5. Where possible, vegetation shall be preserved for 5 feet (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7
- days from the installation of the silt fence. 6. The height of the silt fence shall be a minimum of 16 inches above the original ground surface.
- 7. The silt fence shall be placed in an excavated or sliced be made with a trencher, cable laying machine, slicing machine, or other suitable device that will ensure an adequately uniform trench depth.
- 8. The silt fence shall be placed with the stakes on the downslope side of the geotextile. A minimum of 8 inches of geotextile must be below the ground surface. Excess material shall lay on the bottom of the 6-inch deep trench. The trench shall be backfilled and compacted on both sides of the fabric.

Table 6.3.2 Minimum criteria for Silt Fence Fabric (0D0T, 2002)				
FABRIC PROPERTIES	VALUES	TEST METHOD		
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632		
Maximum Elongation at 60 lbs	50%	ASTM D 4632		
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833		
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533		
Apparent Opening Size	≤ 0.84 mm	ASTM D 4751		
Minimum Permittivity	1X10-2 sec1	ASTM D 4491		
UV Exposure Strength Retention	70%	ASTM G 4355		

34 CHAPTER 6 Sediment Controls

Specifications

Silt Fence

together only at a support post with a minimum 6-in. overlap prior to driving into the ground, (see details).

- as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under the fabric or around the fence ends, or in any other way allows a concentrated flow discharge, one of the following shall be performed, as appropriate: 1) the layout of the silt fence shall be changed, 2) accumulated sediment shall be removed, or 3) other practices shall be installed.
- Sediment deposits shall be routinely removed when the deposit reaches approximately one-half of the height of the silt fence.
- Silt fences shall be inspected after each rainfall and at least daily during a prolonged rainfall. The location of existing silt fence shall be reviewed daily to ensure its proper location and effectiveness. If damaged, the silt fence shall be repaired immediately.
- 1. Fence post The length shall be a minimum of 32 inches. Wood posts will be 2-by-2-in. nominal dimensioned hardwood of sound quality. They shall be free of knots, splits and other visible imperfections, that will weaken the posts. The maximum spacing between posts shall be 10 ft. Posts shall be driven a minimum 16 inches into the ground, where possible. If not possible, the posts shall be adequately secured to prevent overturning of the fence

due to sediment/water loading.

2. Silt fence fabric – See chart below.

3. 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- 9. Removal – Filter socks will be dispersed on site when no

pathogen and insect free and free of any refuse, contami-

nants 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".

3/8" knitted mesh netting material, filled with compost

passing the above specifications for compost products.

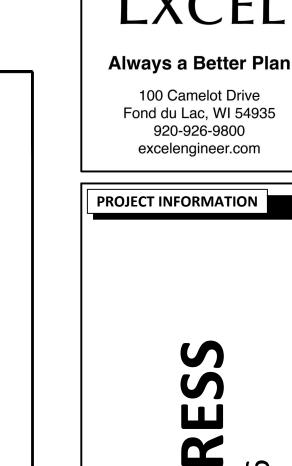
2. Filter Socks shall be 3 or 5 mil continuous, tubular, HDPE

- 4. 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.
- 50 CHAPTER 6 Sediment Controls

__ 10 mil PLASTIC LINING PLYWOOD 48"X24" BLACK LETTERS PAINTED WHITE ----WOOD FRAME SECURELY FASTENED AROUND ENTIRE PERIMETER WITH TWO STAKES LAG SCREWS — CONCRETE **WASHOUT** — 8' MINIMUM - TWO-STACKED 2X12 ROUGH WOOD FRAME CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT) 10 mil PLASTIC LINING -NOT TO SCALE TYPE "ABOVE GROUND" WITH WOOD PLANKS

NOTE: 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. REFERENCE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL FOR ADDITIONAL CONSIDERATIONS.

> CONCRETE WASHOUT DETAIL NO SCALE



FOR LOPMENT DEVE **Q** S 0

PROFESSIONAL SEAL

PRELIMINARY DATES JAN. 20, 2023 MAR. 24, 2023

JOB NUMBER 2178020

SHEET NUMBER

100 Camelot Drive Fond du Lac, WI 54935 920-926-9800 excelengineer.com

Always a Better Plan

PROJECT INFORMATION

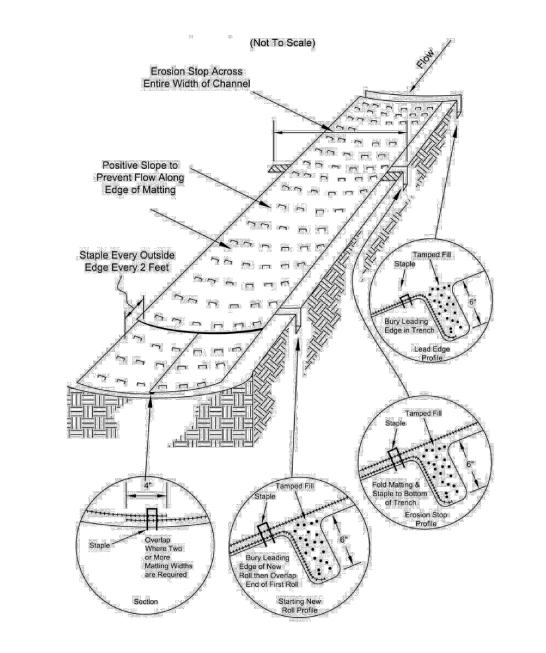
FOR

JOB NUMBER

SHEET NUMBER

Specifications

Temporary Rolled Erosion Control Product



Specifications

1. Channel/Slope Soil Preparation Grade and compact area of **Channel Installation** installation, preparing seedbed by loosening 2"-3" of topsoil 9. Excavate initial anchor trench (12"x6") across the lower end above final grade. Incorporate amendments such as lime of the project area.

Temporary Rolled Erosion Control Product

other debris so that installed RECP will have direct contact with the soil surface. 2. Channel/Slope Seeding Apply seed to soil surface prior to installation. All check slots, anchor trenches, and other disturbed areas must be reseeded. Refer to the Permanent

Seeding specification for seeding recommendations.

Slope Installation

3. Excavate top and bottom trenches (12"x6"). Intermittent erosion check slots (6"x6") may be required based on slope length. Excavate top anchor trench 2' x 3' over crest of the

4. If intermittent erosion check slots are required, install RECP in 6"x6" slot at a maximum of 30' centers or the mid point of the slope. RECP should be stapled into trench on 12"

5. Install RECP in top anchor trench, anchor on 12" spacings, backfill and compact soil.

6. Unroll RECP down slope with adjacent rolls overlapped a minimum of 3". Anchor the seam every 18". Lay the RECP loose to maintain direct soil contact, do not pull taught. 7. Overlap roll ends a minimum of 12" with upslope RECP on top for a shingle effect. Begin all new rolls in an erosion

check slot if required, double anchor across roll every 12". 8. Install RECP in bottom anchor trench (12"x6"), anchor every 12". Place all other staples throughout slope at 1 to 2.5 per square yard dependant on slope. Refer to manufacturer's

CHAPTER 6 Sediment Controls 41

and fertilizer into soil. Remove all rocks, clods, vegetation or 10. Excavate intermittent check slots (6"x6") across the channel at 30' intervals along the channel.

> 11. Excavate longitudinal channel anchor slots (4"x4") along both sides of the channel to bury the edges. Whenever possible extend the RECP 2'-3' above the crest of channel side

12. Install RECP in initial anchor trench (downstream) anchor every 12", backfill and compact soil.

13. Roll out RECP beginning in the center of the channel toward the intermittent check slot. Do not pull taught. Unroll adjacent rolls upstream with a 3" minimum overlap (anchor every 18") and up each channel side slope.

14. At top of channel side slopes install RECP in the longitudinal anchor slots, anchor every 18".

15. Install RECP in intermittent check slots. Lay into trench and secure with anchors every 12", backfill with soil and com-

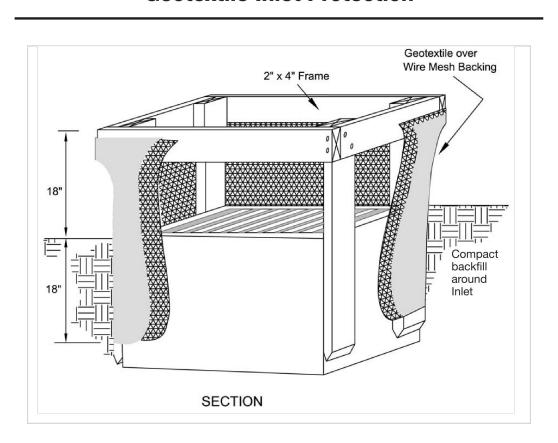
16. Overlap roll ends a minimum of 12" with upstream RECP on top for a shingling effect. Begin all new rolls in an intermittent check slot, double anchored every 12".

17. Install upstream end in a terminal anchor trench (12"x6"); anchor every 12", backfill and compact.

18. Complete anchoring throughout channel at 2.5 per square yard using suitable ground anchoring devices (U shaped wire staples, metal geotextile pins, plastic stakes, and triangular wooden stakes). Anchors should be of sufficient length to resist pullout. Longer anchors may be required in loose sandy or gravelly soils.

CHAPTER 7 Soil Stabilization 55

Specifications **Geotextile Inlet Protection**



land disturbance begins or before the inlet becomes

2. The earth around the inlet shall be excavated completely to a depth at least 18 inches.

3. The wooden frame shall be constructed of 2-inch by 4-inch construction grade lumber. The 2-inch by 4-inch posts shall be driven one (1) ft. into the ground at four corners of the inlet and the top portion of 2-inch by 4-inch frame assembled using the overlap joint shown. The top

4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely

1. Inlet protection shall be constructed either before upslope 5. Geotextile material shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 inches below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth

> 6. Backfill shall be placed around the inlet in compacted 6inch layers until the earth is even with notch elevation on ends and top elevation on sides.

of the frame shall be at least 6 inches below adjacent 7. A compacted earth dike or check dam shall be constructed in the ditch line below the inlet if the inlet is not roads if ponded water will pose a safety hazard to traffic.

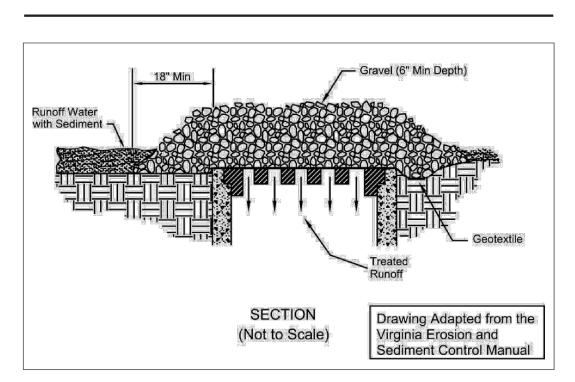
are not fastened to the same post.

in a depression. The top of the dike shall be at least 6 inches higher than the top of the frame.

CHAPTER 6 Sediment Controls 39

54 CHAPTER 7 Soil Stabilization

Specifications **Geotextile-Stone Inlet Protection**



1. Inlet protecion shall be constructed either before upslope land disturbance begins or before the inlet becomes

of 2-inch or smaller clean aggregate placed on top. Extra

support for geotextile is provided by placing hardware

40 CHAPTER 6 Sediment Controls

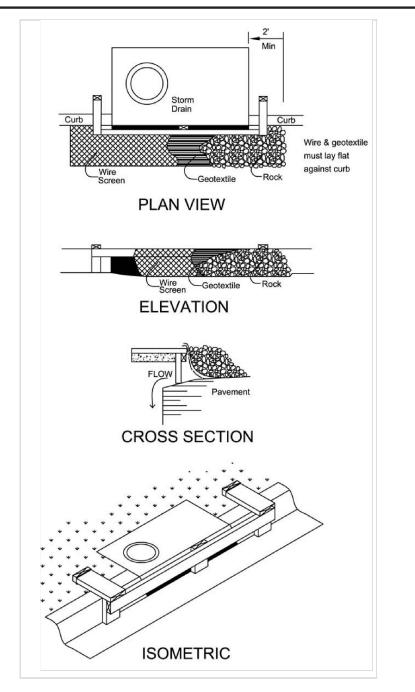
inches across the top and sides of the inlet cover. 2. Geotextile and/or wire material shall be placed over the 3. Maintenance must be performed regularly, especially after storm events. When clogging of the stone or geotextile top of the storm sewer and approximately six (6) inches

cloth or wire mesh across the inlet cover. The wire should be no larger than ½" mesh and should extend an extra 12

occurs, the material must be removed and replaced.

Geotextile - Stone Inlet Protection for Curb Inlets

Specifications



Specifications

Geotextile-Stone Inlet Protection for Curb Inlets

1. Inlet protection shall be constructed either before upslope 5. The wire mesh and geotextile cloth shall be formed to the land disturbance begins or before the inlet becomes

2. Construct a wooden frame of 2-by-4-in. constructiongrade lumber. The end spacers shall be a minimum of 1 6. Two-inch stone shall be placed over the wire mesh and ft. beyond both ends of the throat opening. The anchors shall be nailed to 2-by-4-in. stakes driven on the opposite side of the curb.

3. The wire mesh shall be of sufficient strength to support fabric and stone. It shall be a continuous piece with a minimum width of 30 in. and 4 ft. longer than the throat length of the inlet, 2 ft. on each side.

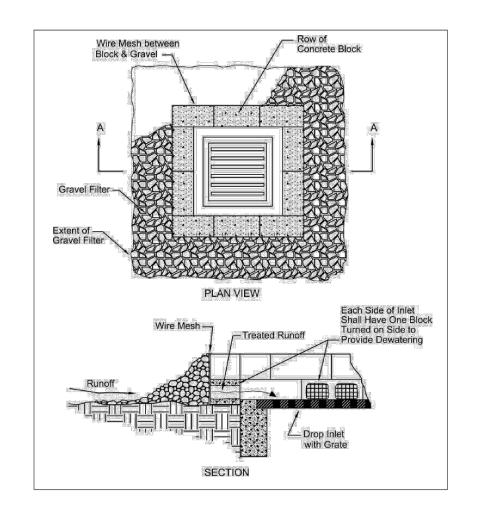
4. Geotextile cloth shall have an equivalent opening size (EOS) of 20-40 sieve and be resistant to sunlight. It shall be at least the same size as the wire mesh.

concrete gutter and against the face of the curb on both sides of the inlet and securely fastened to the 2-by-4-in.

geotextile in such a manner as to prevent water from entering the inlet under or around the geotextile cloth. 7. This type of protection must be inspected frequently and

the stone and/or geotextile replaced when clogged with

Specifications **Block and Gravel Drop Inlet Filter**



1. Place 4-inch by 8-inch by 12-inch concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, with the ends of adjacent blocks abutting. The height of the barrier can be varied, depending upon the design needs, by stacking combinations of the same size blocks. The barrier of blocks should be at

least 12-inches high but no greater than 24-inches high. 2. Wire mesh should be placed over the outside vertical face (webbing) of the concrete blocks to prevent stone from

of the block barrier, as shown below.

being washed through the block cores. Hardware cloth or comparable wire mesh with ½-inch openings should be . Two-inch stone should be piled against the wire to the top

4. If the stone filter becomes clogged with sediment so that $\frac{1}{2}$ it no longer adequately performs its function, pull stone away from the blocks, clean and/or replace.

CHAPTER 6 Sediment Controls 43

42 CHAPTER 6 Sediment Controls

EROSION CONTROL DETAILS

S

PROFESSIONAL SEAL

PRELIMINARY DATES JAN. 20, 2023 MAR. 24, 2023

2178020





excelengineer.com

ENT FOR:

DA EXPRESS

PROPOSED DEVELOPMENT FOR:

JCKS & PANDA EXP

 \Box

PROFESSIONAL SEAL

JAN. 20, 2023 MAR. 24, 2023

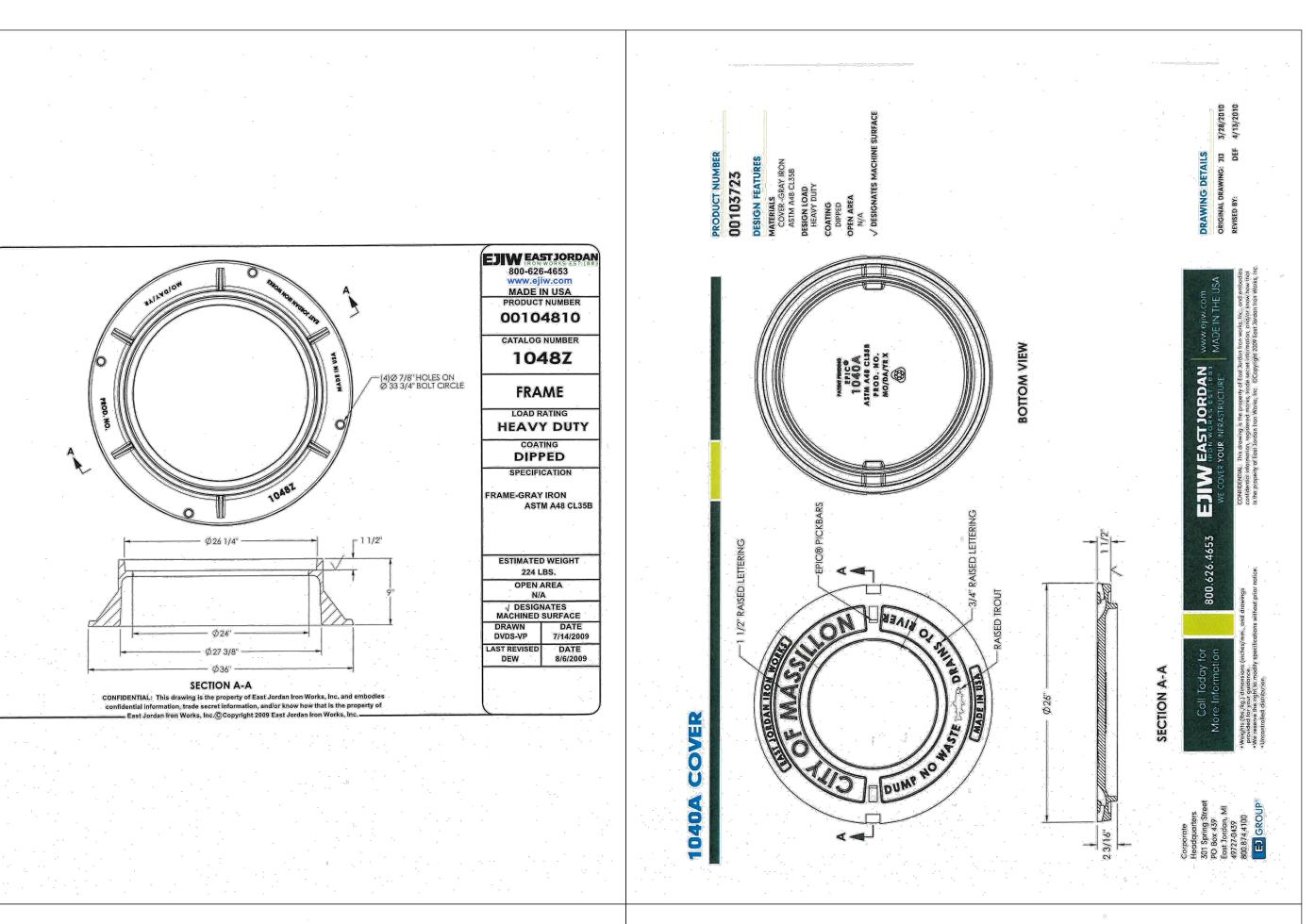
IOR NUMBER

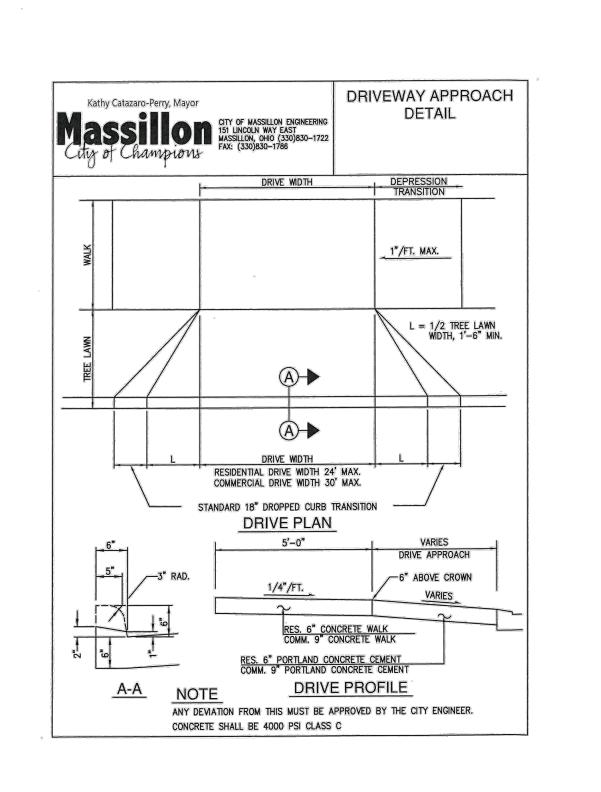
<u>ЈОВ NUMBER</u> 2178020

SHEET NUMBER

C2.5

2021 © EXCEL ENGINEERING, INC.





22 1/5, ______ 1. 3/8,

Approx. 260 sq. in.

No curb radius

Grate Approx. 225 sq. in.

open area 1 1/4" wide opening

Type T4 Back 3° curb Radius Height adjusts 6" to 11" "DUMP NO WASTE!"

Approx. 260 sq. in.

12" concave curb radius

Type M10 ADA Grate Approx. 140 sq. in. open

"DUMP NO WASTE!"

lettering and fish

Type T6 3" curb radius Height adjusts 6" to 10" "DUMP NO WASTE!" lettering and fish

Heavy duty

260 sq. in. open area

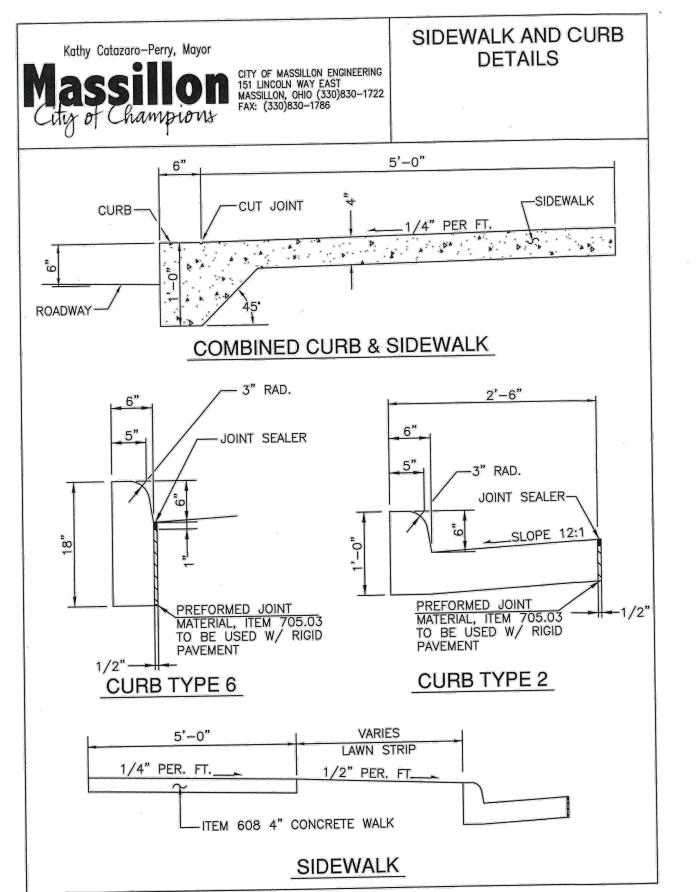
With Type M2 grate and T1 back

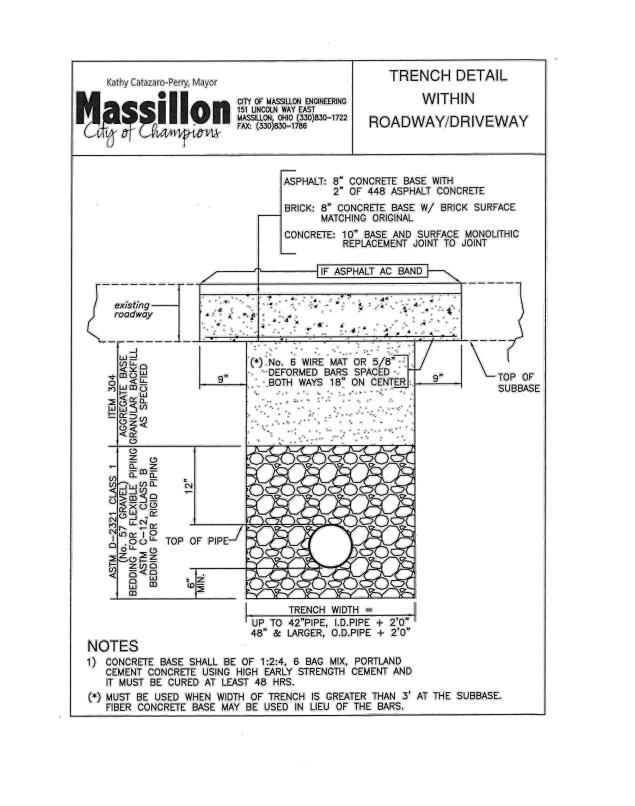
7030Z2 Drive Over Curb Inlet Frame

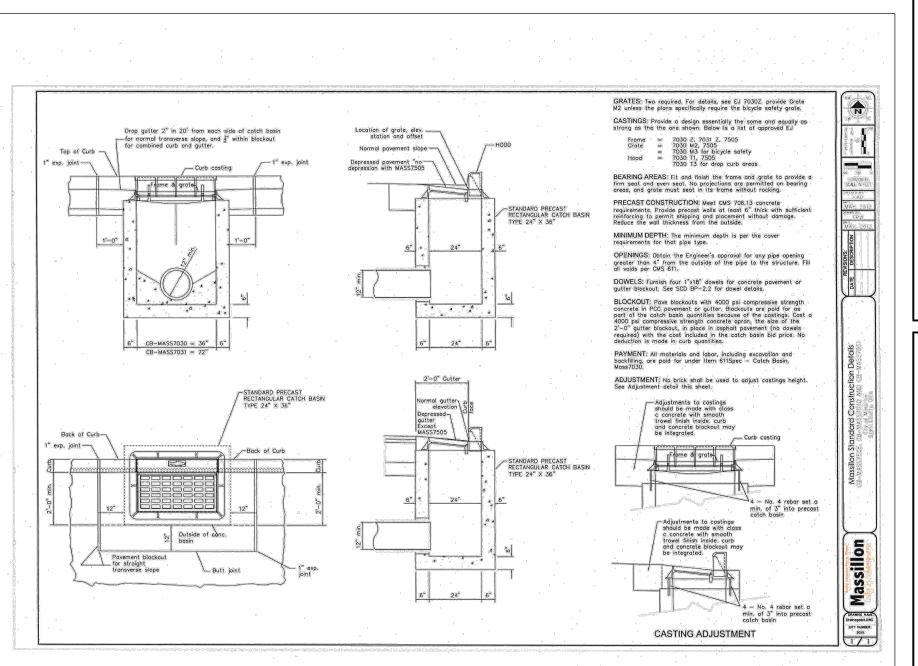
Approx. 315 sq. in.

2 1/8" wide opening

Curb back height adjusts from 3 1/4" to 9"
"DUMP NO WASTEI" lettering and fish image
Drive over curb inlet frame — 7030Z2









PROJECT INFORMATION

RESS

ANDA EXPRE

TARBUCKS & PANDA

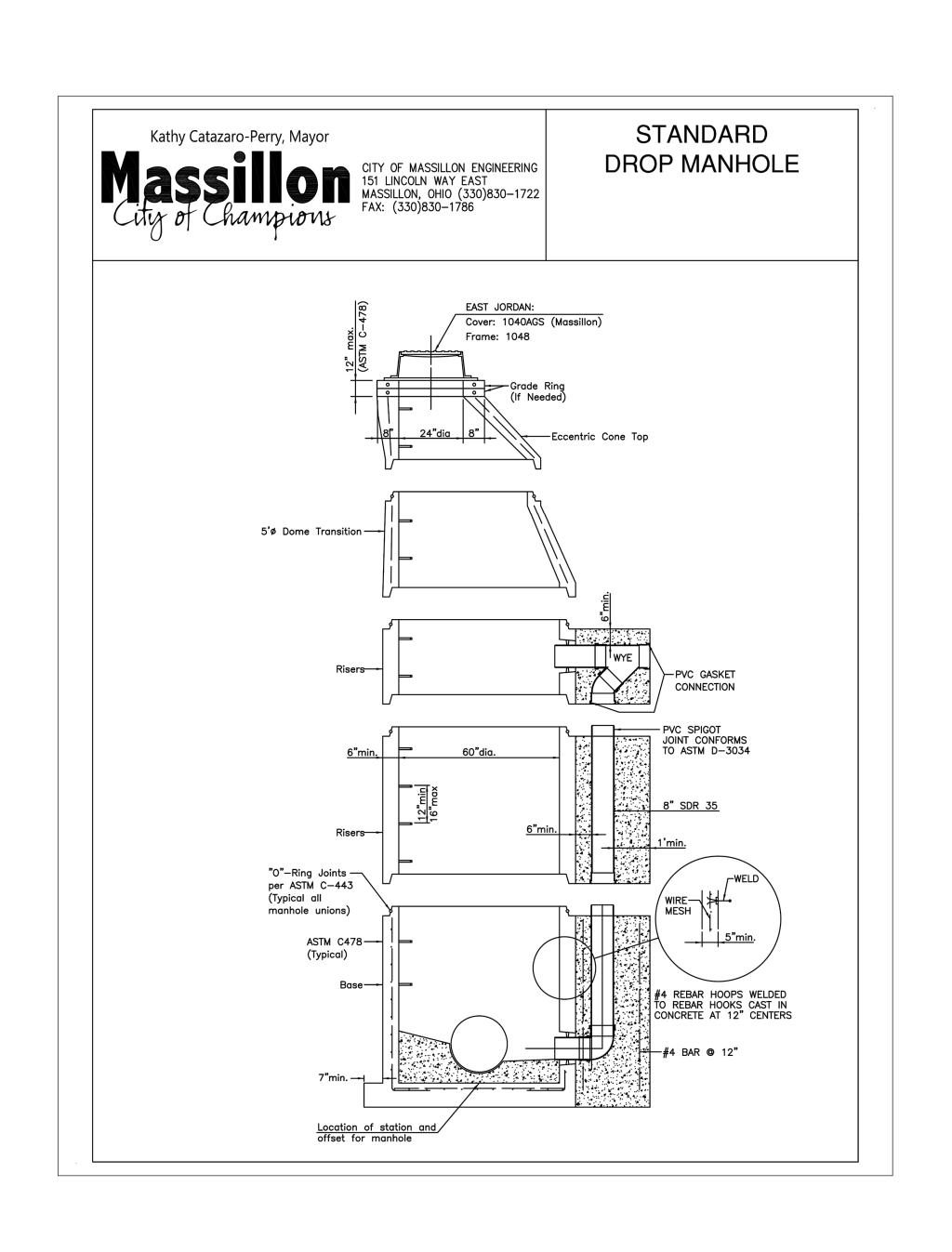
HINCOLN WAY F. MASSILLON

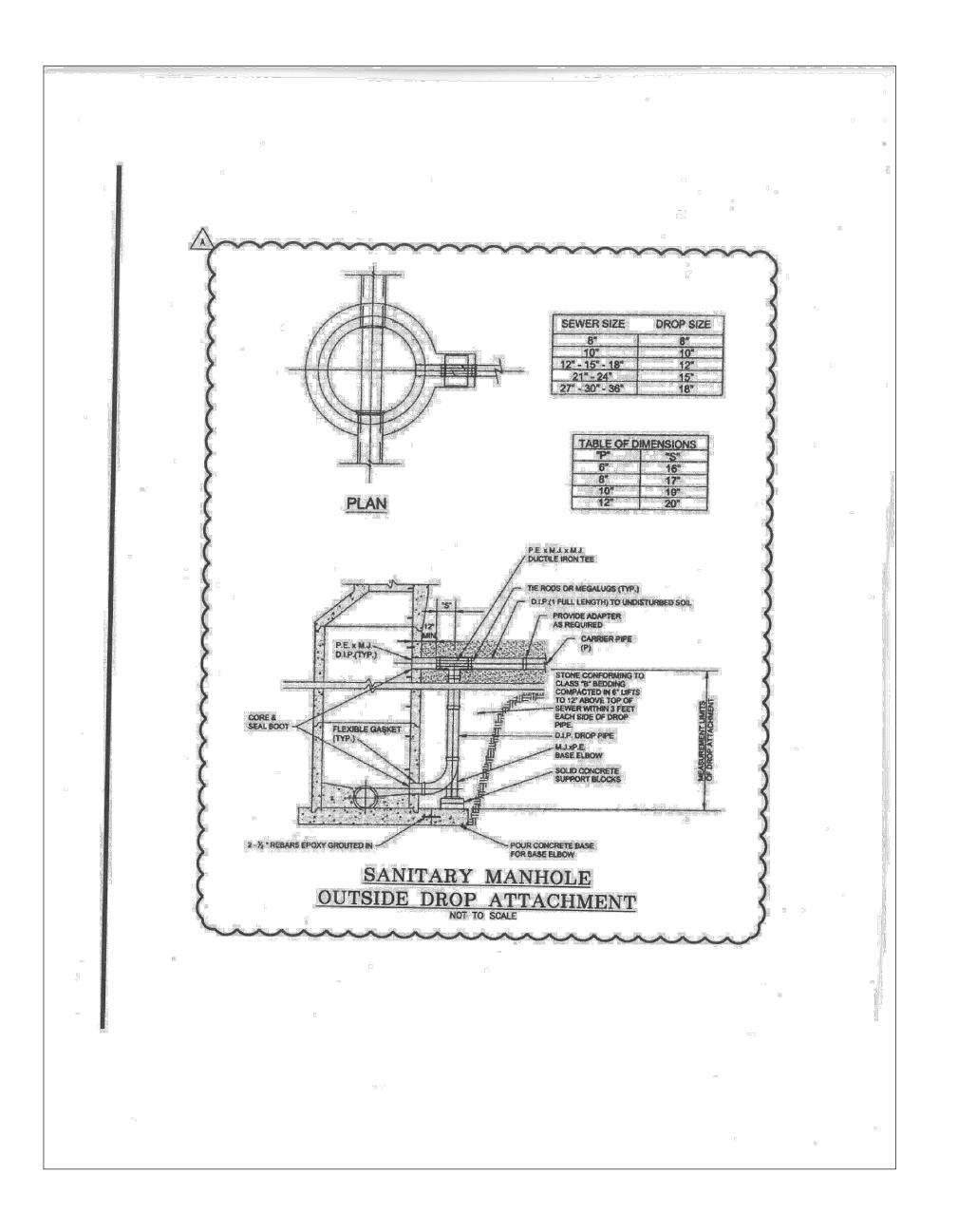
JAN. 20, 2023 MAR. 24, 2023

PROFESSIONAL SEAL

JOB NUMBER 2178020

C2.6





⁺0.3 ⁺0.3 ⁺0.3 ⁺0.3

*2.5 *2.3 *2.4 *2.3

*2.5 *2.3 *2.3 *2.2

*2.4 *2.4 *2.4 *2.2

*2.5 *2.4 *2.1 *1.7 *1.4

*2.1 *2.0

*2.2 *2.0 +_{1.3}

*2.8 *2.7 **†**1.6

1.4 *2.2 *2.0 *2.2 *2.0 *1.7 *1.5 *1.5 *1.6 *1.8 *1.9 *1.8 *1.8 *1.0 *1.8 *1.0 *0.3 *0.2 *0.1 *0.1 *0.0 *0.0

+2.7 *3.0 - *2.7 *2.5 *2.1 *1.6 *1.4 *1.4 +1.6 *2.0 *2.2 *2.2 *2.0 *1.1 = +0.1 +0.1 +0.0 +0.0

3.3 L14 0 23' *2.9 *2.6 *2.0 (*1.5 *1.3 .*1.4 +1/6 *2.2 .*2.6 .*2.8 .*2.8 ... *2.8 ... *1/6

 $\begin{picture}(100,0) \put(0.0,0) \put(0.0,0)$

 $^{+}0.2$ $^{+}0.2$ $^{+}0.3$ $^{+}0.3$ $^{+}0.4$ $^{+}0.4$ $^{+}0.4$ $^{+}0.4$ $^{+}0.4$ $^{+}0.3$ $^{+}0.3$ $^{+}0.2$ $^{+}0.1$ $^{+}0.1$ $^{+}0.0$ $^{+}0.0$ $^{+}0.0$ $^{+}0.0$ $^{+}0.0$ $^{+}0.0$ $^{+}0.0$

⁺0.3 ⁺0.1 ⁺0.1 ⁺0.1

*1.3 *1.4 *1.5

*12.6 *2.9

2.5

*2.3 *2.3

⁺2.4 **2.5 **2.4 **

*2.8 *2.4

*1.8 *2.0 *2.1 *2.0 *1.8 *1.6

0.9 *1.9 *1.9 *2.0 *2.0 *1.9 *1.8 C16.91

*2.1 *2.2 *2.2 *2.0 *1.9

*3.3 *3.0 *2.6 *2.0 *1.7

 $^{+}0.0$ $^{+}0.0$ $^{+}0.0$ $^{+}0.0$ $^{+}0.1$ $^{+}0.1$ $^{+}0.1$ $^{+}0.2$ $^{+}0.3$ $^{+}0.3$ $^{+}0.4$ $^{+}0.5$ $^{+}0.5$ $^{+}0.5$ $^{+}0.5$ $^{+}0.6$ $^{+}1.0$ $^{+}1.7$

 $PPN: 6^{+}_{0.0} = \frac{1}{100} = \frac{1}{100}$

S+0.1 Ven +0.1 +0.2 +0.3 +0.4 +0.8 +1.6 *1.8 *1.9 *1.8 *1.6 *1.5

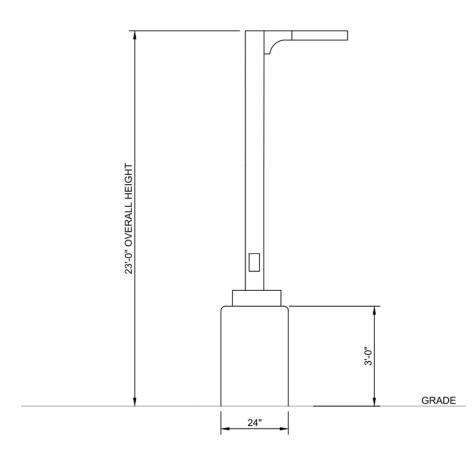
*1.9 *2.0 *2.1 *2.0 *1.9 *1.9 **C16** d3 **51**

+0.4 +0.8 +1.2 *1.5 *1.7 *2.1 *2.4 +2.5 +2.5 +2.5 +2.4 +2.3 *2.2 *2.0 *2.1



Height H2: Weight: Order DSX1 LED	(6.9 cm) 34 lbs (15.4 kg)	tion	EXA	MPLE: DSX1 LED	poles req typical en	ergy savings of e of over 100,00	phting application 65% and expecte 00 hours.
Series	LEDs		Color Rendering Index ²	Distribution		Voltage	Mounting
DSX1 LED	Porward optics P1 P6 P2 P7 P3 P8 P4 P9 P5 Rotated optics P101 P121 P111 P131	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T15 Type I short T2M Type II medium T3M Type II medium T3LG Type II low glare T4M Type N medium T4LG Type N low glare TFTM Forward throw medium	TSM Type V medium TSLG Type V low glare TSW Type V wide BLC3 Type III backlight control ³ BLC4 Type IV backlight control ³ LCC0 Left corner outoff ³ RCC0 Right corner outoff ³	MVOLT (120V-277V)* HVOCT (347V-480V) XVOLT (277V - 480V)	SPA Square pole mi
Control option					Other options		Finish (required)
Shipped ins NLTAIR2 PIRI	4N nLight AIR gen 2 er ambient sensor, 8 sensor enabled at 2		FAO Field	n-pin receptacle only (controls ed separate) ^{14, 21} adjustable output ^{16, 21} sel switched dimming, 30% ^{16, 21}	Shipped installed SPD20KV 20KV surge protection HS Houseside shield (bill L90 Left rotated optics 1	on lack finish standard) ²²	DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White
PIR	High/Tow, motion/a height, ambient sen	embient sensor, 8–40' mounting isor enabled at 2fc ^{13, 21, 21}		el switched dimming, 50% 15,21	R90 Right rotated optics		DDBTXD Textured dark bron
PER	NEMA twist-lock re separate) 14	eceptacle only (controls ordered	fixtur	v dimming wires pulled outside e (for use with an external	CCE Coastal Construction Shipped separately	29	DBLBXD Textured black DNATXD Textured natural a
PER5		only (controls ordered separate) ^{14,21}		ol, ordered separately) ¹⁷ switching ^{18, 19, 21}	EGS External Glare Shield	f (reversible, field install	DWHGXD Textured white
				,	required, matches ho	ousing finish)	

LIGHTING.	© 2011-2022 Acuity Brands Lighting, Inc. All rights reserved.	Rev. 11/10/22 Page 1 of 10
DMMERCIAL OUTDOOR		



		7									
	Schedule										
')	Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Wattage
,		L14	3	Lithonia Lighting	DSX1 LED P6 40K 80CRI T4M	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Type 4 Medium	1	19126	0.9	165.25	
4		L24	2	Lithonia Lighting	DSX1 LED P6 40K 80CRI T4M	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Type 4 Medium	1	19126	0.9	330.5	
2		WP2	1	Lithonia Lighting	WST LED P2 30K VW MVOLT	WST LED, Performance package 2, 3000 K, visual comfort wide, MVOLT	1	3276	0.9	25	
0		C16	16	LEDRA BRANDS	NU3-RAPH-SW-16LM- 27K-90CRI-D50	NU3 Round Adjustable Pinhole Static White 50D,No Accessory	1	1084	0.9	12.5	
		WP3	1	GAMA SONIC	GS-101PIR-G	8W LED SOLAR SECURITY LIGHT	1	860	0.9	8	
		L14H	4	Lithonia Lighting	DSX1 LED P6 40K 80CRI T4M HS	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Type 4 Medium Houseside Shield	1	16453	0.9	165.2497	

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/
Calc Zone #3	+	1.1 fc	18.5 fc	0.0 fc	N/A	N/A
PARKING LOT	Ж	2.1 fc	15.4 fc	0.5 fc	30.8:1	4.2:



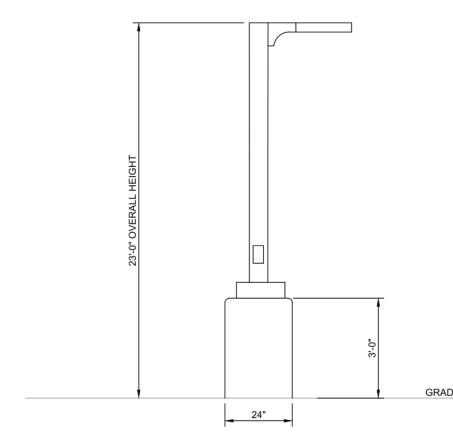


920-926-9800

excelengineer.com

PROJECT INFORMATION

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www



LIGHT POLE DETAIL

PRELIMINARY DATES	
JAN. 17, 2023	$\overline{}$
JAN. 20, 2023	9
MAR. 24, 2023	OT FOR CONSTRUCTION

PROFESSIONAL SEAL

JOB NUMBER 2178020

SHEET NUMBER