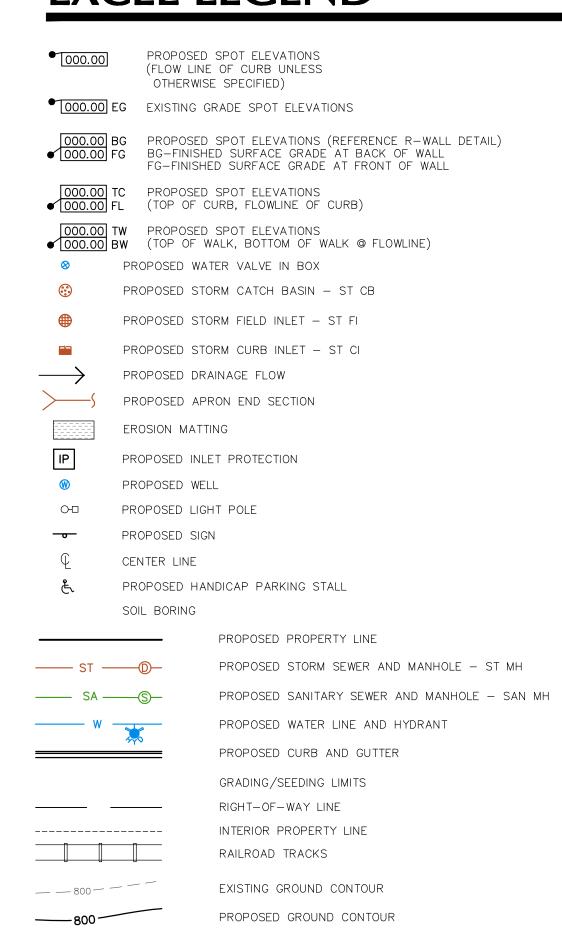
PROPOSED DEVELOPMENT FOR: STARBUCKS & PANDA EXPRESS

Meadow Wind

NORTH

PROJECT LOCATION MAP

MASSILLON, OHIO **EXCEL LEGEND**



CIVIL SHEET INDEX

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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 jason.d@excelengineer.com



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.

31 10 00 SITE CLEARING (DEMOLITION)

DIVISION 31 EARTH WORK

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 SITE DEMOLITION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND
- FIELD CONDITIONS PRIOR TO CONSTRUCTION.
- 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.
- 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 DENTIFY 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 REQUIREMENTS. 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. F PLACE RACKEILL 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.
- F. COMPACT THE SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D 698, STANDARI PROCTOR TEST. FILL MAY NOT BE PLACED ON FROZEN GROUND AND NO FROZEN MATERIALS MAY BE USED FOR BACK FILL. APPLY THE MORE STRINGENT REQUIREMENTS WHEN COMPARING BETWEEN THE FOLLOWING AND THE GEOTECHNICAL REPORT. 1. UNDER FOUNDATIONS - SUBGRADE. AND EACH LAYER OF BACKFILL OR FILL MATERIAL. TO NOT LESS THAN 98 PERCENT
- 2. 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. 3. LINDER INTERIOR SLAR-ON-GRADE WHERE GROLINDWATER IS WITHIN 3 FEFT OF THE SLAR SLIREACE- PLACE A DRAINAGE COLIRSE 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 percen 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 LINDER 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
- 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
- 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 SOUARE FEET OF PAVED AREA OR BUILDING SLAB. ONE TEST FOR EACH SPREAD FOOTING, AND ONE TEST FOR EVERY 50 LINEAR FEET OF 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 J. 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

31 30 00 EROSION CONTROL/STORMWATER MANAGEMENT & POLLUTION PREVENTION

- 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, AND PLAN AMENDMENTS ON THE CONSTRUCTION SITE AT ALL TIMES PURSUANT TO OHIO EPA REQUIREMENTS UNTIL PERMIT
- 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 PERÍOD. THE CONTRACTOR SHALL REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL AS NECESSARY WITHIN 24 HOURS OF AN
- INSPECTION OR AFTER A DEPARTMENT NOTIFICATION WHERE REPAIR OR REPLACEMENT IS REQUESTED. 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: THE DATE, TIME, AND LOCATION OF THE CONSTRUCTION SITE INSPECTION.
- 2. THE NAME OF THE INDIVIDUAL WHO PERFORMED THE INSPECTION. 3. AN ASSESSMENT OF THE CONDITION OF THE EROSION AND SEDIMENT CONTROLS.

Material

CITY ENGINEER

C901/906 PE

AWWA C901/C906

AWWA C900, ASTM D1785, ASTM

ASTM D1785, ASTM D2665, ASTM | ASTM F1336

ALL DRIVEWAYS AND CURB CUTS TO BE CONSTRUCTED ACCORDING TO LOCAL

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL WORK IN ROW PERMITS.

ORDINANCES. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS.

APPROVED BY THE MASSILLON CITY ENGINEER THIS

ONLY APPROVED SIGNED PLANS BY THE CITY

ENGINEER ARE TO BE USED FOR CONSTRUCTION

- 4. A DESCRIPTION OF ANY EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE IMPLEMENTATION AND MAINTENANCE
- 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 ANI 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
- 1. 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 MANIJAL 4. STORM DRAIN INLET PROTECTION SHALL BE PROVIDED FOR ALL NEW AND DOWNSTREAM STORM CATCH BASINS AND CURB INLETS FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL 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 ROLIGHENING 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 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 3. 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 FO LESS THAN ONE YEAR. THIS TEMPORARY SITE RESTORATION REOUIREMENT ALSO APPLIES TO SOIL STOCKPILES THAT EXIST FOR MORE
- ihan 7 days. Permanent restoration applies to areas where perennial vegetative cover is needed to permanentl 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

Table A: Allowable Pipe Material Schedule

ASTM D2609, ASTM D2683, ASTM D3261

ASTM D2466, ASTM D2467, ASTM D3311,

ASTM F409, ASTM F1336, ASTM F1866

AWWA C110, AWWA C153, ASTM D2464, Joint: ASTM D3139 Integral Bell &

Elastomeric Gasket: ASTM F477

Joint: ASTM F2648 Bell & Spigot

Push On: ASTM D3212 for Tightness Elastomeric Seal: ASTM F477

Elastomeric Seal: ASTM F477

PLAN SPECIFICATIONS (BASED ON CSI FORMAT)

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

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
- HEAVY ASPHALT PAVING SECTION:

UNDERGONE FINAL STABILIZATION.

- TACK COAT 2-1/2" BINDER COURS
- B. CONTRACTOR TO COMPACT THE AGGREGATE BASE ASPHALT RINDER COLIRSE AND ASPHALT SLIREACE COLIRSE 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.
- 2. <u>Heavy Duty/Drive-thru/Dumpster pad concrete (truck traffic)</u> 6" of concrete over 6" of 3/4" crushed aggregate. ONCRETE 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.
- 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 a. CONCRETE SHALL BE STEEL REINFORCED AS FOLLOWS:
- 1). 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. 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 WORL
- 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. 6. 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. 7. MAXIMUM AGGREGATE SIZE FOR ALL EXTERIOR CONCRETE SHALL BE 0.75 INCHES.
- 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. FOUIPMENT 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 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, IOINTING IN THE PAVEMENT AND CURB SHALL ALIGN. ALL EXTERIOR CONCRETE SHALL HAVE A LIGHT BROOM FINISH UNLESS NOTED.
- 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. . ALL REINFORCING BARS SHALL BE ASTM A615 GRADE 60. THICKNESS OF CONCRETE COVER OVER REINFORCEMENT SHALL BE NOT LESS THAN 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 SHAL 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 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.
- 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,
- 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.

DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND

32 30 00 LANDSCAPING AND SITE STABILIZATION

- A. T<u>opsoil:</u> 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 RESPONSIBL 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 SHALL ALSO BE REMOVED. TOPSOIL INSTALLATION: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES AND REMOVE STONES LARGER THAN 1" IN DIAMETER. ILSO 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.
- PERMANENT LAWN AREAS SHALL BE SEEDED WITH A BLEND THAT IS CONSISTENT WITH LOCAL CLIMATE AND TYPICAL OF THE GENERAL AREA. THE 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. SEE 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% PERFNNIAL RYFGRASS (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
- 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
- D. <u>SEEDED LAWN MAINTENANCE:</u> 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
- E. EROSION MATTING: CONTRACTOR TO PROVIDE FROSION CONTROL MATTING (NORTH AMERICAN GREEN \$150) OR FOLIVALENT ON ALL SLOPES THAT ARE 4:1
- AND GREATER, LAWN SEED SHALL BE PLACED BELOW MATTING IN ACCORDANCE WITH SEEDING REQUIREMENTS AND MANUFACTURER TREES AND SHRUBS: FURNISH NURSERY-GROWN TREES AND SHRUBS WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR OOT 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 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 1" ABOVE ADJACENT FINISHED GRADES. PLACE PLANTING SOIL MIX AROUND ROO' BALL IN LAYERS AND TAMP TO SETTLE MIX. WATER ALL PLANTS THOROUGHLY. PROVIDE TEMPORARY STAKING FOR TREES AS REQUIRED.
- 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. 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 . PLASTIC EDGING: INSTALL VALLEY VIEW INDUSTRIES BLACK DIAMOND LAWN EDGING TO SEPARATE ALL PLANTING BEDS FROM LAWN ARFAS
- EDGING TO BE 5.5" TALL WITH METAL STAKES INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. CONTRACTOR TO VERIFY FINAL EDGING TYPE TO BE WITH OWNER/TENANT PRIOR TO ORDERING/INSTALLING. 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

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 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. CLEANOLITS SHALL BE PROVIDED FOR THE SANITARY AND STORM SERVICES AT LOCATIONS INDICATED ON THE LITILITY PLAN. THE CLEANOLIT SHALL CONSIST OF A COMBINATION WYE FITTING IN LINE WITH THE SANITARY/STORM SERVICE WITH THE CLEANOUT LEG OF TH 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 PAVE ALL SIDES, SLOPING AWAY FROM THE SLEEVE. THE CLEANOUT HOUSING SHALL BE CONSTRUCTED PER MANUFACTURERS REQUIREMENTS.
- 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 REQUIREMENT: 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. 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, SANITARY AND STORM SEWER. K. SEE PLANS FOR ALL OTHER UTILITY SPECIFICATIONS AND DETAILS

	CONSTRUCTION SEQUENCE
PHASE	TYPE OF ACTION
PRE-CONSTRUCTION	1. CONTRACTOR TO CALL OUPS AT A MINIMUM OF 2 DAYS PRIOR TO CONSTRUCTION.
ACTION	2. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION. NOTIFY ENGINEER
	OF DISCREPANCIES.
	3. PLACE ALL TEMPORARY SILT FENCE AND INLET PROTECTION.
	4. CONSTRUCT TRACKING STONE ENTRANCES AND ANY TEMPORARY CONSTRUCTION ROADWAYS AS NEEDED.
	5. CONSTRUCT PERMANENT STORMWATER DETENTION SYSTEMS AND PERMANENT STORMWATER CONVEYANCE SYSTEMS.
	6. CONSTRUCT ANY TEMPORARY STORMWATER CONVEYANCE SYSTEMS AS NEEDED.
	7. STABILIZE ALL TEMPORARY AND PERMANENT EROSION CONTROL AND STORMWATER CONVEYANCE SYSTEMS BEFORE TOPSOIL CAN BE STRIPPED.
	1 SITE DEMOLITION AS DECLUBED

TYPE OF BREAK FOR BOTH 7-DAY TESTS AND 28-DAY TESTS.

- - SITE DEMOLITION AS REQUIRED. STRIP AND RELOCATE TOPSOIL TO THE DESIGNATED TOPSOIL STOCKPILE. FINAL LOCATION BY OWNER/CONTRACTOR. PROVIDE PERIMETER SILT
 - BEGIN MASS EARTH WORK FOR THE BUILDING PAD AND PAVEMENT AREAS CONSTRUCT ANY REMAINING STORMWATER CONVEYANCE SYSTEMS, AND INSTALL ALL OTHER UTILITIES ON SITE
 - DIG AND POUR ALL BUILDING FOOTINGS. PLACE GRAVEL FOR ALL PROPOSED PAVEMENT AREAS.
 - TOPSOIL, SEED, AND MULCH ALL DISTURBED AREAS OUTSIDE THE BUILDING AND PROPOSED PAVEMENT AREAS. PAVE DRIVEWAYS AND PARKING AREAS.
- D. TOPSOIL, SEED, AND MULCH ALL OTHER DISTURBED AREAS. PLACE EROSION MATTING AS NEEDED CONTRACTOR TO REMOVE TEMPORARY EROSION CONTROL MEASURES UPON SITE STABILIZATION. POST CONSTRUCTION
- SEE THE POST CONSTRUCTION MAINTENANCE PLAN FOR PERMANENT STORMWATER MANAGEMENT SYSTEMS. **CONTRACTOR TO FOLLOW THE EROSION CONTROL SPECIFICATIONS FOR CONSTRUCTION EROSION CONTROL INSPECTION AND MAINTENANCE.**
 - CIVIL COVER AND SPECIFICATION SHEET

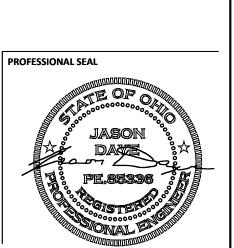


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PROJECT INFORMATION

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PRELIMINARY DATES	
JAN. 20, 2023	NOT FOR CONSTRUCTION

2178020	
SHEET NUMBER	7

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:

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

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PROJECT INFORMATION

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PROPOSED UCKS 8

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PRELIMINARY DATES	
JAN. 17, 2023	>
JAN. 20, 2023	9
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	CONSTRUCTION
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2178020

CIVIL EXISTING SITE AND DEMOLITION PLAN

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

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	LOPMENI)	
	AREA (AC)	AREA (SF)	R.A
PROJECT SITE	2.27	98,935	
BUILDING FLOOR AREA	0.00	0	C
PAVEMENT (ASP. & CONC.)	0.00	0	C
TOTAL IMPERVIOUS	0.00	0	C
LANDSCAPE/ OPEN SPACE	2.27	98,935	100
PROPOSED SITE DATA	(OVERALL DEV	/FLOPMENT)	
<u>PROPOSED SITE DATA</u>			D
	OVERALL DEN AREA (AC) 2.27	/ELOPMENT) area (sf) 98,935	R/
PROJECT SITE	AREA (AC)	AREA (SF)	R <i>A</i>
PROJECT SITE BUILDING FLOOR AREA	AREA (AC) 2.27	AREA (SF) 98,935	
PROJECT SITE BUILDING FLOOR AREA PAVEMENT (ASP. & CONC.)	AREA (AC) 2.27 0.11	AREA (SF) 98,935 4,965	5
PROPOSED SITE DATA PROJECT SITE BUILDING FLOOR AREA PAVEMENT (ASP. & CONC.) TOTAL IMPERVIOUS LANDSCAPE/ OPEN SPACE	AREA (AC) 2.27 0.11 1.34	AREA (SF) 98,935 4,965 58,287	5 58

CURB & GUTTER MARKING KEY: INVERTED CURB & GUTTER

STANDARD ASPHALT CONCRETE; SEE PLAN SHEDDING CURB & GUTTER & C0.1 FOR DETAILS/SPECIFIED THICKNESS

PAVEMENT HATCH KEY:

- 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.

DETECTABLE WARNING PLATE

TRAFFIC FLOW ARROWS. COLOR TO MATCH PARKING STALL STRIPING.

PAINT STRIPING (TYP). COLOR TO MATCH PARKING STALL STRIPING. REPLACE ASPHALT PAVEMENT PER CITY OF MASSILON/OH DOT STANDARDS AS NEEDED FOR PROPOSED SITE IMPROVEMENTS. (TYP.)

CONCRETE SIDEWALK PER LOCAL STANDARDS. (TYP.) 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 &

NEAR OR ADJACENT TO RETAINING WALL 6' TALL MINIMUM OPAQUE FENCE. FINAL COLOR/STYLE BY OWNER/TENANT. CONTRACTOR TO COORDINATE FENCING REQUIREMENTS WITH RETAINING WALL SUPPLIER AS NEEDED.

SPECIFICATIONS BY WALL SUPPLIER. WALL DESIGNER TO ACCOUNT FOR SITE FEATURES SUCH AS LIGHT POLES, FENCES, UTLITIES, ETC

DEDICATED MOBILE ORDER PICK-UP PARKING SPACE. COORDINATE WITH OWNER/TENANT FOR SPECIFIC SIGNAGE AND/OR PAVEMENT MARKINGS. (TYP.)

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.

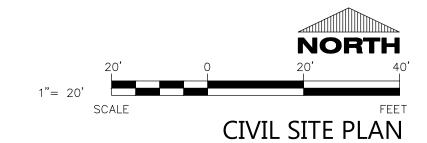
MENU BOARD & SPEAKER POST SYSTEM. COORDINATE WITH OWNER/TENANT FOR FINAL LOCATIONS, FOUNDATION DETAILS,

CONDUÍT 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.)

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 SHEET C1.3.





Fond du Lac, WI 54935 920-926-9800

100 Camelot Drive

excelengineer.com

PROJECT INFORMATION

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FOR

JOB NUMBER 2178020

SHEET NUMBER

2021 © EXCEL ENGINEERING, INC.

LIMITS OF DISTURBED SITE -

AREA: 103,181 SF/2.37 AC

(INCLUDES OFFSITE UTILITY

SILT FENCE (TYP.)

TRENCHING)

1128.45 EG

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

NOTES:

- 1. HANDICAP STALL AND ACCESS AISLES SHALL NOT EXCEED A SLOPE OF 1.50% IN ANY DIRECTION. HANDICAP STALL & ACCESS AISLES SHALL CONFORM TO ADA REQUIREMENTS (CURRENT EDITION)
- 2. ÀLL SIDEWALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 1.50% AND RUNNING SLOPE OF 4.50% UNLESS OTHERWISE SPECIFIED.

INLET PROTECTION NOTE:

CONTRACTOR SHALL PROVIDE TEMPORARY INLET PROTECTION FOR ALL CURB INLETS & CATCH BASINS ONSITE & OFFSITE IMMEDIATELY DOWNSTREAM OF THE PROJECT SITE PER LOCAL CODE.

STABILIZED CONSTRUCTION ENTRANCE NOTE:

CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT CONSTRUCTION ENTRANCE FOR PROPOSED IMPROVEMENTS AS REQUIRED PER CODE.

CONCRETE WASHOUT NOTE:

CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AS REQUIRED PER CODE. FINAL LOCATION TBD BY CONTRACTOR.

OVERALL SITE STORMWATER DISCHARGE:

PROJECT SITE WILL DISCHARGE TO CITY STORM SEWER IN 25TH STREET ROW. SITE IS WITHIN OVERALL WATERSHED OF TUSCARAWAS RIVER

EROSION/SEDIMENT CONTROL NOTE:

- TRACKING PAD PER LOCAL

STANDARDS (TYP.)

- SILT FENCE (TYP.)

SILT FENCE (TYP.)

THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATTING, TEMPORARY SEEDING, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCES, ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL RAINWATER AND LAND DEVELOPMENT - OHIO'S STANDARDS FOR STORMWATER MANAGEMENT, LAND DEVELOPMENT, AND URBAN STREAM PROTECTION. SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION PLAN IF APPLICABLE, OR AS DETAILED ON THE CONSTRUCTION PLANS, AS SPECIFIED BY THE CITY OF MASSILLON.

SURVEY NOTES

BASIS OF BEARING:

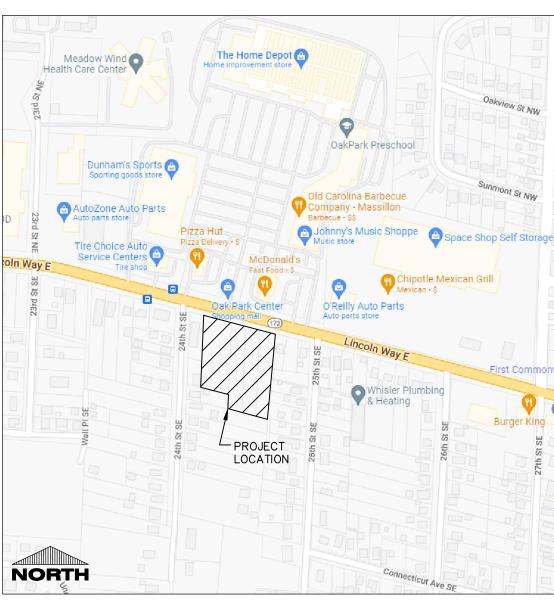
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NOTE:

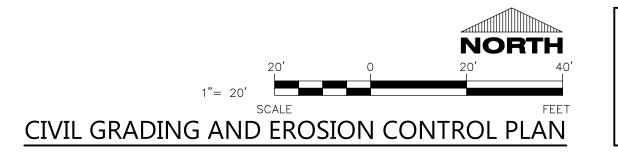
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PROJECT LOCATION MAP





Always a Better Plan

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PROJECT INFORMATION

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PROFESSIONAL SEAL

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

JOB NUMBER 2178020

SHEET NUMBER

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SILT FENCE (TYP.) -TEMPORARY DITCH CHECK PER -LOCAL STANDARDS. (TYP.) 1129.75 1128.50 1128.40 1127.60 1127.90 - SILT FENCE (TYP?) TEMPORARY DITCH CHECK PER LOCAL 1118.90 EG SILT FENCE (TYP.) TEMPORARY DITCH CHECK PER LOCAL STANDARDS. (TYP.) 1118.43E PROPOSED TEMPORARY SOIL STOCKPILE LOCATION. FINAL LOCATION BY CONTRACTOR/OWNER. PROVIDE PERIMETER SILT FENCE. PROPOSED VERSA LOK OR EQUIVALENT RETAINING WALL SYSTEM. REFERENCE RETAINING WALL DETAIL ON C2.0. FINAL DESIGN DETAILS AND SPECIFICATIONS BY WALL SUPPLIER. PROPOSED VERSA LOK OR EQUIVALENT — RETAINING WALL SYSTEM. REFERENCE RETAINING WALL DETAIL ON C2.0. FINAL SILT FENCE (TYP.) DESIGN DETAILS AND SPECIFICATIONS BY WALL SUPPLIER.

PROPOSED TEMPORARY SOIL

TEMPORARY DITCH CHECK PER LOCAL -

STANDARDS. (TYP.)

STOCKPILE LOCATION. FINAL LOCATION BY CONTRACTOR/OWNER. PROVIDE PERIMETER SILT FENCE.

PROVIDE DRAINAGE OPENINGS IN

PATIO WALL AS NEEDED. (TYP.)



> PVC ABOVE GRADE. ALL DOWNSPOUTS SHALL BE CONNECTED TO STORM SEWER. SEE ARCH PLANS

> NOTE: EXISTING SANITARY AND WATER LATERALS FROM PREVIOUS RESIDENTIAL HOMES MAY EXIST ON THE SUBJECT SITE. IF THESE SERVICES ARE

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

RELATING TO THE EACH OWNER/TENANT'S SCOPES OF WORK.

DEPARTMENTS TO FACILITATE ANY NECESSARY INSPECTIONS,

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

FOR Ш OP 1 S 0 4

PROFESSIONAL SEAL

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

JOB NUMBER 2178020

SHEET NUMBER

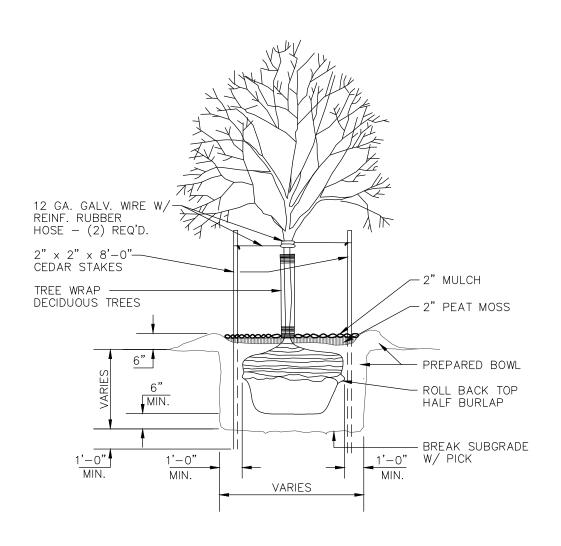
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EROSION MATTING LOCATION

	LANDSCAPING PLANTING SCHEDULE							
SYMBOL	COMMON NAME	BOTANICAL NAME	PLANTED SIZE	QUANTIT`				
	DECIDU	<u>OUS TREES</u>						
€	Jack Flowering Pear	Pyrus calleryana 'Jaczam'	2" CAL	6				
	DL COMMON NAME BOTANICAL NAME PLANTED SIZE QUANTITY DECIDUOUS TREES							
Ξ	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>EVERGRE</u>	EEN SHRUBS						
	Taunton Yew	Tauntonii	24"	51				
	PER	ENNIALS						
**	Karl Foerster Feather Reedgrass	Calamagrotis x acutiflora 'Karl Foerster'	24"	26				
•	Landscaper to provide a variety of Gro	ass 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 Da	ylily species for diversity and disease resista	nce	•				

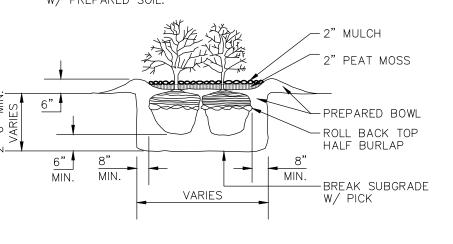
NOTE: LANDSCAPE CONTRACTOR SHALL REVIEW PROPOSED PLANTINGS WITH OWNER/TENANT PRIOR TO INSTALLATION. PROVIDE ALTERNATE PLANTINGS OR SUBSTITUTIONS AS DIRECTED BY THE OWNER/TENANT.

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.



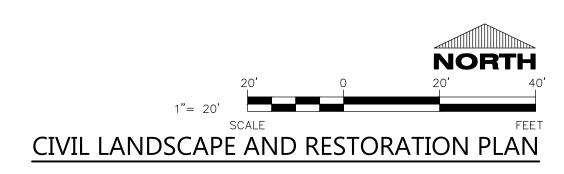
TREE PLANTING DETAIL

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



SHRUB PLANTING DETAIL

NO SCALE





PROJECT INFORMATION

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PROFESSIONAL SEAL

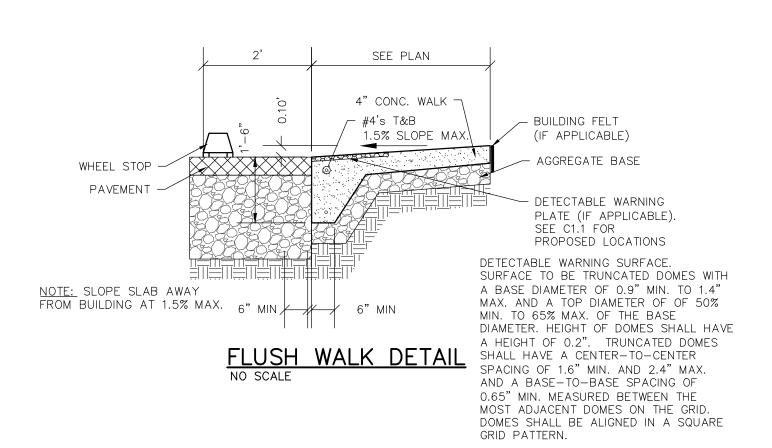
OF ON DATE

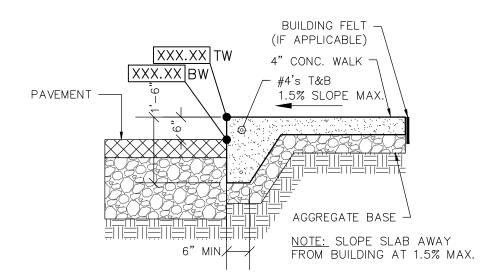
PRELIMINARY DATES	
JAN. 20, 2023	NOT FOR CONSTRUCTION

10В NUMBER2178020

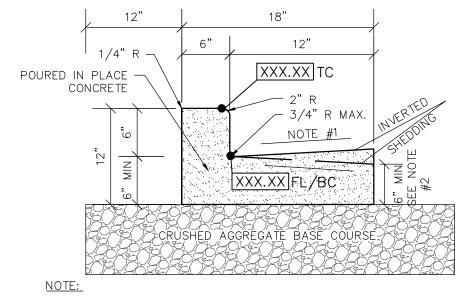
SHEET NUMBER

C1.4





RAISED WALK DETAIL NO SCALE

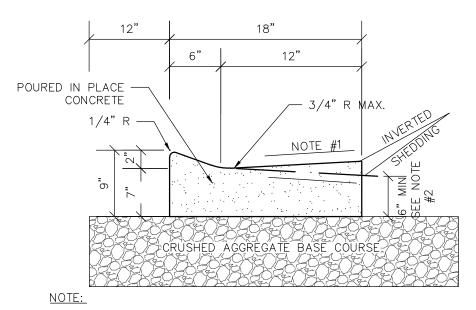


1. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS. 2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MIN. GUTTER THICKNESS IS MAINTAINED.

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

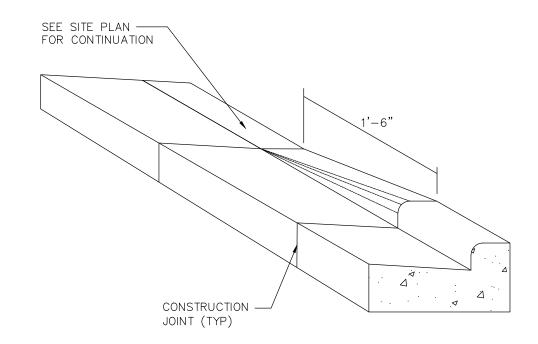
18" CONCRETE CURB & GUTTER DETAIL

NO SCALE

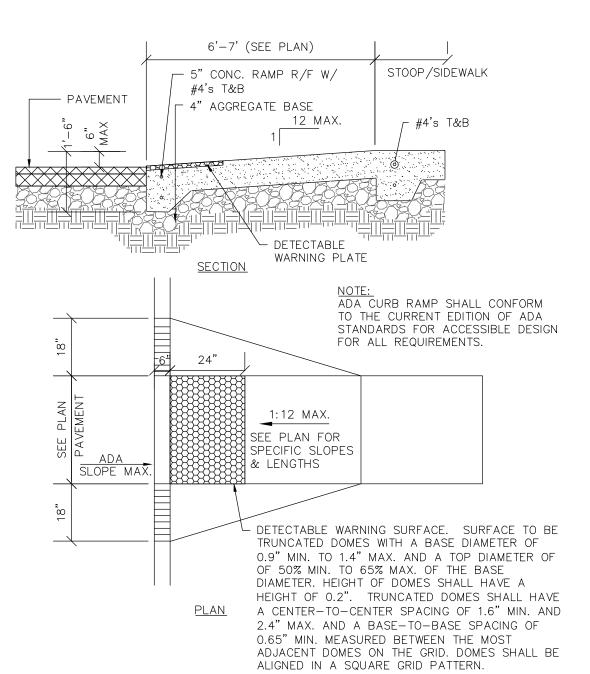


1. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS. 2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MIN. GUTTER THICKNESS IS MAINTAINED. 3. SEE SITE PLAN & GRADING PLAN FOR INVERTED & SHEDDING CURB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

18" MOUNTABLE CURB & GUTTER DETAIL NO SCALE

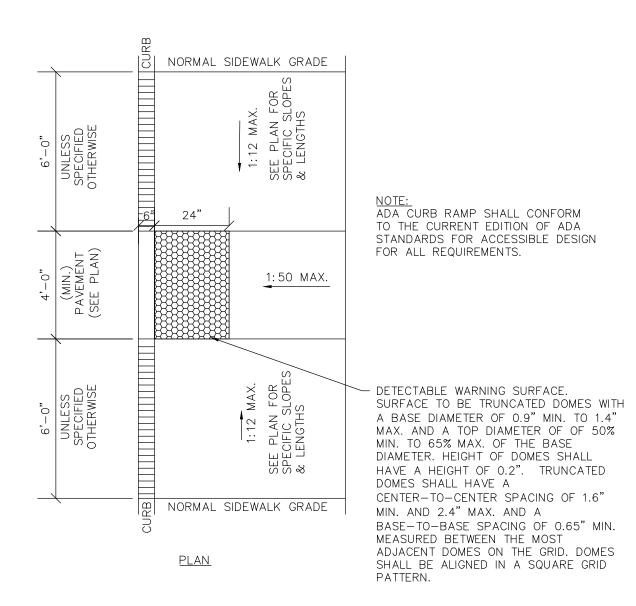


CURB TAPER DETAIL

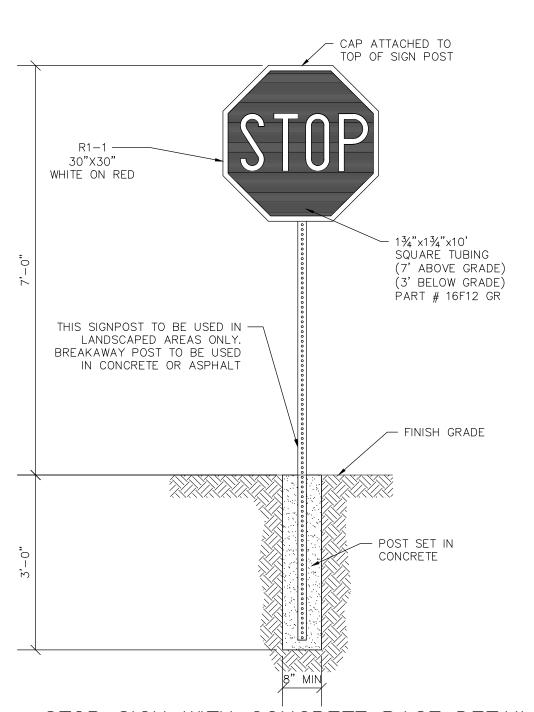


CURB RAMP DETAIL

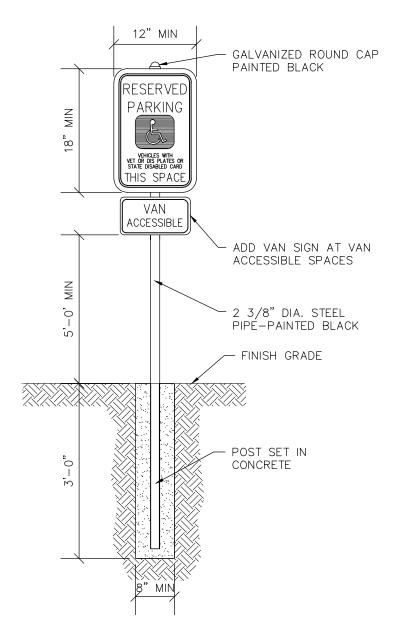
NO SCALE



ADA SIDEWALK RAMP DETAIL NO SCALE

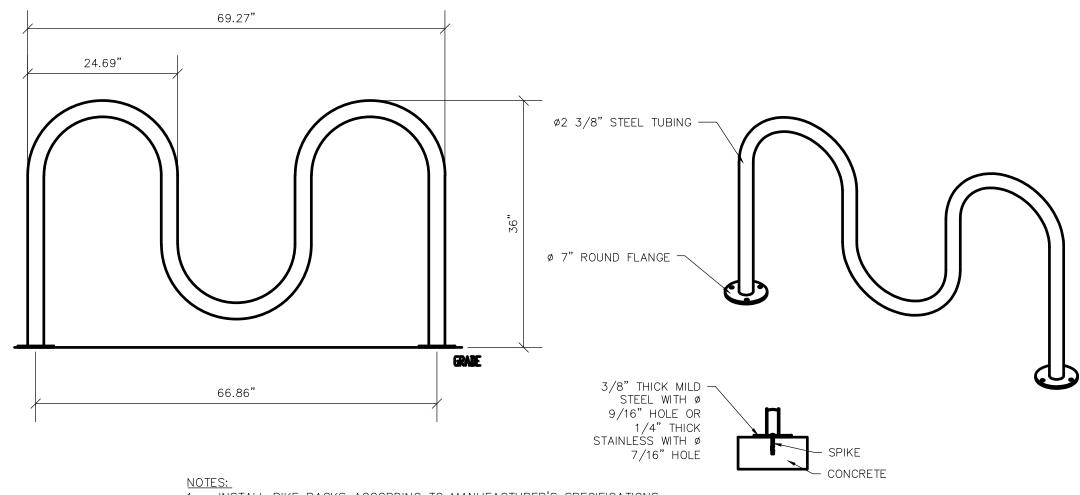


STOP SIGN WITH CONCRETE BASE DETAIL



HANDICAP SIGNAGE WITH CONCRETE BASE DETAIL

NO SCALE

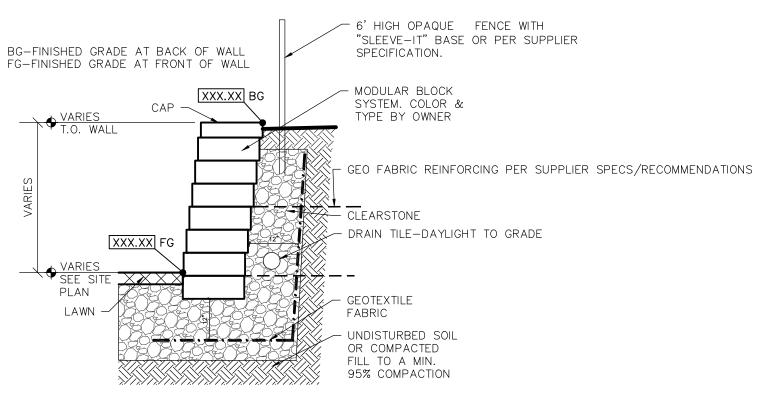


INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

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

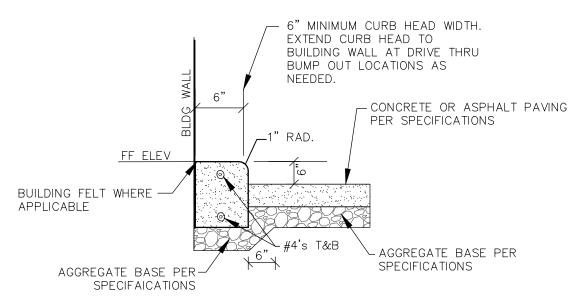
5 BIKE RACK DETAIL-WAVE TYPE

NO SCALE



THIS DETAIL IS INFORMATIONAL ONLY AND IS NOT FOR CONSTRUCTION PURPOSES. THE WALL MANUFACTURER/SUPPLIER IS RESPONSIBLE FOR FINAL DESIGN AND CONSTRUCTION DETAILS. WALL DESIGNER SHALL ACCOUNT FOR SITE IMPROVEMENTS LOCATED NEAR/ADJACENT TO WALL INCLUDING FENCE, LIGHT POLES, UTILITIES, ETC (SEE PLAN FOR LOCATIONS). CONTRACTOR TO COORDINATE PROVIDING STAMPED PLANS TO AHJ AS REQUIRED.

RETAINING WALL DETAIL



NO SCALE

DRIVE THRU VERTICAL CURB DETAIL

CIVIL DETAILS



SPECIFICATION NOTE: SEE SHEET CO.1 FOR PLAN

SPECIFICATIONS AND REQUIREMENTS

920-926-9800 excelengineer.com

PROJECT INFORMATION

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DEVELOPMENT I

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PROI

PROFESSIONAL SEAL

PRELIMINARY DATES JAN. 20, 2023

JOB NUMBER 2178020

SHEET NUMBER

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PROJECT INFORMATION

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PELOPMENT FOR:

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STARBUCKS & PANDA
LINCOLN WAY E • MASSILLON, OF

PROFESSIONAL SEAL

OF ON DATE

JOB NUMBER 2178020

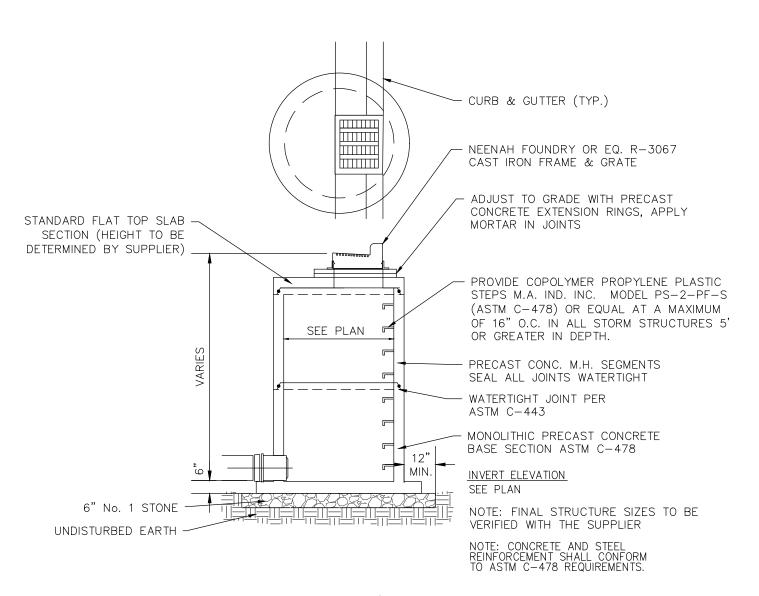
SHEET NUMBER

C2.1

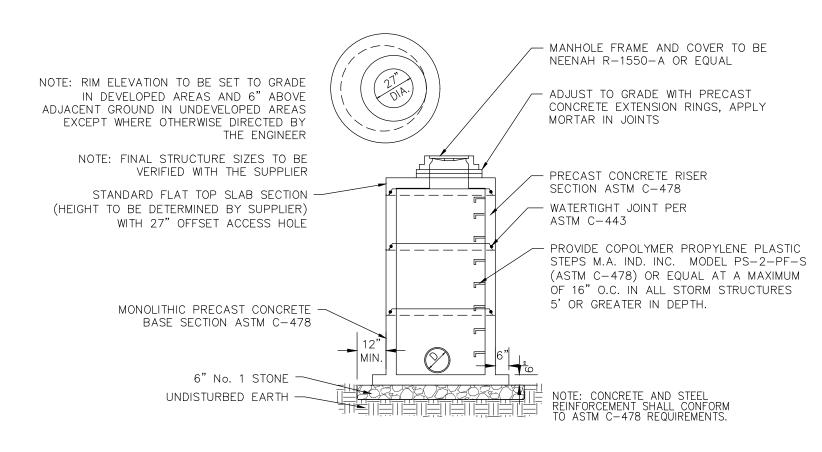
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NEENAH FOUNDRY OR -EQ. R-3067 CAST IRON FRAME & GRATE ADJUST TO GRADE WITH PRECAST CONCRETE EXTENSION RINGS, APPLY MORTAR IN JOINTS AGGREGATE BASE PER -PAVEMENT SECTION PRECAST CONC. M.H. SEGMENTS. SEAL ALL JOINTS WATERTIGHT PROVIDE COPOLYMER PROPYLENE PLASTIC STEPS M.A. IND. INC. MODEL PS-2-PF-S (ASTM C-478) OR EQUAL AT A MAXIMUM OF 16" O.C. IN ALL STORM STRUCTURES 5' OR GREATER IN DEPTH. NOTE: FINAL STRUCTURE SIZES TO BE VERIFIED WITH THE SUPPLIER NOTE: CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO ASTM C-478 REQUIREMENTS. 6" No. 1 STONE UNDISTURBED EARTH -

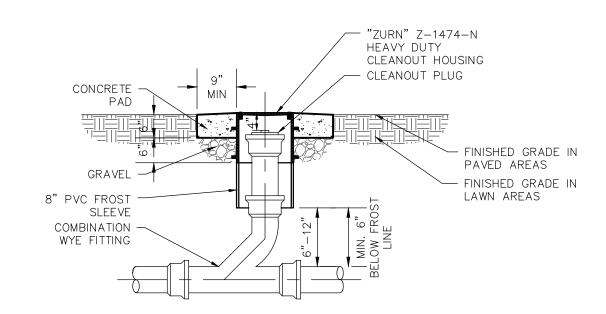
STORM CURB INLET DETAIL
NO SCALE



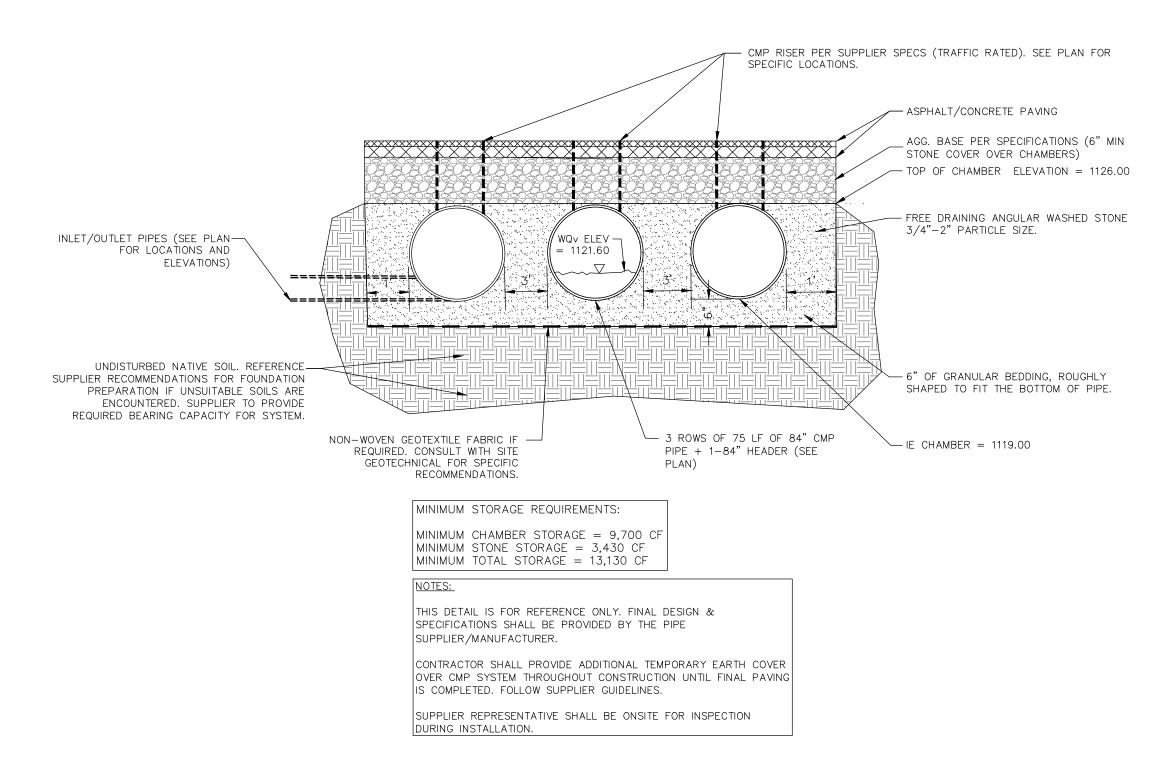
STORM CURB INLET W/ ROUND STRUCTURE DETAIL NO SCALE



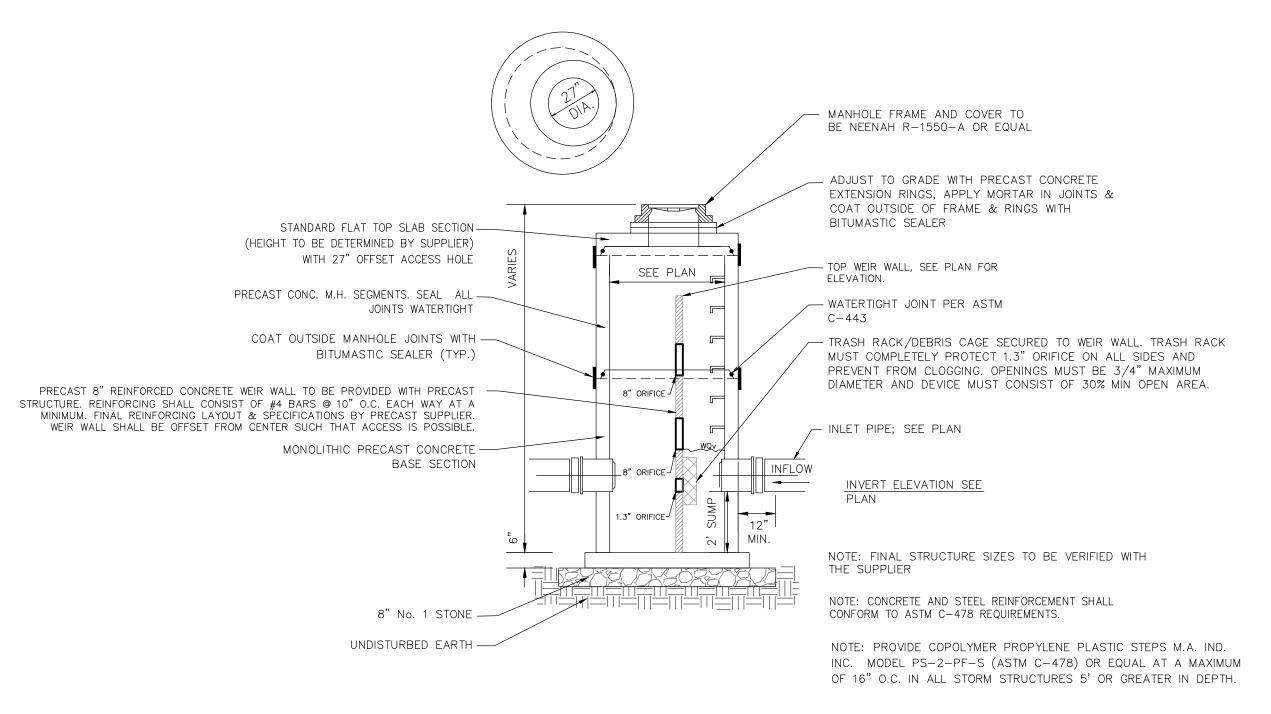
STORM MANHOLE DETAIL NO SCALE



CLEANOUT TO GRADE DETAIL NO SCALE



UNDERGROUND STORAGE CHAMBERS DETAIL NO SCALE



NOTE: REFER TO SHEET C1.3 FOR ORIFICE/WEIR ELEVATIONS.

STORM MANHOLE OUTLET STRUCTURE
NO SCALE

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

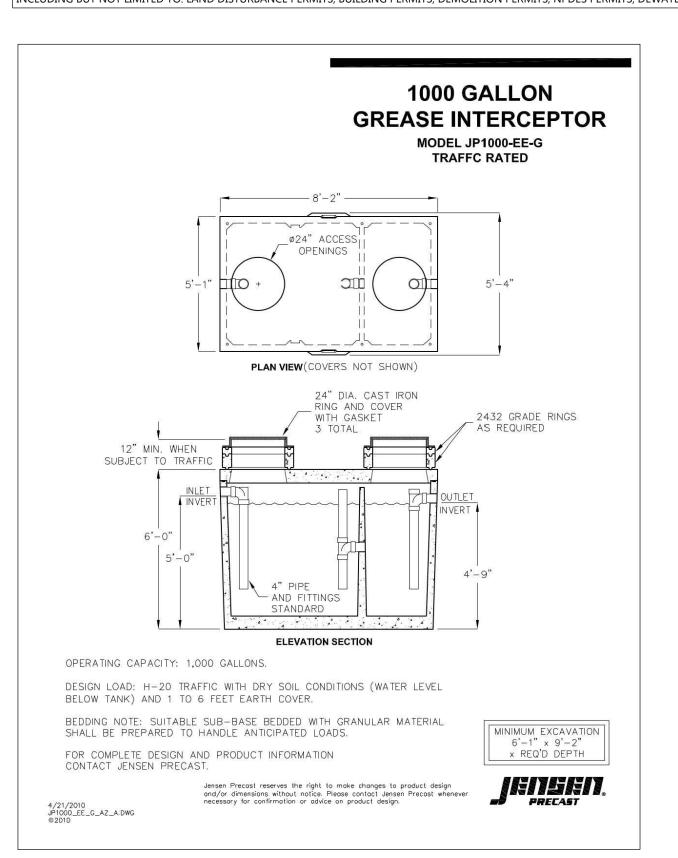
CONTRACTOR SHALL ENSURE 100% COVERAGE OF ALL LANDSCAPED AREAS WITHIN LIMITS OF WORK, INCLUDING POTENTIAL OFFSITE AREAS. COVERAGE SHALL INCLUDE BOTH LANDSCAPING AND IRRIGATION.

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

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

24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE

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.

- CONDUCTOR IRRIGATION WIRE. EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR STATION AND COMMON STATION WIRE - RED
- 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.

PROVIDE LINE-VOLTAGE DISCONNECT SWITCH WITH GROUND FAULT PROTECTION

RAIN SENSOR: WIRELESS RAIN/FREEZE SENSOR.

- 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 COMMENCEMEN' 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.
- 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
- 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.
- MARKED ON THE GROUND PRIOR TO INSTALLATION. SPRINKLER HEAD STAKING SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
- 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.
- PROVIDE THREE ADDITIONAL IRRIGATION CONTROL WIRES ALONG EACH BRANCH OF MAINLINE FOR FUTURE EXPANSION. STUB ADDITIONAL CONTROL WIRES INTO BACK OF IRRIGATION CONTROLLERS.
- INSTALL THE RAIN SENSOR IN THE VICINITY OF THE CONTROLLER, AND COORDINATE LOCATION WITH THE 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
- ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- 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.
- MAKE ALL NECESSARY ADJUSTMENTS TO PROVIDE COMPLETE COVERAGE, INCLUDING REALIGNMENT OF HEADS AND REPLACEMENT OF NOZZLES.
- AREAS IN A NEAT, ORDERLY CONDITION. DISPOSED LEGALLY OF ALL EXCAVATED MATERIALS OFF THE PROJECT SITE. INSPECTION AND ACCEPTANCE
- OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE IRRIGATION CONTRACTOR SHALL 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,
- COLOR FOR EACH ZONE. 5. TURN THE FOLLOWING ITEMS IN TO THE OWNER UPON COMPLETION OF THE INSTALLATION: OUICK COUPLER KEYS (2)
- CONTROLLER MANUAL (1) CONTROLLER KEYS (2)
- 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 SITE AND SHALL BE REPLACED. REPLACEMENTS SHALL BE OF THE SAME KIND AS SPECIFIED IN THE
- IMPROPER MAINTENANCE SHALL NOT BE COVERED BY THIS WARRANTY. SHOULD THE PERMITTING JURISDICTION REQUIRE AN IRRIGATION AUDIT, THE IRRIGATION CONTRACTOR SHALL

VALVES SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS.

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

- THAN 2" BELOW FINISH GRADE. O SPRAY ROTOR AND BURBLER HEADS:
- ALL SPRAY AND ROTOR HEAD LOCATIONS SHALL BE STAKED, FLAGGED AND/OR OTHERWISE CLEARLY
- 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, BOULDERS. AND HARDSCAPE, UNLESS OTHERWISE SPECIFIED. 4. ALL ROTOR, SPRAY AND BUBBLER HEADS AND VALVES SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM
- THE IRRIGATION CONTRACTOR SHALL COORDINATE 120 V.A.C. ELECTRICAL POWER TO CONTROLLER AND 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. CONNECT ALL DIRECT BURIAL WIRES TO VALVES USING 3M'S "DBY-DIRECT BURIAL SPLICE KIT" (UNLESS
- THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONTROL WIRE SLEEVES AND PIPE SLEEVES UNDER PAVED AREAS PRIOR TO PAVING - SEE SLEEVING NOTES
- COST TO THE OWNER. QUALITY CONTROL
- 1. DURING IRRIGATION EXCAVATION AND INSTALLATION, KEEP ALL PAVEMENT CLEAN AND ALL WORK
- UPON COMPLETION OF THE WORK, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE
- 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
- 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. 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
- IRRIGATION LEGEND, AND SHALL BE INSTALLED AS ORIGINALLY SPECIFIED. IRRIGATION PARTS DAMAGED OR IMPAIRED DUE TO ACTS OF GOD, VANDALISM, AND/OR THE OWNER'S
- RETAIN THE SERVICES OF A THIRD-PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR, AT NO ADDITIONAL COST TO THE OWNER.

PANDA EXPRESS SITE NOTES & DETAILS



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

PROJECT INFORMATION

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PROFESSIONAL SEAL

PRELIMINARY DATES JAN. 20, 2023

2178020

SHEET NUMBER

2021 © EXCEL ENGINEERING, INC

Street 60

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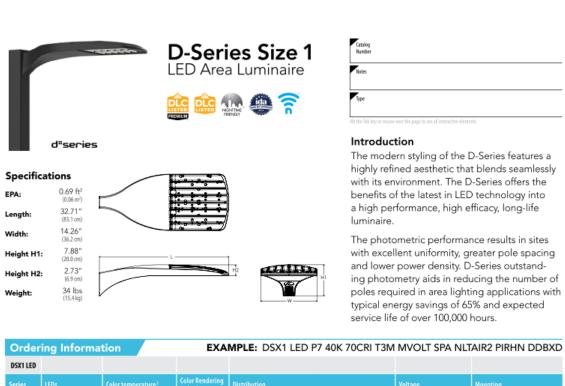
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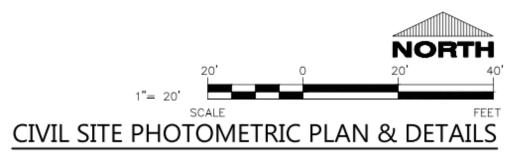
			Calas Dandadas				
Series			Color Rendering Index ²	Distribution		Voltage	Mounting
DSX1 LED	P1 P6 P2 P7 P3 P8 P4 P9 P5 Rotated optics P101 P121 P111 P131	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type I medium T3M Type II medium T3LG Type II low glare ³ T4M Type N low glare ³ TFTM Forward throw medium	T5M Type V medium T5LG Type V low glare T5W Type V wide BLC3 Type III backlight control 1 BLC4 Type IV backlight control 1 LCCO Left corner cutoff 1 RCCO Right corner cutoff 3	MVOLT (120V-277V)* HVOLT (347V-480V) XVOLT (277V - 480V)	5.6 SPA Square pol
Control optic	nns				Other options		Finish (required)
Shipped ins NLTAIR2 PIRI- PIR PER PERS	AN nLight AIR gen 2 er ambient sensor, 8- sensor enabled at 2 High/low, motion/a height, ambient sen NEMA twist-lock re separate) ³⁴	habled with bi-level motion / 40 mounting height, ambient 56, 10, 20, 33 mblent sensor, 8, 40 mounting sor enabled at 2fc 10, 32, 31 ceptacle only (controls ordered only (controls ordered separate) 14, 21	FAO Field BL30 Bi-le BL50 Bi-le DMG 0-10 fixts	n-pin receptacle only (controls sed separate) ^{96,27} adjustable output ^{16,27} vel switched dimming, 3006 ^{16,27} vel switched dimming, 5006 ^{16,27} vol dimming wires pulled outside re (for use with an external rol, ordered separately) ⁷⁷ switching ^{16,27,27}	L90 Left rotated optics 1 R90 Right rotated optics CCE Coastal Construction Shipped separately	lack finish standard) ²² 1 1 ²³ d (reversible, field install ousling finish)	DDBXD Dark Bronze DBLXD Black DNAXD Natural Alumin DWHXD White DDBTXD Textured dark I DBLBXD Textured black DNATXD Textured white

23-0" OVERALL HEIGHT	

LIGHT POLE DETAIL

		/									
	Schedule										
7)	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	
		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	
		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/
PARKING LOT	Ж	2.1 fc	15.4 fc	0.5 fc	30.8:1	4.2



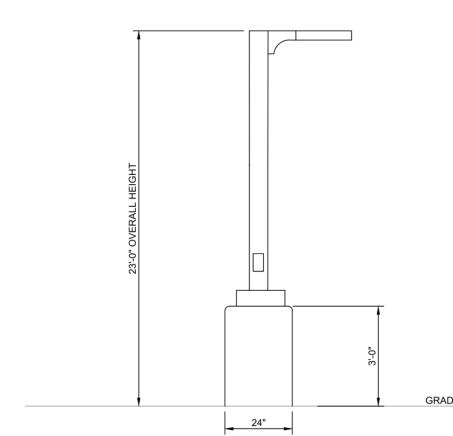


PROJECT INFORMATION

920-926-9800

excelengineer.com

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PRELIMINARY DATES	
JAN. 17, 2023	_ >
JAN. 20, 2023	_ 2
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JOB NUMBER 2178020

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