# INCLUSIVE PLAYGROUND

2400 BARLOW RD HUDSON, OH SEPTEMBER, 2025

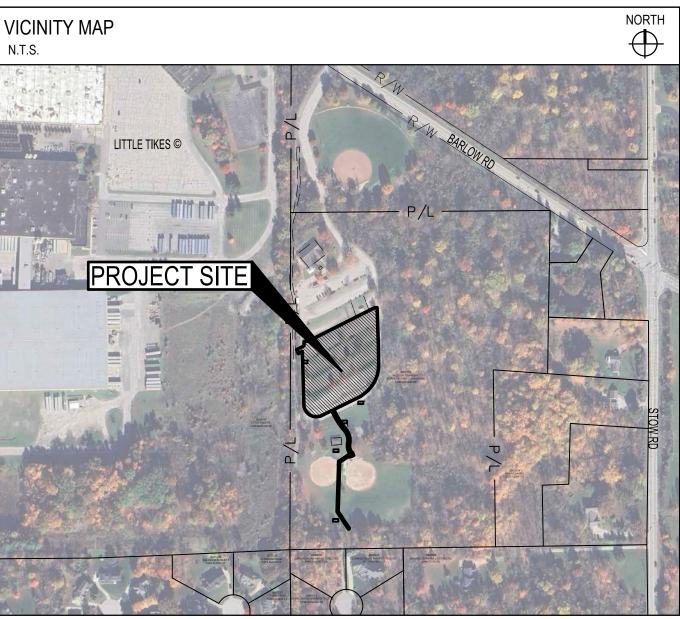


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OWNER AND DEVELOPER
CITY OF HUDSON
1140 TEREX RD
HUDSON, OH 44236
PHONE: 330-342-1700

# APPROVALS

NAME OF CITY ENGINEER	DATE :
NAME OF SANITARY ENGINEER	DATE:
WATER DEPARTMENT	DATE:
STORMWATER MANAGEMENT	DATE:





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TS-001 SHEET NO: 1/21

# PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW PLAYGROUND WITHIN EXISTING OAK GROVE PARK. SCOPE INCLUDES SURVEY, GEOTECHNICAL SERVICES, DEMOLITION, UPDATED ASPHALT PARKING AND SIDEWALKS FOR PEDESTRIANS, SIDEWALKS CONNECTING THE PLAYGROUND ELEMENTS AND CONNECTIONS TO THE PARKING LOT, LANDSCAPE BEDS, TREES, AND LAWN AREAS, ACCESSIBLE PLAYGROUND EQUIPMENT FOR ALL AGES AND AMENITIES, PREFABRICATED RESTROOM, UTILITIES, STRUCTURAL FOUNDATIONS, STORMWATER MANAGEMENT, DRAINAGE, SITE EARTHWORK, EROSION CONTROL, AND ELECTRICAL ENGINEERING.

# OHIO SPECIFICATION

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

# PLAN REPRODUCTION WARNING THE PLANS HAVE BEEN PREPARED

THE PLANS HAVE BEEN PREPARED FOR PRINTING ON ANSI D (22"x34") SHEETS. PRINTING ON OTHER SIZE SHEETS MAY DISTORT SCALES. REFER TO GRAPHIC SCALES.



#### DEMOLITION NOTES

CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY DEMOLITION PROCESS. CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS INCLUDING BUT NOT LIMITED TO: MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC. THESE ACTIVITIES WILL REQUIRE SPECIFIC OHIO EPA OR LOCAL GOVERNING AUTHORITIES AIR PERMITS FOR INSTALLATION AND OPERATION. CONTRACTORS PERMITTING AUTHORITIES. MUST SEEK AUTHORIZATION FROM THE CORRESPONDING GOVERNING BODIES. FOR DEMOLITION OF ALL COMMERCIAL SITES, A NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO THE OHIO EPA AND LOCAL GOVERNING AUTHORITIES TO DETERMINE ANY CORRECTIVE ACTIONS THAT MAY BE REQUIRED.

#### DEMOLITION INCLUDES THE FOLLOWING:

- COMMENCING DEMOLITION OPERATIONS (WHEN APPLICABLE).
- 2.B. DEMOLITION AND REMOVAL OF SITE IMPROVEMENTS NECESSARY FOR THE PROPOSED
- CONSTRUCTION OF NEW IMPROVEMENTS. . REROUTING, RELOCATING, DISCONNECTING, CAPPING OR SEALING, AND ABANDONING/REMOVING MANAGER OF ANY DISCREPANCY BETWEEN SOILS REPORT AND PLANS, ETC. SITE UTILITIES IN PLACE (WHICHEVER IS APPLICABLE).
- REMOVE AND LEGALLY DISPOSE OF ITEMS CALLED OUT TO BE REMOVED. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS. THOSE ITEMS INDICATED TO BE REINSTALLED, SALVAGED, OR TO REMAIN SHALL BE CLEANED, SERVICED, AND OTHERWISE PREPARED FOR REUSE. CONTRACTOR TO STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN LOCATIONS INDICATED.
- PROTECT ITEMS INDICATED TO REMAIN AGAINST DAMAGE AND SOILING THROUGHOUT CONSTRUCTION. WHEN PERMITTED BY THE CONSTRUCTION MANAGER OR OWNER, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION THROUGHOUT CONSTRUCTION AND 5. ALL WORK WITHIN THE RIGHTS OF WAY SHALL BE IN ACCORDANCE WITH THE GOVERNING THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS. PROMPTLY REPAIR DAMAGES TO JURISDICTION AND SPECIFICATIONS. ADJACENT FACILITIES CAUSED BY DEMOLITION OPERATIONS AT THE CONTRACTORS COST.
- CONTRACTOR SHALL SCHEDULE DEMOLITION ACTIVITIES WITH THE CONSTRUCTION/PROJECT MANAGER INCLUDING THE FOLLOWING:
- FOR EACH ACTIVITY 5.B. DATES FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES.
- S.C. IDENTIFY AND ACCURATELY LOCATE UTILITIES AND OTHER SUBSURFACE STRUCTURAL, ELECTRICAL, OR MECHANICAL CONDITIONS.
- REGULATORY REQUIREMENTS: COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE STARTING DEMOLITION. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION
- MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE THROUGHOUT CONSTRUCTION OPERATIONS.
- A. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR OPERATING FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY OWNER'S REPRESENTATIVE AND AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO OWNER AND TO GOVERNING AUTHORITIES.
- LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITY SERVICES SERVING 10. THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION OR SAFETY, MEANS, THE SITE. ARRANGE TO SHUT OFF AND CAP UTILITIES WITH UTILITY COMPANIES AND FOLLOW THEIR RESPECTIVE UTILITY KILL AND CAP POLICIES. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING BY THE MAY APPEAR IN THE PLANS IS INTENDED TO ASSIST IN THE UNDERSTANDING OF PROJECT UTILITY COMPANY.
- CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT 11. DETAILS, NOTES, AND OTHER REFERENCES CONTAINED HEREIN MAY HAVE BEEN ATTAINED BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION FROM OUTSIDE REFERENCE SOURCE LOCATIONS SUCH AS, BUT NOT LIMITED TO, LOCAL AREA. SAFE PASSAGE INCLUDES THE ERECTION OF TEMPORARY PROTECTION AND/OR BARRICADES AS PER LOCAL GOVERNING AUTHORITIES AND IN ACCORDANCE WITH THE CURRENT ADA REGULATIONS. USE OF EXPLOSIVES WILL NOT BE PERMITTED.
- ). CLEAN ADJACENT BUILDINGS AND IMPROVEMENT OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF
- . PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. STORAGE OR SALE OF REMOVED ITEMS OR MATERIALS ON-SITE WILL NOT BE PERMITTED. NO BURNING OF ANY MATERIALS ON SITE SHALL BE PERMITTED.
- IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER AND THE OWNER.
- . SURVEY THE CONDITION OF THE STRUCTURE TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN A STRUCTURAL DEFICIENCY OR UNPLANNED COLLAPSE OF ANY PORTION OF THE STRUCTURE OR ADJACENT STRUCTURES THROUGHOUT CONSTRUCTION.
- I. DEMOLISH BUILDING AND STRUCTURAL PADS COMPLETELY AND REMOVE FROM THE SITE. USE METHODS REQUIRED TO COMPLETE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS AND AS FOLLOWS:
- 14.A. DISPOSE OF DEMOLISHED ITEMS AND MATERIALS PROMPTLY. 14.B. DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS.
- 14.C. BREAK UP AND REMOVE CONCRETE SLABS ON GRADE.
- 5. BELOW-GRADE DEMOLITION: DEMOLISH FOUNDATION WALLS, PAVEMENTS, AND OTHER
- BELOW-GRADE DEMOLITION, AS FOLLOWS: 15.A. COMPLETELY REMOVE BELOW-GRADE DEMOLITION. INCLUDING FOUNDATION WALLS FOOTINGS. KNOWN AND UNKNOWN PAVEMENT SECTIONS INCLUDING UNDERLYING CONCRETE SLABS, AND OTHER BELOW GRADE CONCRETE SLABS FOUND DURING DEMOLITION (INCLUDING ITEMS WHICH MAY NOT BE IDENTIFIED HEREIN).
- FROM DEMOLITION OF BUILDINGS, PAVEMENTS, AND OTHER REMOVED ITEMS WITH SOIL MATERIALS DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY ACCORDING TO REQUIREMENTS PER SOILS REPORT AND ON-SITE GEOTECHNICAL ENGINEER'S REPRESENTATIVE. CONTRACTOR SHALL CONTACT GEOTECHNICAL ENGINEER PRIOR TO FILLING ANY AREAS TO OBSERVE FILL PROCEDURES.
- . CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE 16. IN SOME CASES, THE DEVELOPER OR OWNER MAY HAVE PROVIDED THEIR OVERALL WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT DEVELOPMENT PLANS FOR THE PROJECT DESIGN RATHER THAN A FIELD SURVEY. (SEE SITE CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERNING REGULATIONS.
- B. CONTRACTOR TO WET SAWCUT EXISTING PAVEMENT TO REMAIN AT NEXT NEAREST JOINT PRIOR TO REMOVALS OF CURB, GUTTER, PAVEMENT, ETC.
- 9. THE CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS WITH SMALL HANDHELD GRINDERS OR SCARIFIES OR OTHER METHODS, WITH THE APPROVAL OF THE CONSTRUCTION MANAGER. TAKE CARE DURING MARKING REMOVAL NOT TO SCAR, DISCOLOR, OR OTHERWISE DAMAGE THE PAVEMENT SURFACE. DO NOT OVERPAINT OR USE OTHER METHODS OF COVERING MARKINGS INSTEAD OF REMOVAL.
- 20. WHEN NOTED AND ALLOWED BY THE OWNER, THE CONTRACTOR MAY RE-USE EXISTING WHEELSTOPS FOR THE PROPOSED SITE. CONTRACTOR AND CONSTRUCTION MANAGER SHALL COORDINATE WHICH EXISTING WHEELSTOPS MAY BE RE-USED PRIOR TO DEMOLITION. CONTRACTOR SHALL ENSURE THAT ALL RE-USED WHEELSTOPS ARE PROTECTED DURING
- . CONTRACTOR SHALL FULLY SECURE WORK AREA WITH THE APPROPRIATE SIGNAGE, FENCING, AND INSTALLER / CONTRACTOR SHALL BE OR BECOME CERTIFIED INSTALLERS PRIOR TO BARRICADES WHICH ACCOMMODATE VISUALLY IMPAIRED PERSONS AS AGREED UPON WITH SITE CONSTRUCTION/PROJECT MANAGER AND OWNER TO WARN AND KEEP PEOPLE OUT OF THE SITE WORK AREA FOR THE DURATION OF THE PROJECT.

#### GENERAL PLAN NOTES

- PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE SECTION OF THESE NOTES ENTITLED "GRADING PLAN NOTES" FOR DEFINITIONS AS MAY BE NECESSARY FOR "GEOTECHNICAL ENGINEER" AND "SOILS REPORT".
- 3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND 2.A. TRANSFER BENCHMARK CONTROL TO NEW LOCATIONS OUTSIDE THE DISTURBED AREA PRIOR TO THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION/PROJECT
  - 4. THE CONTRACTOR SHALL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL EXPLORATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY TO PERMIT VERIFICATION OF THE CONDITIONS AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLAN AND SPECIFICATIONS AND DISCLOSED BY THE SOIL STUDIES WILL BE ALLOWED UNLESS THE OF SUCH DIFFERING CONDITIONS.

  - CONTRACTOR SHALL COORDINATE ANY MAINTENANCE OF TRAFFIC WITH THE OWNER'S REPRESENTATIVE AND THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION.
- 5.A. DETAILED SEQUENCE OF DEMOLITION AND REMOVAL WORK, WITH STARTING AND ENDING DATES 7. CONTRACTOR SHALL AT ALL TIMES ENSURE THAT SWPP MEASURES PROTECTING EXISTING DRAINAGE FACILITIES BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY PHASE OF THE SITE CONSTRUCTION OR LAND ALTERATION. (SEE SWPP PLANS).
  - 8. ALL WORK SHALL BE COMPLETED IN A NEAT AND ORDERLY MANNER REMOVING ALL EXCESS MATERIAL AND WASTE FROM THE SITE INCLUDING TIMELY REMOVAL OF ANY CONCRETE SPLATTER. UPON COMPLETION OF PROJECT, CONTRACTOR SHALL CLEAN THE PAVED AREAS PRIOR TO REMOVAL OF TEMPORARY SEDIMENT CONTROLS, AS DIRECTED BY THE CITY AND/OR CONSTRUCTION/PROJECT MANAGER. IF POWER WASHING IS USED, NO SEDIMENT LADEN WATER SHALL BE WASHED INTO THE STORM SYSTEM. ALL SEDIMENT LADEN MATERIAL ON PAVEMENT OR WITHIN THE STORM SYSTEM SHALL BE COLLECTED AND REMOVED FROM THE SITE AT CONTRACTOR'S EXPENSE (SEE SWPP PLANS).
  - THESE PROJECT CONSTRUCTION DOCUMENTS SHALL NOT CONSTITUTE A CONTRACTUAL RELATIONSHIP BETWEEN GPD GROUP AND THE CONTRACTOR / SUBCONTRACTOR / OR OTHER AFFILIATED PARTIES.
  - METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES UTILIZED IN CONSTRUCTION BY THE CONTRACTOR OR SUBCONTRACTORS. ANY SEQUENCING OR SUGGESTED NOTATIONS WHICH
  - AUTHORITY AGENCIES, DESIGN REFERENCE MANUALS, MANUFACTURE'S RECOMMENDED DOCUMENTATION, OR OTHER INDUSTRY SOURCES. GPD DOES NOT WARRANT INFORMATION OR REPRESENTATION OF SAID CONTENT CONTAINED HEREIN, IT IS SHOWN SOLELY FOR REFERENCE ONLY OF DESIGN INTENT AT THE TIME OF PLAN PREPARATION. THE CONSTRUCTION TEAM MEMBERS (CONTRACTOR AND CONSTRUCTION MANAGER, WHERE APPLICABLE) SHALL OBTAIN THE MOST CURRENT DETAILED INFORMATION FROM THE RESPECTIVE SOURCE TO CONSTRUCT THE IMPROVEMENTS UNDER THE AUTHORITY OF THE RESPECTIVE GOVERNING AGENCIES. IF ANY DISCREPANCIES ARE DISCOVERED BETWEEN THE ORIGINAL DESIGN INTENT AND THE CONSTRUCTION TEAM OBTAINED REFERENCE MATERIAL, THE CONSTRUCTION MANAGER OR THE PROJECT'S CONTACT PERSON SHALL BE NOTIFIED PRIOR TO COMMENCING OF ASSOCIATED WORK.
- 12. IT IS NOT EXPECTED THAT ASBESTOS WILL BE ENCOUNTERED IN THE COURSE OF THIS CONTRACT. 12. CONDUCT CONSTRUCTION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS. STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT CLOSE OF OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS.
  - 13. THE ALTA/TOPOGRAPHIC SURVEY SIGNED/SEALED BY GPD GROUP ON JULY 28. WITH FIELD WORK COMPLETED ON JULY 25 SHALL BE CONSIDERED A PART OF THESE PLANS. THE G.C. IS RESPONSIBLE FOR LOCATING IMPROVEMENTS PER THESE PLANS.
  - 14. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE BASED ON GENERAL FIELD SURVEYS, OWNER RECORDS, AND COUNTY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO BECOME FAMILIAR WITH THE SITE'S POSSIBLE BELOW GRADE FEATURES, INCLUDING BUT NOT LIMITED TO, ROOMS, VAULTS, UTILITIES, ETC. AND SHALL CONDUCT A WALK THROUGH WITH THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR REPAIR TO DAMAGE CAUSED BY THEIR WORK FORCE TO FACILITIES WHICH ARE NOT INTENDED TO BE DISTURBED
- 15. ALL DIMENSIONS, GRADES, AND UTILITY LOCATIONS SHOWN ON THESE PLANS WERE BASED ON THE SURVEY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO 3. FILLING BELOW-GRADE AREAS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION/PROJECT MANAGER IF ANY CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO INFORMATION SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
  - PLAN FOR NOTES WHEN THIS IS THE CASE). ALL DIMENSIONS, GRADES, AND UTILITY LOCATIONS SHOWN ON THESE PLANS WERE BASED ON SAID DEVELOPMENT PLANS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO INFORMATION SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
  - 17. THE CONTRACTOR SHALL RUN AN INDEPENDENT VERTICAL CONTROL TRAVERSE TO CHECK BENCHMARKS AND A HORIZONTAL CONTROL TRAVERSE THROUGH THE REFERENCED PROJECT CONTROL DATUM TO CONFIRM GEOMETRIC DATA. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
  - 18. CRASH RATED BOLLARDS SHALL BE PROVIDED AND INSTALLED AT ALL LOCATIONS WHICH ARE SEPARATING VEHICLES FROM PEDESTRIANS AND/OR STOREFRONTS REGARDLESS OR NOT OF BEING NOTED AS SUCH WITHIN THE PLANS. THE ANTICIPATED SPEED/PENETRATION RATING OF S20/P1 ACCORDING TO ASTM F3016/3016M IS TO BE UTILIZED - THE FINAL SPACING, RATINGS, AND INSTALLATION DETAILS SHALL BE IN ACCORDANCE WITH ASTM AND THE MANUFACTURER'S REQUIREMENTS FOR REQUIRED LOCATIONS AND POSSIBLE VEHICLE APPROACH SPEED. INSTALLATION, CONTACT MANUFACTURER(S) FOR DETAILS.

# CONCRETE NOTES AND SPECIFICATIONS

- 1. ALL EXTERIOR SITE SPECIFIC PORTLAND CEMENT CONCRETE (PCC) (I.E. SIDEWALK, PAVEMENT OR CURBING) SHALL MEET THE MINIMUM REQUIREMENTS OF THE LATEST EDITIONS OF THE STATE DEPARTMENT OF TRANSPORTATION (DOT) AND THE AMERICAN CONCRETE INSTITUTE (ACI) SPECIFICATIONS USING THE RESPECTIVE ASTM STANDARDS FOR MATERIALS USED, MIXING, TRANSPORTATION, FORMING, PLACEMENT, CURING, AND SEALING. THE MINIMUM STRENGTH FOR NORMAL WEIGHT CONCRETE IS 4500 PSI AT 28 DAY STRENGTH. CONTRACTOR SHALL REFER TO DETAILS, NOTES, AND SPECIFICATIONS WITHIN THE CONSTRUCTION DOCUMENTS FOR VARIATIONS TO THIS SPECIFICATION. MIX DESIGN SHOP DRAWINGS SHALL BE TAILORED TO THE ACTUAL FIELD PLACEMENT CONDITIONS AND BE SUBMITTED TO THE CONSTRUCTION/PROJECT MANAGER IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.
- 2. ALL EXTERIOR CONCRETE CURBS SHALL HAVE JOINTS PER ACI 330. CURB JOINTS ARE TO ALIGN WITH CONCRETE PAVEMENT JOINTS WHERE APPLICABLE, TYPICALLY BEING 10 FT TO 12 FT. ALL EXTERIOR VEHICULAR CONCRETE PAVEMENT AND FLATWORK SHALL HAVE CONTROL JOINTS PER TARLE RELOW AND EXPANSION JOINTS PER ACL 330 TYPICAL RECOMMENDATIONS

LE BI	ELOW AND EXPANSION JOIN 15 PER	ACI 330 I YPICAL RECUMINIENDATIONS
	SLAB THICKNESS - " T "	MAXIMUM JOINT SPACING
	LESS THAN 4 INCHES	8 FEET
	4 - < 5 INCHES	10 FEET
	5 - < 6 INCHES	12.5 FEET
	6 INCHES - < 8 INCHES	15 FEET
	8 INCHES - 10 INCHES	15 FEET

- CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING AS REQUIRED ABOVE, 3. ALL JOINTS, INCLUDING SAWED JOINTS, SHALL BE SEALED. JOINTS SHALL BE CLEANED AND DRIED PRIOR TO SEALING. JOINT SEALING MATERIALS SHALL COMPLY WITH ASTM D 6690 FOR HOT APPLIED ELASTOMERIC, ASTM D 5893 TYPE NS FOR SILICONE RUBBER, AND TT-S-00230C FOR SINGLE COMPONENT ELASTOMERIC. SEALER WIDTH, DEPTH, AND PREPARED APPLICATION SURFACES SHALL BE PER MANUFACTURES RECOMMENDATIONS. JOINT FILLER MATERIAL SHALL CONFORM TO ASTM D1751 OR ASTM D8139 AND EXTEND THE FULL DEPTH OF CONTACTING SURFACE.
  - 4. ALL CONCRETE PANELS SHALL BE SQUARE WITH A LENGTH TO WIDTH RATIO NO GREATER THAN 1.25 TO 1 AND HAVE A MEDIUM BROOM FINISH (TRANSVERSE, SLIP RESISTANT FOR PEDESTRIAN PATHWAYS) WHICH SHALL BE TO MINIMUM STRENGTH PRIOR TO OPENING FOR VEHICULAR TRAFFIC AREAS. STAGGERED/OFFSET JOINT, INTERIOR CORNERS, ANGLES LESS THAN 60 DEGREES, SLABS LESS THAN 18-INCHES WIDE, AND ODD SHAPES SHALL NOT BE PERMITTED. BLOCKOUTS AROUND ALL PAVEMENT CASTINGS SHALL BE PROVIDED IN ACCORDANCE WITH ACI RECOMMENDATIONS.
  - 5. ALL JOINTING (IF) SHOWN HEREIN IS ONLY A GENERAL GUIDELINE OF DESIGN INTENT. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR FINAL LAYOUT OF THE JOINTING WHICH COINCIDES WITH THEIR MEANS AND METHODS TO ENSURE NO UNDESIRED CRACKS FORM THROUGH ANY PLACED CONCRETE. JOINTS SHALL BE APPROPRIATELY PLACED AS SOON AS POSSIBLE TO KEEP UNNECESSARY CRACKS FROM DEVELOPING. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF THEIR PAVEMENT JOINT LAYOUT TO OWNER / CONSTRUCTION MANAGER PRIOR TO PLACEMENT FOR RECORD. THE CONTRACTOR SHALL REPLACE ANY CRACKED CONCRETE, WHICH HAS NOT BEEN PLACED/FINISHED IN ACCORDANCE WITH ACI STANDARDS, TO THE NEXT JOINT PAST THE EFFECTED AREA AT NO ADDITIONAL COST TO THE PROJECT WITHIN ONE YEAR OF PROJECT COMPLETION.
  - 6. DESIGN INTENT CONCRETE AND SHALL CONFORM TO THE FOLLOWING MINIMUM AND MAXIMUM VALUES:

V <i>F</i>	ALUES.	
a.	STRENGTH	PER MIX DESIGN, MINIMUM 4500 PSI
b.	PORTLAND CEMENT / BLENDED CEMENT	550 LB / CY (ASTM C150 TYPE I/II;
	CONTENT	C595 TYPE IL 12% TARGET)
C.	POZZOLAN MATERIALS	SILICA FUME MAY REPLACE MAX 7% CEMENT
	(SEE NOTES BELOW)	FLY ASH MAY REPLACE MAX 20% CEMENT,
		SLAG CEMENT MAY REPLACE MAX 25%
d.	MAX W/C RATIO	PER MIX DESIGN, MAXIMUM 0.45
e.	ENTRAINED AIR	6.5% AVG ± 1.5% (7.0% TARGET) ASTM C260
f.	SLUMP	4" MAX WITHOUT WATER REDUCER
g.	SLUMP WITH HRWR OR MID RANGE WR	6" TO 8"
h.	WATER REDUCER	NORMAL TYPE A (ASTM C494)
i.	RETARDER	NORMAL TYPE B OR D AS NEEDED (REQUIRE
		CONCRETE TEMPERATURE EXCEEDS 85F)
j.	CONCRETE TEMPERATURE AT PLACEMENT	50F-90F
k.	ACCELERATOR	NON-CHLORIDE TYPE ONLY - CALCIUM
		CHLORIDE IS PROHIBITED
l.	FIBERS TO BE USED	POLYPROPYLENE OR POLYETHYLENE
	FOR SHRINKAGE CRACK CONTROL	MICRO SYNTHETIC FIBERS @ 1.5 LBS / CY
	- (CURBS, WALKS, STEPS, RAMPS)	(FIBERMESH 300 OR APPROVED EQUAL)
	- FOR USE AS W.W.F. REPLACEMENT	MACRO SYNTHETIC FIBERS @ 4.0 LBS / CY
	(VEHICULAR TRAFFIC PAVEMENT)	(TUF-STRAND SF OR APPROVED EQUAL)

- 7. ALL SYNTHETIC FIBERS SHALL BE TYPE III PER ASTM C1116 AND ASTM D7508. MACRO FIBERS SHALL BE 1.5 TO 2.25 INCHES IN LENGTH. MICRO FIBERS SHALL BE 0.5 TO 0.75 INCHES IN LENGTH.
- 8. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, ASTM A1064, ASTM A307, AND ASTM A775.

  12. WHEN CONSTRUCTING ASPHALTIC CONCRETE PAVEMENTS, CONTRACTOR SHALL PROVIDE WHEN USED, ALL W.W.F. SLAB REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS AND BE FLAT SHEETS ONLY. ZINC REPAIR MATERIAL SHALL CONFORM TO ASTM A780.
- 9. CONCRETE SHALL ARRIVE AT JOB SITE WITH APPROPRIATE W/C RATIO. NO WATER SHALL BE ADDED TO CONCRETE ON SITE WHICH EXCEEDS THE MAXIMUM ALLOWED W/C RATIO AS INDICATED BY THE WRITTEN BATCH PLANT TICKET FROM THE SUPPLIER. SUPERPLASTICIZER AND/OR OTHER ADMIXTURES MAY BE UTILIZED TO ACHIEVE DESIRED WORKABILITY OR TO ACCOUNT FOR ADVERSE PLACEMENT CONDITIONS. ADMIXTURES SHALL BE UTILIZED ONLY IN ACCORDANCE WITH THE MANUFACTURES WRITTEN INSTRUCTIONS AND MEET THE REQUIREMENTS OF ASTM C494 AND/OR ASTM C1017.
- 10. CONTRACTOR SHALL HAVE A MIN. 5 YEARS EXPERIENCE WITH SUCCESSFUL PLACEMENT OF CONCRETE UTILIZING POZZOLAN MATERIALS. MIX DESIGNS WHICH UTILIZED POZZOLAN MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL DOT SPECIFICATIONS AND ACI STANDARDS. FLY ASH SHALL MEET THE REQUIREMENTS OF ASTM C618, CLASS C OR CLASS F, EXCEPT THE LOSS ON IGNITION MUST NOT EXCEED 5%. SLAG CEMENT ACCORDING TO ASTM C989, GRADE 100 MINIMUM. SILICA FUME SHALL BE DRY DENSIFIED MEETING THE REQUIREMENTS OF ASTM C1240. USE OF MATERIALS SHALL BE IN ACCORDANCE WITH ACI 211.1.
- 11. AGGREGATES SHALL BE LOW-SHRINKAGE / WELL GRADED PER ASTM C33 AND THE LOCAL DOT SPECIFICATIONS WHICH ARE RESISTANT TO FREEZE / THAW, SULFATE ATTACK, AND ARE NOT ALKALI-CARBONATE AGGREGATES OR SUSCEPTIBLE TO ALKALI-AGGREGATE REACTIVITY.
- 12. LIQUID MEMBRANE FORMING CURING COMPOUNDS SHALL BE PER ASTM C309 TYPE 1D OR 2, DISSIPATING IN ACCORDANCE WITH ACI 308. LIQUID MEMBRANE FORMING CURING COMPOUNDS SHALL BE APPLIED IN PERPENDICULAR UNIFORM APPLICATIONS PER MANUFACTURES RECOMMENDATIONS WITHIN THE ALLOWABLE TIME PERIODS. APPLICATIONS SHALL BE PHOTOGRAPH DOCUMENTED FOR EVEN AND CONSISTENT COVERAGE. NO POOLING OF MATERIAL SHALL BE ACCEPTED.
- 13. CONCRETE SEALER SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. A WRITTEN STATEMENT FROM THE MANUFACTURE FOR THE SEALER AND CURING COMPOUND SHALL BE PROVIDED GUARANTEEING COMPATIBILITY.
- 14. REFER TO ACI INDUSTRY STANDARDS FOR CONCRETE PLACEMENT AND INSTALLATION. CONTRACTOR SHALL INCLUDE PROVISIONS IN ACCORDANCE WITH ACI 305R AND 306R FOR HOT AND COLD WEATHER PLACEMENT WHEN PROJECT SCHEDULE TIMING FALLS WITHIN THE REQUIRED TEMPERATURE RANGES PER ACI AND THE LOCAL DOT.

# GRADING PLAN NOTES

- . A GEOTECHNICAL REPORT HAS BEEN PREPARED BY GPD GROUP, DATED 08/29/2025 AND SHALL BE CONSIDERED TO BE A PART OF THIS PLAN SET.
- 2. BEFORE STARTING GRADING OPERATIONS, SEE STORMWATER POLLUTION PREVENTION PLAN, NOTES AND DETAILS (SWPP), LANDSCAPE PLAN AND SOILS REPORT FOR TREATMENT OF EXISTING GRADE.
- 3. PRIOR TO SITE CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL INSTALL ALL SWPP MEASURES TO PROTECT EXISTING DRAINAGE FACILITIES. CONTRACTOR SHALL PREVENT SILTATION FROM LEAVING THE SITE AT ALL TIMES.
- 4. STRIP BUILDING AND PAVEMENT AREAS OF ALL ORGANIC TOPSOILS. STOCKPILE SUITABLE TOPSOILS FOR RESPREADING ONTO LANDSCAPE AREAS. ALL EXCESS EXCAVATED MATERIALS SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE. SEE GEOTECHNICAL REPORT FOR STRIPPING AND TOPSOIL REQUIREMENTS.
- 5. OBTAIN APPROVED BORROW SOIL MATERIALS OFF-SITE WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE ON-SITE.
- 6. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. UNLESS OTHERWISE SPECIFIED IN THE PLANS, SPECIFICATIONS, OR GEOTECHNICAL REPORT THE SITE GRADING, EXCAVATION, AND EMBANKMENT SHALL BE IN ACCORDANCE WITH THE STATE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.
- 7. AT A MINIMUM ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 98% OF STANDARD / MODIFIED PROCTOR MAXIMUM DRY DENSITY PER A.S.T.M. TEST D-698 / D-1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 2% BELOW OPTIMUM. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND RETAIN A QUALIFIED SOILS ENGINEER REGISTERED WITHIN THE STATE TO ENSURE COMPLIANCE WITH THE GEOTECHNICAL REPORT, MAKE GEOTECHNICAL RECOMMENDATIONS BASED ON FIELD CONDITIONS, AND ENSURE THAT ALL SHORING AND DEWATERING MEANS AND METHODS WILL NOT COMPROMISE THE STABILITY OF EXISTING OR PROPOSED FOOTINGS/FOUNDATIONS. THE OWNER SHALL RECEIVE ALL COMPACTION REPORTS PREPARED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. NOTIFY PROJECT CONSTRUCTION MANAGER IF ANY UNSUITABLE SOILS ARE FOUND.
- 8. FOLLOWING GRADING OF SUBSOIL TO SUBGRADE ELEVATIONS THE CONTRACTOR SHALL PLACE TOPSOIL TO A 6" DEPTH (UNLESS OTHERWISE SPECIFIED IN LANDSCAPING DETAILS) IN ALL DISTURBED AREAS WHICH ARE NOT TO BE PAVED. SMOOTHLY FINISH GRADE TO MEET SURROUNDING LAWN AREAS AND ENSURE POSITIVE DRAINAGE. STOCKPILED TOPSOIL SHALL BE SCREENED PRIOR TO RESPREADING. TOPSOIL SHALL BE FREE OF SUBSOIL, DEBRIS, BRUSH AND STONES LARGER THAN 1" IN ANY DIMENSION. ROCK HOUNDING IN PLACE WILL NOT BE PERMITTED. ALL EXCESS TOPSOIL SHALL BE LEGALLY DISPOSED OF OFF SITE.
- 9. ELEVATIONS GIVEN ARE AT BOTTOM FACE OF CURB AND/OR FINISHED PAVEMENT GRADE UNLESS OTHERWISE SPECIFIED ON GRADING PLAN. ALL PAVEMENT SHALL BE LAID ON A STRAIGHT, EVEN, AND UNIFORM GRADE WITH A MINIMUM OF 1% SLOPE TOWARD THE COLLECTION POINTS UNLESS OTHERWISE SPECIFIED ON THE GRADING PLAN. DO NOT ALLOW NEGATIVE GRADES OR PONDING OF WATER.
- 10. SLOPE BUILDING SIDEWALK AWAY FROM THE BUILDING AT A MAXIMUM OF 1.5% (UNLESS OTHERWISE INDICATED ON THE GRADING PLAN).

# 11. ADA GRADING NOTES:

- 11.1. MAX. CONSTRUCTED WALK CROSS SLOPE SHALL NOT BE MORE THAN 2.0%. 11.2. MAX. CONSTRUCTED WALK RUNNING SLOPE SHALL NOT BE MORE THAN 5.0%.
- 11.3. MAX. CONSTRUCTED CURB RAMP RUNNING SLOPE SHALL NOT BE MORE THAN 8.3%.
- 11.4. MAX. CONSTRUCTED SLOPE IN ANY DIRECTION WITHIN ADA PARKING, RAMP LANDINGS, AND LOADING AREAS SHALL NOT BE MORE THAN 2.0%.
- 11.5. CONTRACTOR SHALL VERIFY ALL GRADES IN ADA AREAS PRIOR TO CONSTRUCTION AND NOTIFY THE CONSTRUCTION/PROJECT MANAGER IF THEY DON'T MEET ABOVE
- 11.6. ANY CONSTRUCTED AREAS WITH SLOPES MORE THAN CODE ALLOWABLE WILL NOT BE ACCEPTED AND WILL REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE AT NO ADDITIONAL COST TO THE PROJECT IN ORDER TO BE IN ACCORDANCE WITH CURRENT
- ADA REQUIREMENT. 11.7. GAPS OR OPENINGS ALONG THE ACCESSIBLE ROUTE MUST NOT EXCEED 1/2 INCH WIDTH,
- PERPENDICULAR TO THE PREDOMINATE FLOW OF PEDESTRIAN TRAFFIC. 11.8. CONTRACTOR SHALL ENSURE ALL ADA ACCESSIBLE PATHWAYS DO NOT EXCEED 1/4 INCH
- BUTT END JOINT TO MEET EXISTING PAVEMENT IN ELEVATION AT DRIVE RETURNS AND ENSURE POSITIVE DRAINAGE.

IN VERTICAL DIFFERENCE PER ADA REQUIREMENTS.

### GENERAL UTILITY NOTES

- I. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES IMMEDIATELY AFTER BID IS AWARDED AND ENSURE THE UTILITY COMPANIES HAVE THE ESSENTIALS REQUIRED FOR COMPLETE SERVICE INSTALLATION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER OF ANY TIME FRAMES ESTABLISHED BY UTILITY COMPANIES WHICH WILL NOT MEET OPENING DATE.
- CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, INVERT ELEVATION, AND CONDITION OF EXISTING UTILITIES WHICH ARE INTENDED TO BE UTILIZED AS A CONNECTION POINT FOR ALL PROPOSED UTILITIES PRIOR TO ANY CONSTRUCTION. CONTRACTOR TO ENSURE EXISTING UTILITIES ARE IN GOOD CONDITION AND FREE FLOWING (IF APPLICABLE). IF ELEVATIONS, SIZE, OR LOCATION DIFFER FROM WHAT IS SHOWN ON PLANS, CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY.
- 3. WHERE PLANS PROVIDE FOR PROPOSED WORK TO BE CONNECTED TO, OR CROSS OVER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING THE PROPOSED WORK. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE RESULTS IN A CHANGE IN THE PLAN, THE CONSTRUCTION MANAGER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED WORK WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY. PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT ITEM.
- 4. UTILITY SERVICE PROVIDERS RULES AND REQUIREMENTS TAKE PRECEDENCE OVER INFORMATION HEREIN. IF DISCREPANCY ARISES, CONTRACTOR SHALL FULLY COORDINATE WITH UTILITY SERVICE PROVIDER PRIOR TO START OF CONSTRUCTION.
- 5. ALL PRECAST CONCRETE UTILITY STRUCTURES AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE APPLICABLE, MOST CURRENT, VERSION OF ASTM STANDARDS (INCLUDING BUT NOT LIMITED TO A536, A615, C443, C478, C890, C891, C913, C923, C990, F2510, ETC.) AND LOCAL CODE REQUIREMENTS.



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ISSUED FOR: **PERMIT** CONSTRUCTION RECORD DESIGNER PROJECT MANAGER JLC

2025041.04

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#### GENERAL NOTES

- ALL WORK SPECIFIED AS A DEPARTMENT OF TRANSPORTATION ITEM SHALL BE GOVERNED BY THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AS WELL AS THE CURRENT EDITION OF THE LOCAL JURISDICTION STORM WATER MANAGEMENT MANUAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POSSESS AND TO BE FAMILIAR WITH APPLICABLE SECTIONS.
- THESE CONTRACT DRAWINGS SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST. IF UNFORESEEN STORM WATER POLLUTION IS ENCOUNTERED, ADDITIONAL STORM WATER POLLUTION PREVENTION (SWPP) MEASURES SHALL BE IMPLEMENTED TO MANAGE THE CURRENT SITE CONDITIONS WHICH MAY BE REQUESTED BY THE OWNER, COUNTY ENGINEER, PROJECT ENGINEER OR SOIL AND WATER CONSERVATION SERVICE REPRESENTATIVE AT ANYTIME. SUCH REQUESTS AND CHANGE IN SITE CONDITIONS SHALL BE IMPLEMENTED IMMEDIATELY AT CONTRACTOR'S EXPENSE.
- ALL STORM WATER POLLUTION PREVENTION PRACTICES SHALL BE INSTALLED BEFORE ANY OTHER EARTH MOVING OCCURS.
- SEDIMENT BARRIERS SHALL BE INSTALLED DOWNSLOPE OF DISTURBED AREAS. SEDIMENT BARRIERS SHALL BE INSTALLED ALONG LEVEL CONTOURS. MAXIMUM CONTRIBUTING DRAINAGE AREA TO SEDIMENT BARRIERS SHALL BE PER THE OHIO EPA OR THE LOCAL AUTHORITY REQUIREMENTS. COMPOSITE FILTER SOCKS USED IN LIEU OF SILT FENCE SHALL BE A MINIMUM OF 12 INCHES IN DIAMETER.
- SILT BARRIERS SHALL BE INSTALLED AROUND ALL EXISTING AND NEW STORM INLETS, CATCH BASINS AND YARD DRAINS. INSTALL ROCK CHECK DAMS FOR HEADWALL INLETS FOR STORM WATER POLLUTION PREVENTION.
- STORM WATER POLLUTION PREVENTION MEASURES SHALL BE INSTALLED AROUND ALL DIRT OR TOPSOIL STOCKPILES AND OTHER TEMPORARILY DISTURBED AREAS AS MAY BE SHOWN ON THESE PLANS AND/OR AS DIRECTED BY THE ENGINEER OR THE LOCAL AUTHORITY HAVING JURISDICTION.
- SILT BARRIERS, CONSTRUCTION ENTRANCES, AND SILT PERIMETER CONTROLS SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF GRASS HAS BEEN OBTAINED AND/OR PAVING OPERATIONS ARE COMPLETE. CONTRACTOR SHALL KEEP SILT FROM ENTERING ANY STORM DRAINAGE SYSTEM. ONCE SITE HAS BEEN COMPLETELY STABILIZED, ANY SILT IN PIPES AND DRAINAGE SWALES SHALL BE REMOVED WITHIN 10 DAYS.
- ALL EXISTING WATER COURSES WITHIN THE PROJECT LIMITS SHALL BE TEMPORARILY PROTECTED DURING LAND CLEARING AND GRADING OPERATIONS. SOILS WITHIN 50 FEET OF SAID WATER COURSES SHALL BE STABILIZED WITHIN 2 DAYS OF THE INITIAL CLEARING /
- CONSTRUCTION ENTRANCE SHALL BE UTILIZED. IF CONDITIONS ARE SUCH THAT MUD IS COLLECTING ON VEHICLE TIRES, THE TIRES MUST BE CLEANED BEFORE THE VEHICLES ENTER THE PUBLIC ROADWAY. THE SITE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOW OF MUD ONTO THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE ROADWAY MUST BE REMOVED PROMPTLY.
- 0. IF FOR ANY REASON, THE PROJECT IS SUSPENDED, THE CONTRACTOR SHALL ENSURE THAT ALL INSTALLED EROSION MEASURES ARE FUNCTIONING AND PROPERLY MAINTAINED DURING THIS PERIOD, AND THAT ALL BARE SOILS ARE SEEDED AND MULCHED WITH TEMPORARY SEED MIXTURE.
- . CONCRETE WASHOUT FACILITY (IF APPLICABLE) SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLAN DETAILS AND LOCAL GOVERNING AUTHORITY REGULATIONS AND INSTRUCTIONS.
- 2. IMPLEMENTATION OF EROSION AND SEDIMENT CONTROLS SHALL CONFORM TO STATE OF OHIO CONSTRUCTION GENERAL PERMIT OHC000006 AND THE CITY OF EUCLID CODIFIED ORDINANCES. IF A CONFLICT EXISTS BETWEEN THE TWO REGARDING EROSION AND SEDIMENT CONTROL IMPLEMENTATION, THE MORE RESTRICTIVE SHALL APPLY.
- 3. DISTURBED AREAS WITHIN 50' OF A STREAM SHALL HAVE PERMANENT STABILIZATION APPLIED WITHIN 2 DAYS OF FINAL GRADE.
- I. DISTURBED AREAS WHICH WILL REMAIN DORMANT FOR OVER 1 YEAR OR ARE AT FINAL GRADE SHALL HAVE PERMANENT STABILIZATION APPLIED WITHIN 7 DAYS OF LAST EARTHWORK DISTURBANCE.

# INSPECTION NOTES

- CONTRACTOR SHALL INSPECT ALL SWPP MEASURES DAILY. CONTRACTOR'S INSPECTOR SHALL BE A QUALIFIED INDIVIDUAL. SITE INSPECTIONS SHALL BE LOGGED WEEKLY AND WITHIN 24 HOURS AFTER EVERY RAINFALL EVENT EXCEEDING 1/2" OF RAINFALL. ALL NECESSARY REPAIRS SHOULD BE IMPLEMENTED IMMEDIATELY AFTER SUCH INSPECTIONS.
- CONTRACTOR'S INSPECTOR SHALL BE RESPONSIBLE FOR PREPARING AND SIGNING WEEKLY AND ALL INTERMEDIATE EROSION CONTROL INSPECTION REPORTS AFTER EVERY INSPECTION, WHICH INCLUDE BUT NOT LIMITED TO (DISTURBED AREAS, MATERIAL STORAGE AREAS, EROSION AND SEDIMENT CONTROLS; DISCHARGE LOCATIONS AND VEHICLE ENTRANCE/EXIT LOCATIONS). SUCH REPORTS SHALL BE MADE AVAILABLE TO OWNER. ENGINEER AND CITY / STATE OFFICIALS UPON THEIR REQUEST.
- REPORTS SHALL BE KEPT FOR 3 YEARS AFTER TERMINATION OF THE CONSTRUCTION
- CONTRACTOR MAY SUBMIT A WAIVER REQUEST TO THE LOCAL AND STATE GOVERNING AUTHORITIES FOR A REDUCTION TO MONTHLY INSPECTIONS IF THE SITE WILL BE STABILIZED AND DORMANT FOR A LONG PERIOD, AND/OR THE RUNOFF IS UNLIKELY DUE TO WEATHER CONDITIONS FOR AN EXTENDED PERIOD OF TIME (FROZEN GROUND).
- FOR BMPS THAT REQUIRE REPAIR OR MAINTENANCE NON SEDIMENT POND BMPS ARE TO BE REPAIRED WITHIN 3 DAYS OF INSPECTION AND SEDIMENT PONDS ARE TO BE REPAIRED OR CLEANED OUT WITHIN 10 DAYS OF INSPECTION.
- FOR BMPS THAT DO NOT MEET THE INTENDED FUNCTION, A NEW BMP SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.
- FOR MISSING BMPS REQUIRED, THE MISSING BMPS SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

#### SPILLS AND CONTAMINATION

- CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION
- PREVENT SPILLS
- USE PRODUCTS UP FOLLOW LABEL DIRECTIONS FOR DISPOSAL
- REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH RECYCLE WASTES WHENEVER POSSIBLE
- DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND DON'T POUR DOWN THE SINK, DOOR DRAIN OR SEPTIC TANKS
- DON'T BURY CHEMICALS OR CONTAINERS
- DON'T BURN CHEMICALS OR CONTAINERS
- DON'T MIX CHEMICALS TOGETHER
- 2. ANY DISCHARGE OF PETROLEUM OR PETROLEUM PRODUCTS OF LESS THAN 25 GALLONS ONTO A PERVIOUS SURFACE SHALL BE LEGALLY REMOVED AND PROPERLY TREATED OR PROPERLY DISPOSED OF, OR OTHERWISE REMEDIATED, SO THAT NO CONTAMINATION FROM THE DISCHARGE REMAINS ON-SITE. SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO THE OHIO EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF THE DISCOVERY OF THE RELEASE. ALL SPILLS WHICH CONTACT WATERS OF THE STATE MUST BE REPORTED TO
- 3. SPILL REPORTING REQUIREMENTS: SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LAND FILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS 6. SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SHALL BE REPORTED TO THE OHIO EPA.
- CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS. TRASH. PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS USED ON-SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL CONSTRUCTION DEMOLITION AND DEBRIS (CD&D) WASTE MUST BE DISPOSED OF AT THE OHIO EPA APPROVED CD&D LAND FILL.
- PROCESS WASTE WATER/LEACHATE MANAGEMENT: EPA'S CONSTRUCTION GENERAL PERMIT ONLY ALLOWS THE DISCHARGE OF STORM WATER AND DOES NOT INCLUDE OTHER WASTE STREAMS/DISCHARGES SUCH AS VEHICLE AND/OR EQUIPMENT WASHING. ON-SITE SEPTIC LEACHATE CONCRETE WASH OUTS, WHICH ARE CONSIDERED PROCESS WASTEWATERS. ALL PROCESS WASTEWATERS MUST BE COLLECTED AND PROPERLY DISPOSED AT AN APPROVED DISPOSAL FACILITY. IN THE EVENT, LEACHATE OR SEPTAGE IS DISCHARGED; IT MUST BE ISOLATED FOR COLLECTION AND PROPER DISPOSAL AND CORRECTIVE ACTIONS TAKEN TO ELIMINATE THE SOURCE OF WASTE WATER.
- WASTES GENERATED BY CONSTRUCTION ACTIVITIES (I.E. CONSTRUCTION MATERIALS SUCH AS PAINTS, SOLVENTS, FUELS, CONCRETE, WOOD, ETC) MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS. HAZARDOUS AND TOXIC SUBSTANCES ARE USED ON VIRTUALLY ALL CONSTRUCTION SITES. GOOD MANAGEMENT OF THESE SUBSTANCES IS ALWAYS NEEDED.
- 7. NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED OR BURNED ON-SITE
- 8. HANDLING CONSTRUCTION CHEMICALS: MIXING, PUMPING, TRANSFERRING OR OTHER HANDLING OF CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
- EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HRS. OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER. SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS MAY APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVE GROUND TANK OF 660 GALLONS OR MORE, ACCUMULATIVE ABOVE GROUND STORAGE OF 1330 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE CONTAMINATED SOILS MUST BE PROPERLY DISPOSED OF IN ACCORDANCE WITH LOCAL GOVERNING AUTHORITY REGULATIONS. SPCC PLAN AND APPROVALS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- 10. CONTAMINATED SOILS: IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID. ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LAND FILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION / DEMOLITION DEBRIS LAND FILL). NOTE THOSE STORM WATER RUNOFFS ASSOCIATED WITH CONTAMINATED SOILS ARE NOT BE AUTHORIZED UNDER CURRENT REGULATIONS OF CONSTRUCTION ACTIVITIES.
- 11. CONTRACTOR SHALL TAKE PREVENTIVE MEASURES FOR WATER DISCHARGES FROM CONTAMINATED SOILS BY ANY MEANS POSSIBLE, INCLUDING THE FOLLOWING:
- 11.1. THE USE OF BERMS, TRENCHES, AND PITS TO COLLECT CONTAMINATED RUNOFF AND PREVENT DISCHARGES.
- 11.2. PUMPING RUNOFF INTO A SANITARY SEWER (WITH PRIOR WRITTEN APPROVAL OF THE SANITARY SEWER SERVICE OPERATOR) OR INTO A CONTAINER FOR TRANSPORT TO AN APPROPRIATE TREATMENT/DISPOSAL FACILITY.
- 11.3. COVERING AREAS OF CONTAMINATION WITH TARPS OR OTHER METHODS THAT PREVENT STORMWATER FROM COMING INTO CONTACT WITH CONTAMINATED MATERIALS.

# TEMPORARY SEEDING

- 1. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.
- 2. TEMPORARY SEEDING / STABILIZATION SHALL BE APPLIED WITHIN THE FOLLOWING TIME FRAMES FOR VARIOUS AREAS OF THE SITE:
- 2.1. ANY DISTURBED AREA WITHIN 50 FEET OF A WATERCOURSE AND NOT AT FINAL GRADE SHALL BE SEEDED AND MULCHED WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE, IF THAT AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
- 2.2. ALL CONSTRUCTION ACTIVITIES IN ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES THAT WILL BE IDLE FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A WATERCOURSE SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE IN THE AREA.
- 2.3. DISTURBED AREAS THAT WILL BE IDLE OVER THE WINTER SHALL BE SEEDED AND MULCHED PRIOR TO NOVEMBER 1.
- 3. THE SEED BED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHOULD NOT BE POSTPONED IF IDEAL SEED BED PREPARATION IS NOT POSSIBLE.
- 4. TEMPORARY VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION, WHICH MAY REQUIRE USE OF SOIL AMENDMENTS. BASE RATES FOR LIME AND FERTILIZER SHALL BE USED.
- 5. ALL SEED MIXES AND SEEDING RATES USED SHALL BE APPROVED BY THE LOCAL GOVERNING AUTHORITY AND THE OWNER.
- SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED. THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
- 7. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH, WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION. IF MULCH IS USED, FOLLOW THE REQUIREMENTS AND INSTRUCTIONS IN THE MULCH APPLICATION.

1. MULCH AND OTHER APPROPRIATE VEGETATIVE PRACTICES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREA IS TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 21 DAYS OR ON AREAS AND PORTIONS OF THE SITE WHICH CAN BE BROUGHT TO FINAL GRADE.

MULCH SHALL CONSIST OF ONE OF THE FOLLOWING:

- 2.1. STRAW SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/AC. OR 90 LB./1,000 SQ. FT. (TWO TO THREE BALES) THE STRAW MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ. FT. SECTIONS AND PLACE TWO 45-LB BALES OF STRAW IN EACH SECTION
- WOOD CELLULOSE FIBER SHOULD BE USED AT 2,000 LB.AC, OR 46 LB/1,000 SQ. FT. 2.3. ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS AND ROLLED EROSION CONTROL PRODUCTS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD MULCH/CHIPS APPLIED AT 10-20 TONS/AC.
- 3. MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR RUNOFF. THE FOLLOWING ARE ACCEPTABLE METHODS FOR ANCHORING MULCH.
- 3.1. USE A DISK, CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT BE LEFT GENERALLY LONGER THAN 6 INCHES.
- 3.2. USE MULCH NETTINGS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, FOLLOWING ALL PLACEMENT AND ANCHORING REQUIREMENTS. USE IN AREAS OF WATER CONCENTRATION AND STEEP SLOPES TO HOLD MULCH IN PLACE. 3.3. FOR STRAW MULCH, SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70,
- PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE SUCH A MANNER WHERE THERE IS NO CONTACT WITH WATERS OF THE STATE.
- WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LB/AC. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LB/100 GAL. OF WOOD CELLULOSE FIBER.

# DUST CONTROL NOTES

- DUST CONTROL SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. IF POSSIBLE GRADING SHALL BE DONE BY PHASING IN ORDER TO MINIMIZE THE AMOUNT OF LAND DISTURBANCE AT ONE TIME. IF PHASING IS NOT AN OPTION, DUST SHALL BE CONTROLLED WITH WATER DURING FARTHWORK OPERATIONS, AFTER FARTHWORK OPERATIONS, THE EXPOSED SOILS SHALL BE COVERED WITH STRAW OR MULCH UNTIL SEEDED.
- 2. DUST CONTROL OR DUST SUPPRESSANTS MAY BE USED TO PREVENT NUISANCE CONDITIONS WHEN APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION. WHEN USED, SUPPRESSANTS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IN A MANNER, WHICH PREVENTS A DISCHARGE TO WATERS OF THE STATE. SUFFICIENT DISTANCE MUST BE PROVIDED BETWEEN APPLICATIONS AND NEARBY BRIDGES, CATCH BASINS, AND OTHER WATERWAYS. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN RAIN IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. OIL MAY NOT BE APPLIED FOR DUST CONTROL.
- 3. SUGGESTED METHODS OF CONSTRUCTION DUST CONTROL MAY INCLUDE THE FOLLOWING: 3.1. CONSTRUCTION SEQUENCING AND DISTURBING ONLY SMALL AREAS AT A TIME CAN GREATLY REDUCE PROBLEMATIC DUST FROM THE SITE. IF LAND MUST BE DISTURBED, ADDITIONAL TEMPORARY STABILIZATION MEASURES SHOULD BE CONSIDERED PRIOR TO DISTURBANCES.
- 3.2. APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 14 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS.
- 3.3. SPRAY DISTURBED SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS MAY BE UTILIZED ACCORDING TO MANUFACTURERS INSTRUCTIONS.
- 3.4. GRADED ROADWAYS AND OTHER SUITABLE AREAS MAY BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
- 3.5. EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED TO THE EXTENT POSSIBLE. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHTS TO CONTROL AIR CURRENTS AND BLOWING SOIL.
- 3.6. WHEN TEMPORARY DUST CONTROL MEASURES ARE USED; REPETITIVE TREATMENT
- SHOULD BE APPLIED AS NEED TO ACCOMPLISH SATISFACTORY CONTROL. PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED, UTILIZING A STREET SWEEPER OR BUCKET-TYPE ENDLOADER OR SCRAPER.

#### DEWATERING

DEWATERING REFERS TO THE ACT OF REMOVING AND DISCHARGING WATER FROM EXCAVATED AREAS ON CONSTRUCTION SITES, UTILITY LINE CONSTRUCTION OR FROM SEDIMENT TRAPS OR BASINS ON CONSTRUCTION SITES. GIVEN THE UNIQUE CONDITIONS AT ANY PARTICULAR CONSTRUCTION SITE, ANY OR ALL OF THE PRACTICES MAY APPLY. IN ALL CASES, EVERY EFFORT SHALL BE MADE TO ELIMINATE SEDIMENT POLLUTION ASSOCIATED WITH DEWATERING.

#### PRACTICES FOR DEWATERING EXCAVATED AREAS

- 1. PUMPING OF WATER TO AN EXISTING SEDIMENT BASIN OR TRAP IN WHICH THE ENTIRE VOLUME OF WATER FROM THE AREA TO BE DEWATERED CAN BE CONTAINED WITHOUT DISCHARGE TO RECEIVING WATERS.
- 2. PUMPING OF WATER TO AN EXISTING SEDIMENT BASIN OR TRAP SUCH THAT THE ENTIRE VOLUME OF WATER FROM THE AREA TO BE DEWATERED CAN BE MANAGED WITHOUT EXCEEDING THE DESIGN OUTFLOW FROM THE SEDIMENT CONTROL STRUCTURE.
- 3. USE OF A STRAW BALE/SILT FENCE PIT OR TRAP AS DESCRIBED HEREIN AND APPROVED BY THE LOCAL GOVERNING AUTHORITY.
- 4. PUMPING WATER THROUGH A GEOTEXTILE BAG MADE SPECIFICALLY FOR THIS PURPOSE.
- 5. A WELL-VEGETATIVE FILTER STRIP, CAPABLE OF WITHSTANDING THE VELOCITY OF DISCHARGED WATER WITHOUT ERODING, INCLUDING THE INSTALLATION OF ENERGY DISSIPATION (HAYBALES, RIPRAP OR SHEET OF PLYWOOD) AT THE PUMP DISCHARGE.
- 6. USE A SUMP PIT TO REDUCE THE PUMPING OF MUD. DEWATERING OF SEDIMENT TRAPS AND BASINS. IN ALL CASES, WATER REMOVED FROM TRAPS

AND BASINS SHALL BE DISCHARGED SO THAT IT PASSES THROUGH A SEDIMENT CONTROL DEVICE APPROVED BY THE LOCAL GOVERNING AUTHORITY PRIOR TO ENTERING RECEIVING WATERS. PRACTICES FOR DEWATERING OF TRAPS AND BASINS MAY INCLUDE SOME OR ALL OF THE FOLLOWING AS MAY BE APPROVED AND APPLICABLE. IN ALL CASES, THE DEWATERING OPERATIONS UTILIZED MUST BE CONTINUOUSLY MONITORED BY THE CONTRACTOR.

#### USE OF A STRAW BALE/SILT FENCE PIT OR TRAP.

- 1.1. AN EXCAVATED BASIN (APPLICABLE TO "STRAW BALE/SILT FENCE PIT") MAY BE LINED WITH FILTER FABRIC TO HELP REDUCE SCOUR AND TO PREVENT EROSION OF SOIL FROM WITHIN THE STRUCTURE. IT MAY ALSO BE HELPFUL TO DIRECT THE DISCHARGE ONTO A HAY OR STRAW BALE OR RIPRAP.
- 1.2. MEASURES SHALL CONSIST OF STRAW BALES, SILT FENCE AND A STONE OUTLET CONSISTING OF A COMBINATION OF 4-8 INCH RIPRAP AND ½ TO 2 INCH AGGREGATE AND A WET STORAGE PIT ORIENTED AS SHOWN IN DRAWING.
- 1.3. THE EXCAVATED AREA SHOULD BE A MINIMUM OF 3 FEET BELOW THE BASE OF THE PERIMETER MEASURES (STRAW BALES OR SILT FENCE)
- 1.4. ONCE THE WATER LEVEL NEARS THE CREST OF THE STONE WEIR (EMERGENCY OVERFLOW), THE PUMP MUST BE STOPPED WHILE THE STRUCTURE DRAINS DOWN TO THE ELEVATION OF THE WET STORAGE.
- 1.5. THE WET STORAGE PIT MAY BE DEWATERED ONLY AFTER A MINIMUM OF 6 HOURS OF SEDIMENT SETTLING TIME. THIS EFFLUENT SHOULD BE PUMPED ACROSS A WELL-VEGETATED AREA OR THROUGH A SILT FENCE PRIOR TO ENTERING A
- 1.6. ONCE THE DEVICE HAS BEEN REMOVED, GROUND CONTOURS SHALL BE RETURNED TO ORIGINAL CONDITION.
- PUMPING WATER THROUGH A GEOTEXTILE BAG MADE SPECIFICALLY FOR THIS PURPOSE. 2.1. THE BAG SHALL BE INSTALLED ON A VERY SLIGHT SLOPE SO INCOMING WATER FLOWS
- DOWNHILL THROUGH THE BAG WITHOUT CREATING MORE EROSION. 2.2. THE INLET OPENING OF THE DEWATERING DEVICE SHALL HAVE A FILL SPOUT LARGE ENOUGH TO ACCOMMODATE THE DISCHARGE HOSE AND SHALL USE TWO STAINLESS STEEL STRAPS TO SECURE THE HOSE AND PREVENT PUMPED WATER FROM ESCAPING WITHOUT BEING FILTERED.
- THE BAG SHOULD BE PLACED ON AN AGGREGATE OR HAY BALE BED TO MAXIMIZE
- WATER FLOW THROUGH THE ENTIRE SURFACE AREA OF THE BAG. 2.4. THE FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR PASS WATER AT A REASONABLE RATE.
- 2.5. FLOW RATES VARY DEPENDING ON THE SIZE OF THE DEWATERING DEVICE, AMOUNT OF SEDIMENT DISCHARGED INTO THE DEWATERING DEVICE, THE TYPE OF GROUND, ROCK, OR OTHER SUBSTANCE UNDER THE BAG AND THE DEGREE OF THE SLOPE ON WHICH THE BAG LIES. THE FILTER BAG SHOULD BE SIZED TO ACCOMMODATE THE ANTICIPATED FLOW RATES FROM THE TYPE OF PUMP USED. IN ALL CASES FOLLOW THE MANUFACTURERS RECOMMENDATIONS FOR PUMPING FLOW RATES.
- THE FILTER BAG CAN BE LEFT IN PLACE AFTER CUTTING THE TOP OFF AND SEEDING AND MULCHING THE ACCUMULATED SEDIMENT OR REMOVED AND DISPOSED OF OFFSITE IN AN APPROVED LANDFILL.
- MANUFACTURER. ALL APPLICATIONS OF SYNTHETIC BINDERS MUST BE CONDUCTED IN 3. A WELL-VEGETATIVE FILTER STRIP, CAPABLE OF WITHSTANDING THE VELOCITY OF DISCHARGED WATER WITHOUT ERODING, INCLUDING THE INSTALLATION OF ENERGY DISSIPATION (HAYBALES, RIPRAP OR SHEET OF PLYWOOD) AT THE PUMP DISCHARGE. SUCH OTHER METHODS AS MAY BE APPROVED BY THE LOCAL GOVERNING AUTHORITY.
  - 4. REGARDLESS OF THE TYPE OF TREATMENT, ALWAYS USE A FLOATING SUCTION HOSE TO PUMP THE CLEANER WATER FROM THE TOP OF THE POND. AS THE CLEANER WATER IS PUMPED, THE SUCTION HOSE WILL LOWER AND EVENTUALLY ENCOUNTER SEDIMENT-LADEN WATER. AT THIS POINT CEASE PUMPING OPERATIONS AND REMOVE THE REMAINDER OF THE TRAPPED SEDIMENT WITH MACHINERY. EVEN WHEN PUMPING FROM THE TOP OF THE WATER COLUMN, PROVISIONS MUST STILL BE MADE TO FILTER WATER AS REQUIRED IN THIS SECTION PRIOR TO DISCHARGING TO A STREAM. DURING THE DEWATERING, PERSONNEL SHOULD BE ASSIGNED TO MONITOR PUMPING OPERATIONS AT ALL TIMES TO ENSURE THAT SEDIMENT POLLUTION IS ABATED. PUMPING SEDIMENT-LADEN WATER INTO THE WATERS OF THE STATE WITHOUT FILTRATION IS PROHIBITED.
  - 5. THE DEWATERING DEVICE MUST BE SIZED (AND OPERATED) TO ALLOW PUMPED WATER TO FLOW THROUGH THE FILTERING APPARATUS WITHOUT EXCEEDING THE CAPACITY OF THE STRUCTURE.



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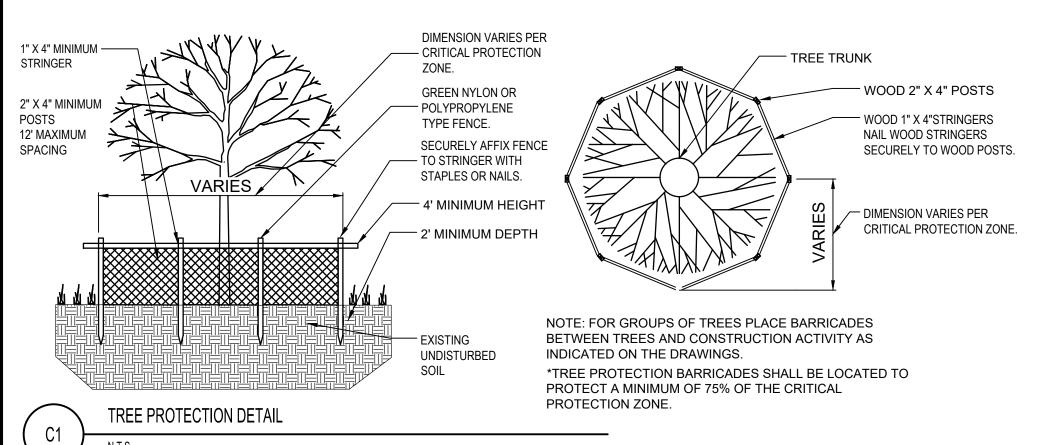
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SWPPP AMENDMENT LOG PROJECT NAME: SWPPP CONTACT AMENDMENT DATE OF PREPARED BY DESCRIPTION OF THE AMENDMENT **AMENDMENT** No. [NAME(S) AND TITLE] \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ **GRADING AND STABILIZATION LOG** PROJECT NAME: SWPPP CONTACT: DATE TEMPORARY GRADING STABILIZATION GRADING OR DESCRIPTION OF THE STABILIZATION MEASURE AND LOCATION AND DESCRIPTION ACTIVITY | PERMANENT ACTIVITY MEASURES OF THE GRADING ACTIVITY LOCATION CEASED INITIATED INITIATED | ACTIVITY

COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS MULTI-FILAMENT MULTI-FILAMENT MATERIAL TYPE | 3 mil HDPE | 5 mil HDPE | 5 mil HDPE | POLYPROPYLENE | POLYPROPYLENE | POLYPROPYLENE (MFPP) PHOTO-MATERIAL PHOTO-PHOTO-PHOTO-BIO-CHARACTERISTICS DEGRADABLE DEGRADABLE DEGRADABLE DEGRADABLE **DEGRADABLE** SOCK DIAMETERS 18" 24" 24" 24" MESH OPENING TENSILE STRENGTH 26 PSI 26 PSI 202 PSI ULTRAVIOLET STABILITY % AT 1000 23% AT 100% AT 100% AT ORIGINAL STRENGTH HR. 1000 HR. 1000 HR. 1000 HR. (ASTM G-155) MINIMUM **FUNCTIONAL** MONTHS MONTHS MONTHS YEARS LONGEVITY TWO-PLY SYSTEMS HDPE BIAXIAL NET **CONTINUOUSLY WOUND** INNER CONTAINMENT **FUSION-WELDED JUNCTURES** 3/4" X 3/4" MAX. APERTURE SIZE COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER & NON-WOVEN FLEECE MECHANICALLY OUTER FUSED VIA NEEDLE PUNCH) FILTRATION MESH 3/16" MAX. APERTURE SIZI SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS COMPOST SHALL MEET THE FOLLOWING STANDARDS: ORGANIC MATTER CONTENT 80% - 100% (DRY WEIGHT BASIS) ORGANIC PORTION FIBROUS AND ELONGATED MOISTURE CONTENT 35% - 55% PARTICLE SIZE 98% PASS THROUGH 1" SCREEN SOLUBLE SALT CONCENTRATION 5.0 dS MAXIMUM CONCRETE BLOCK OR SAND BAG AT 10' - 2"x2" WOODEN STAKE (EXPOSED 3" TO 4" ABOVE O/C (ONLY WHEN STAKES CANNOT BE SACKVATOR PLACED USED) COMPOST FILTER UNDISTURBED GROUND GROUND MIN. 12" CONCRETE BLOCK-NOT TO BE USED WHERE IT COULD - 2"x2" WOODEN STAKE INTERFERE WITH (EXPOSED 3" TO 4" ABOVE VEHICULAR TRAFFIC. SOCK) AT 10' O/C

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT.

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TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

EX. CONTOURS UNDISTURBED 18" MIN.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH ½ INCH STORM RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS

BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S

RECOMMENDATIONS. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK

FLOW CROSS SECTION WIRE AND GEOTEXTILE MUST LAY FLAT AGAINST - WIRE SCREEN └- GEOTEXTILE

INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.

CONSTRUCT A WOODEN FRAME OF 2-BY-4-IN. CONSTRUCTION-GRADE LUMBER. THE END SPACERS SHALL BE A MINIMUM OF 1 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.

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.

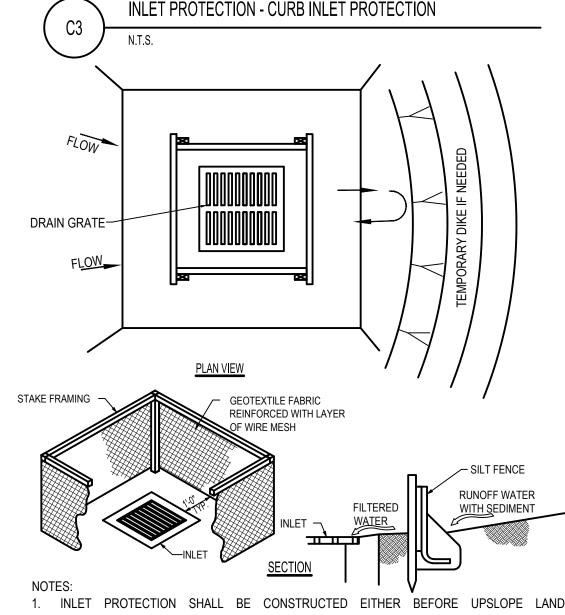
GEOTEXTILE CLOTH SHALL HAVE AN EQUIVALENT OPENING SIZE (EOS) OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE AT LEAST THE SAME SIZE AS THE WIRE MESH. 5. THE WIRE MESH AND GEOTEXTILE CLOTH SHALL BE FORMED TO THE CONCRETE GUTTER AND

AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET AND SECURELY FASTENED TO THE 2-BY-4-IN. FRAME. 6. TWO-INCH STONE SHALL BE PLACED OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER

AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE

THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE STONE AND/OR

GEOTEXTILE REPLACED WHEN CLOGGED WITH SEDIMENT.



1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL

2. SILT FENCE SHALL BE GEOTEXTILE FABRIC, PER STATE'S DEPARTMENT OF

TRANSPORTATION STANDARDS, AND SHOULD BE CUT FROM A CONTINUOUS ROLL TO AVOID JOINTS. 3. STAKES SHALL BE 1" x 2" WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET. STAKES SHALL BE SPACED AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND SECURELY DRIVEN INTO THE GROUND (MINIMUM OF 8

INCHES). THE TOP OF THE FRAME SHALL BE AT LEAST 6 IN. BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. 4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND

FASTENED SECURELY TO THE FRAME. 5. THE SILT FENCE SHALL BE STAPLED WITH HEAVY DUTY WIRE STAPLES AT LEAST 1/2 INCH LONG, TO THE WOODEN STAKES, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE HEIGHT OF THE FILTER BARRIER SHALL BE A MINIMUM OF 15 INCHES AND

SHALL NOT EXCEED 18 INCHES (PLATE 1.08B) 6. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE

CLOTH ARE NOT FASTENED TO THE SAME POST. 7. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE STAKES.

8. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6 IN. LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.

A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6 IN. HIGHER THAN THE TOP OF THE FRAME.

MAINTENANCE: SILT FENCE SHOULD BE INSPECTED REGULARLY AND FREQUENTLY AS WELL AS AFTER EACH RAINFALL EVENT TO ENSURE THAT THEY ARE INTACT AND THERE ARE NO GAPS AT THE FENCE-GROUND INTERFACE OR TEARS ALONG THE LENGTH OF THE FENCE. IF GAPS OR TEARS ARE FOUND, THEY SHOULD BE REPAIRED OR THE FABRIC REPLACED IMMEDIATELY ACCUMULATED SEDIMENTS SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE. SEDIMENT REMOVAL SHOULD OCCUR MORE FREQUENTLY IF ACCUMULATED SEDIMENT IS CREATING NOTICEABLE STRAIN ON THE FABRIC AND THERE IS THE POSSIBILITY OF THE FENCE FAILING FROM A SUDDEN STORM EVENT. WHEN THE SILT FENCE IS REMOVED, THE ACCUMULATED SEDIMENT SHOULD BE REMOVED.

INLET PROTECTION - SILT BARRIER

1) SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

2) ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.

TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER

4) WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.

5) WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FT. (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 IN. ABOVE THE ORIGINAL

7) THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP,

8) POSTS SHALL BE A MINIMUM OF 5 FEET LONG, 2 INCHES IN DIAMETER AND SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND. WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.

9) THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.

10) THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 IN. OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6 IN. DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.

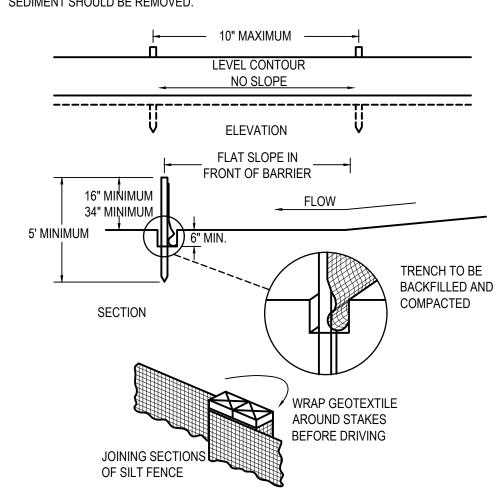
11) WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.

12) THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

13) SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.

14) SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: A) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, B) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR C) OTHER PRACTICES SHALL BE INSTALLED.

SILT FENCE SHOULD BE INSPECTED REGULARLY AND FREQUENTLY AS WELL AS AFTER EACH RAINFALL EVENT TO ENSURE THAT THEY ARE INTACT AND THERE ARE NO GAPS AT THE FENCE-GROUND INTERFACE OR TEARS ALONG THE LENGTH OF THE FENCE. IF GAPS OR TEARS ARE FOUND. THEY SHOULD BE REPAIRED OR THE FABRIC REPLACED IMMEDIATELY ACCUMULATED SEDIMENTS SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE. SEDIMENT REMOVAL SHOULD OCCUR MORE FREQUENTLY IF ACCUMULATED SEDIMENT IS CREATING NOTICEABLE STRAIN ON THE FABRIC AND THERE IS THE POSSIBILITY OF THE FENCE FAILING FROM A SUDDEN STORM EVENT. WHEN THE SILT FENCE IS REMOVED, THE ACCUMULATED SEDIMENT SHOULD BE REMOVED.



CRITERIA FOR GEOTEXTILE FABRIC SILT FENCE, PER CURRENT STATE'S DOT SPECIFICATIONS.

FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LB. MINIMUM	ASTM D 4632
MINIMUM BURST STRENGTH	200 PSI MINIMUM	
MINIMUM PERMITTIVITY	1x10-2sec-1	ASTM D 4491
APPARENT OPENING SIZE	AOS < 0.84 mm	ASTM D 4751
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4335
MAXIMUM ELONGATION AT 60 LBS.	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS (220N)	ASTM D 4833
MINIMUM TEAR STRENGTH	40 LBS (180N)	ASTM D 4533

SILT FENCE



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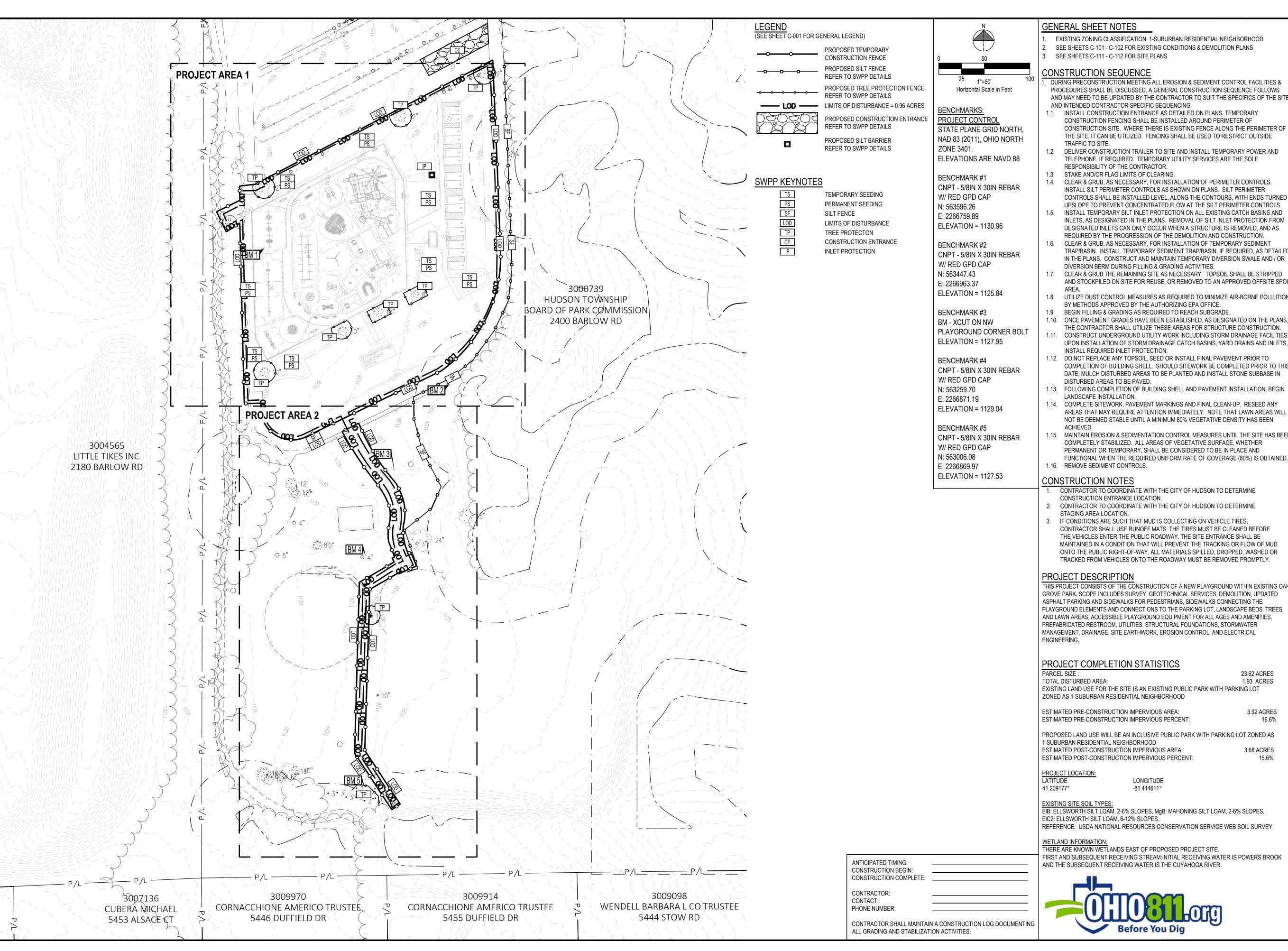


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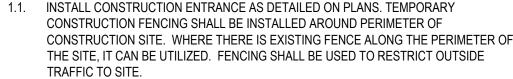


#### GENERAL SHEET NOTES

- EXISTING ZONING CLASSIFICATION: 1-SUBURBAN RESIDENTIAL NEIGHBORHOOD
- SEE SHEETS C-101 C-102 FOR EXISTING CONDITIONS & DEMOLITION PLANS

# SEE SHEETS C-111 - C-112 FOR SITE PLANS

DURING PRECONSTRUCTION MEETING ALL EROSION & SEDIMENT CONTROL FACILITIES & PROCEDURES SHALL BE DISCUSSED. A GENERAL CONSTRUCTION SEQUENCE FOLLOWS AND MAY NEED TO BE UPDATED BY THE CONTRACTOR TO SUIT THE SPECIFICS OF THE SITE AND INTENDED CONTRACTOR SPECIFIC SEQUENCING.



- DELIVER CONSTRUCTION TRAILER TO SITE AND INSTALL TEMPORARY POWER AND TELEPHONE, IF REQUIRED. TEMPORARY UTILITY SERVICES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- STAKE AND/OR FLAG LIMITS OF CLEARING. CLEAR & GRUB, AS NECESSARY, FOR INSTALLATION OF PERIMETER CONTROLS.
- INSTALL SILT PERIMETER CONTROLS AS SHOWN ON PLANS. SILT PERIMETER CONTROLS SHALL BE INSTALLED LEVEL, ALONG THE CONTOURS, WITH ENDS TURNED UPSLOPE TO PREVENT CONCENTRATED FLOW AT THE SILT PERIMETER CONTROLS. INSTALL TEMPORARY SILT INLET PROTECTION ON ALL EXISTING CATCH BASINS AND
- INLETS, AS DESIGNATED IN THE PLANS. REMOVAL OF SILT INLET PROTECTION FROM DESIGNATED INLETS CAN ONLY OCCUR WHEN A STRUCTURE IS REMOVED, AND AS REQUIRED BY THE PROGRESSION OF THE DEMOLITION AND CONSTRUCTION. CLEAR & GRUB, AS NECESSARY, FOR INSTALLATION OF TEMPORARY SEDIMENT TRAP/BASIN. INSTALL TEMPORARY SEDIMENT TRAP/BASIN, IF REQUIRED, AS DETAILED
- DIVERSION BERM DURING FILLING & GRADING ACTIVITIES. CLEAR & GRUB THE REMAINING SITE AS NECESSARY. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR REUSE, OR REMOVED TO AN APPROVED OFFSITE SPOIL
- UTILIZE DUST CONTROL MEASURES AS REQUIRED TO MINIMIZE AIR-BORNE POLLUTION BY METHODS APPROVED BY THE AUTHORIZING EPA OFFICE.
- BEGIN FILLING & GRADING AS REQUIRED TO REACH SUBGRADE ONCE PAVEMENT GRADES HAVE BEEN ESTABLISHED, AS DESIGNATED ON THE PLANS, THE CONTRACTOR SHALL UTILIZE THESE AREAS FOR STRUCTURE CONSTRUCTION. CONSTRUCT UNDERGROUND UTILITY WORK INCLUDING STORM DRAINAGE FACILITIES.
- UPON INSTALLATION OF STORM DRAINAGE CATCH BASINS, YARD DRAINS AND INLETS. INSTALL REQUIRED INLET PROTECTION. 1.12. DO NOT REPLACE ANY TOPSOIL, SEED OR INSTALL FINAL PAVEMENT PRIOR TO COMPLETION OF BUILDING SHELL. SHOULD SITEWORK BE COMPLETED PRIOR TO THIS DATE, MULCH DISTURBED AREAS TO BE PLANTED AND INSTALL STONE SUBBASE IN
- DISTURBED AREAS TO BE PAVED. 1.13. FOLLOWING COMPLETION OF BUILDING SHELL AND PAVEMENT INSTALLATION, BEGIN
- 1.14. COMPLETE SITEWORK, PAVEMENT MARKINGS AND FINAL CLEAN-UP. RESEED ANY AREAS THAT MAY REQUIRE ATTENTION IMMEDIATELY. NOTE THAT LAWN AREAS WILL NOT BE DEEMED STABLE UNTIL A MINIMUM 80% VEGETATIVE DENSITY HAS BEEN
- MAINTAIN EROSION & SEDIMENTATION CONTROL MEASURES UNTIL THE SITE HAS BEEN COMPLETELY STABILIZED. ALL AREAS OF VEGETATIVE SURFACE, WHETHER PERMANENT OR TEMPORARY, SHALL BE CONSIDERED TO BE IN PLACE AND
- FUNCTIONAL WHEN THE REQUIRED UNIFORM RATE OF COVERAGE (80%) IS OBTAINED. 1.16. REMOVE SEDIMENT CONTROLS.

# **CONSTRUCTION NOTES**

CONTRACTOR TO COORDINATE WITH THE CITY OF HUDSON TO DETERMINE CONSTRUCTION ENTRANCE LOCATION.

- CONTRACTOR TO COORDINATE WITH THE CITY OF HUDSON TO DETERMINE STAGING AREA LOCATION.
- IF CONDITIONS ARE SUCH THAT MUD IS COLLECTING ON VEHICLE TIRES CONTRACTOR SHALL USE RUNOFF MATS. THE TIRES MUST BE CLEANED BEFORE THE VEHICLES ENTER THE PUBLIC ROADWAY. THE SITE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOW OF MUD ONTO THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO THE ROADWAY MUST BE REMOVED PROMPTLY.

# PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW PLAYGROUND WITHIN EXISTING OAK GROVE PARK. SCOPE INCLUDES SURVEY, GEOTECHNICAL SERVICES, DEMOLITION, UPDATED ASPHALT PARKING AND SIDEWALKS FOR PEDESTRIANS, SIDEWALKS CONNECTING THE PLAYGROUND ELEMENTS AND CONNECTIONS TO THE PARKING LOT, LANDSCAPE BEDS, TREES, AND LAWN AREAS, ACCESSIBLE PLAYGROUND EQUIPMENT FOR ALL AGES AND AMENITIES, PREFABRICATED RESTROOM, UTILITIES, STRUCTURAL FOUNDATIONS, STORMWATER MANAGEMENT, DRAINAGE, SITE EARTHWORK, EROSION CONTROL, AND ELECTRICAL

# PROJECT COMPLETION STATISTICS

23.62 ACRES 1.93 ACRES

EXISTING LAND USE FOR THE SITE IS AN EXISTING PUBLIC PARK WITH PARKING LOT ZONED AS 1-SUBURBAN RESIDENTIAL NEIGHBORHOOD

ESTIMATED PRE-CONSTRUCTION IMPERVIOUS AREA: 3.92 ACRES ESTIMATED PRE-CONSTRUCTION IMPERVIOUS PERCENT:

PROPOSED LAND USE WILL BE AN INCLUSIVE PUBLIC PARK WITH PARKING LOT ZONED AS 1-SUBURBAN RESIDENTIAL NEIGHBORHOOD 3.68 ACRES

ESTIMATED POST-CONSTRUCTION IMPERVIOUS AREA: ESTIMATED POST-CONSTRUCTION IMPERVIOUS PERCENT:

-81.414611°

# **EXISTING SITE SOIL TYPES:**

EIB: ELLSWORTH SILT LOAM, 2-6% SLOPES, MgB: MAHONING SILT LOAM, 2-6% SLOPES, EIC2: ELLSWORTH SILT LOAM, 6-12% SLOPES.

LONGITUDE

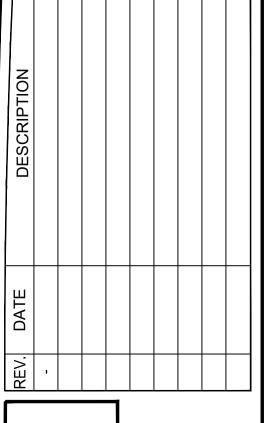
THERE ARE KNOWN WETLANDS EAST OF PROPOSED PROJECT SITE. FIRST AND SUBSEQUENT RECEIVING STREAM:INITIAL RECEIVING WATER IS POWERS BROOK AND THE SUBSEQUENT RECEIVING WATER IS THE CUYAHOGA RIVER.





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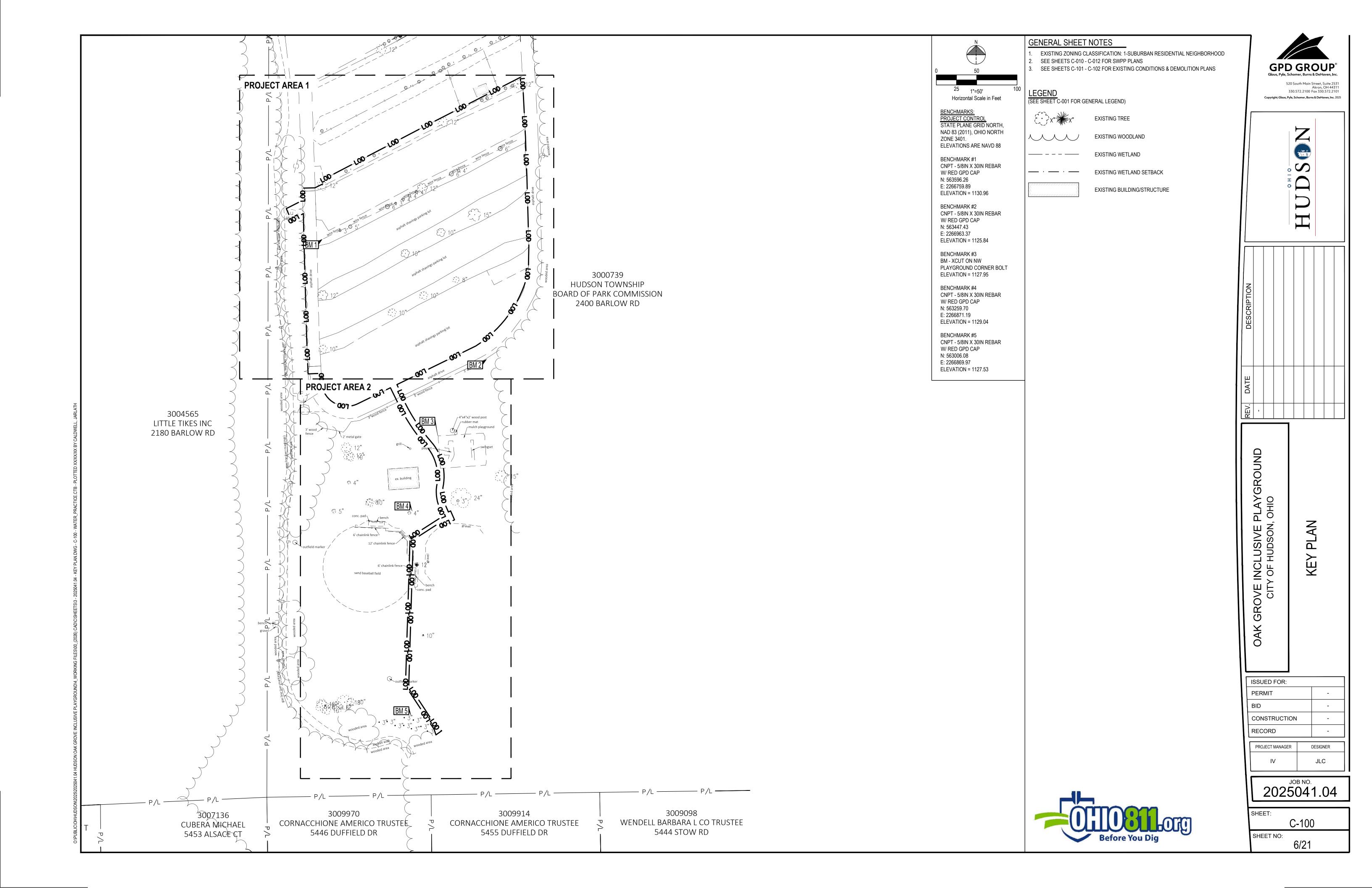
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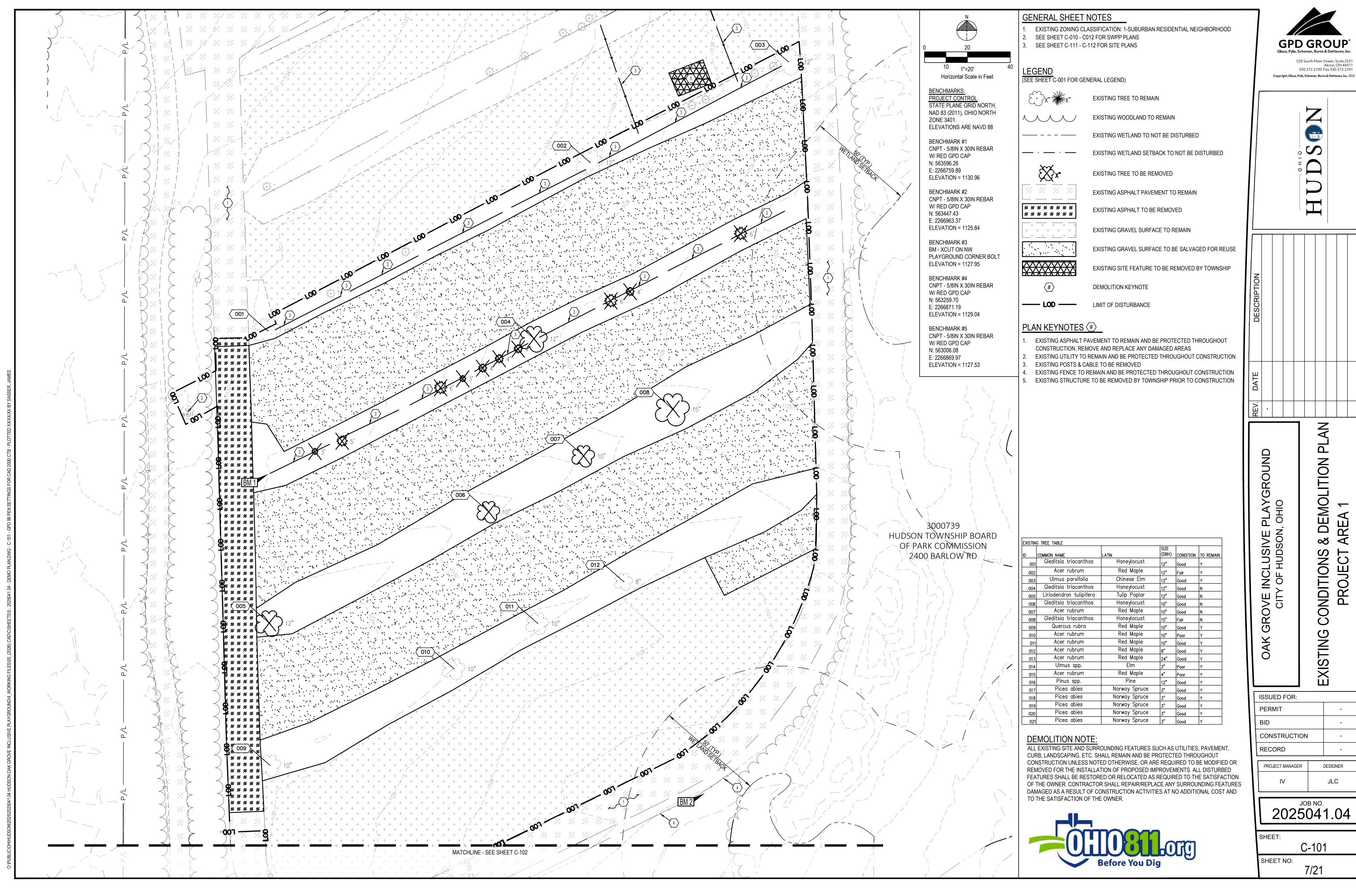
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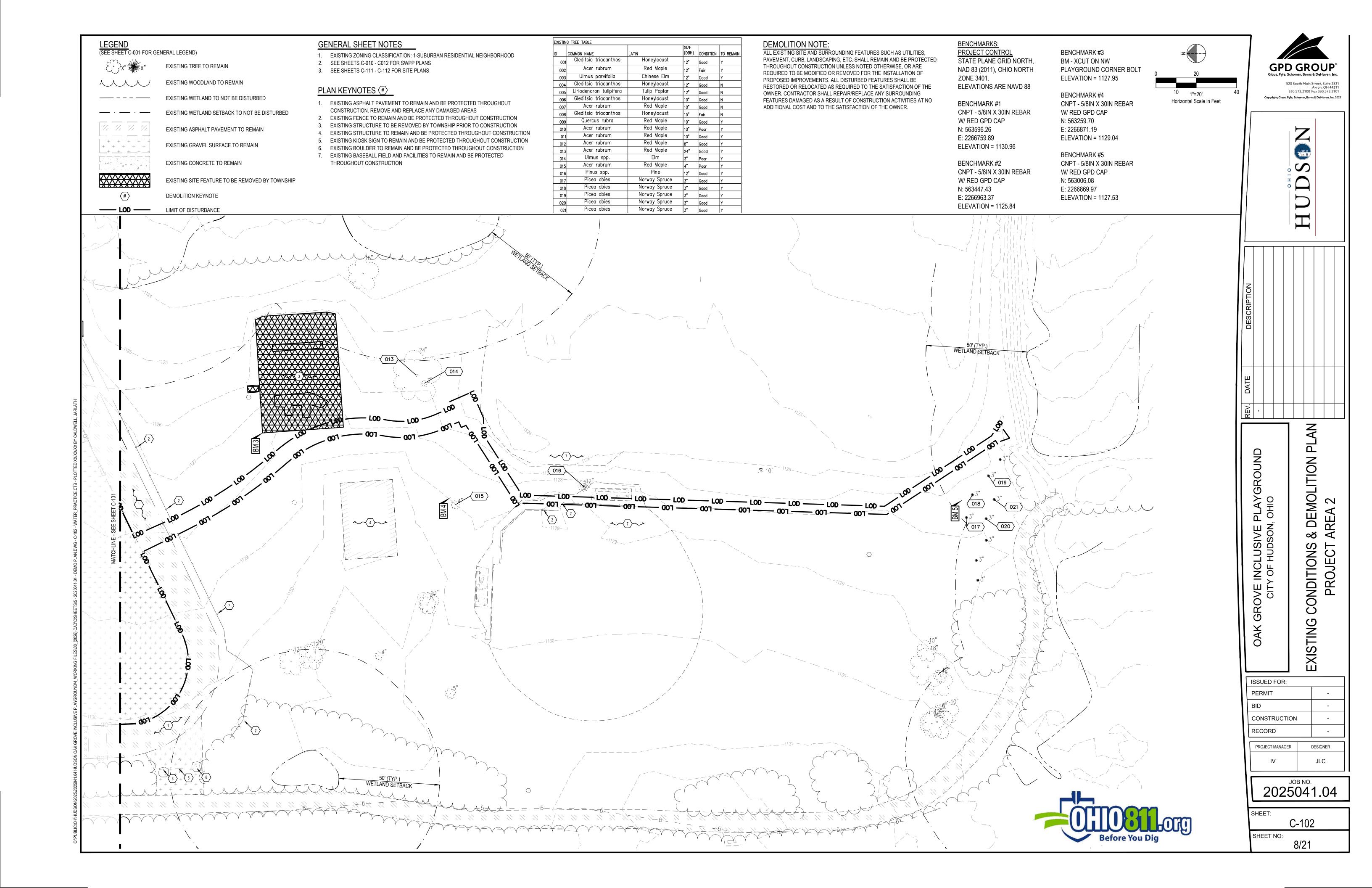
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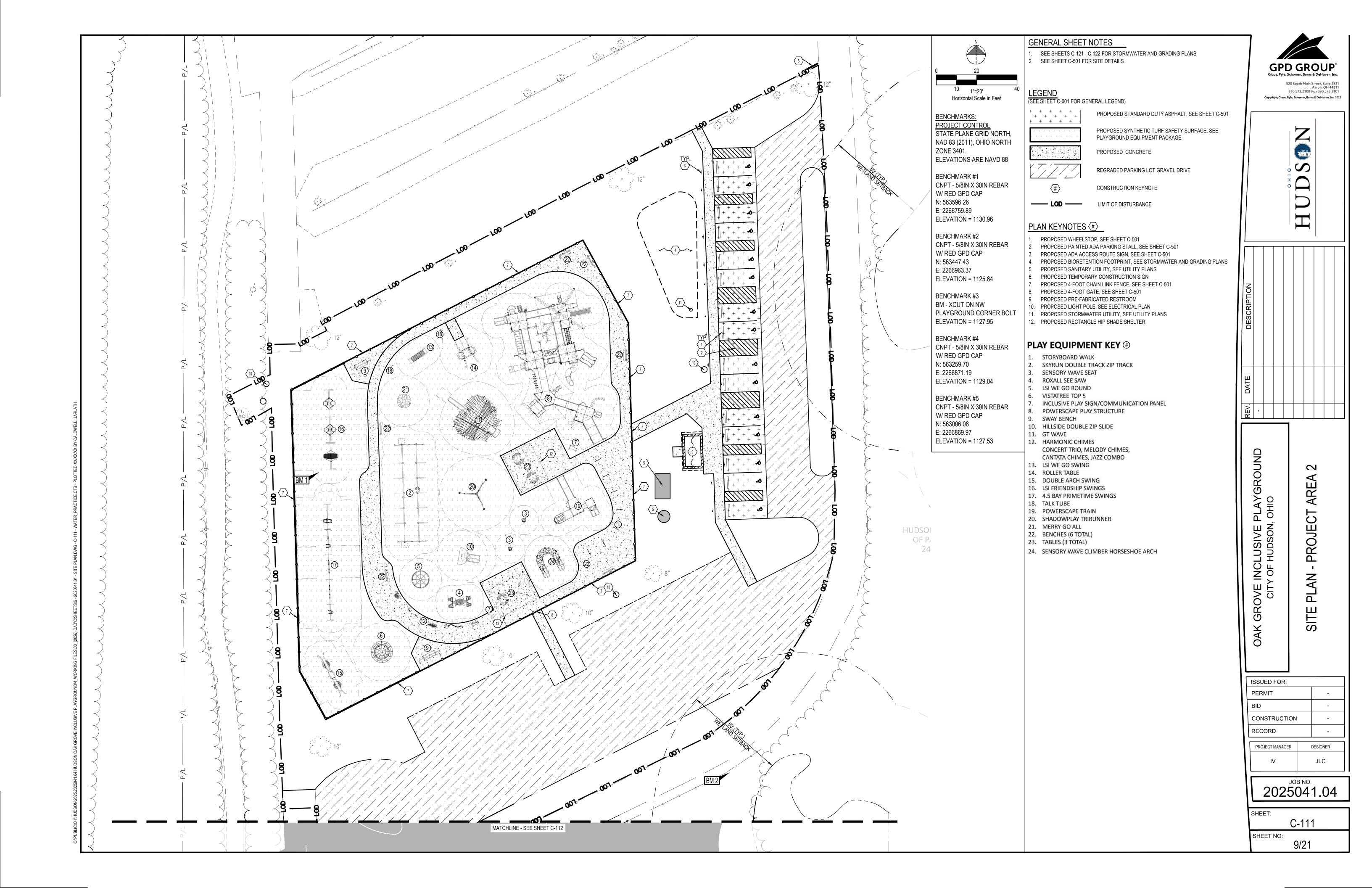
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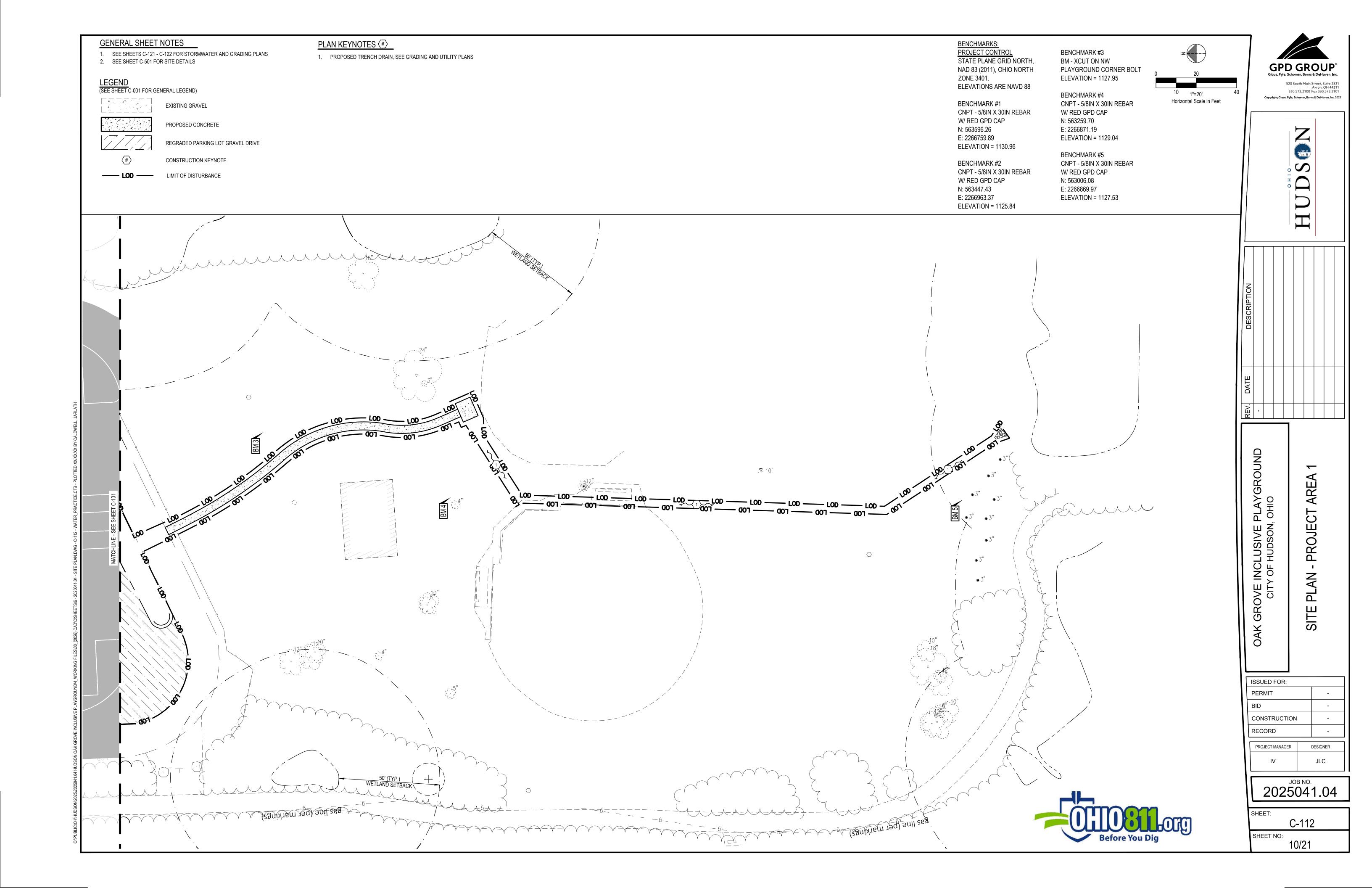


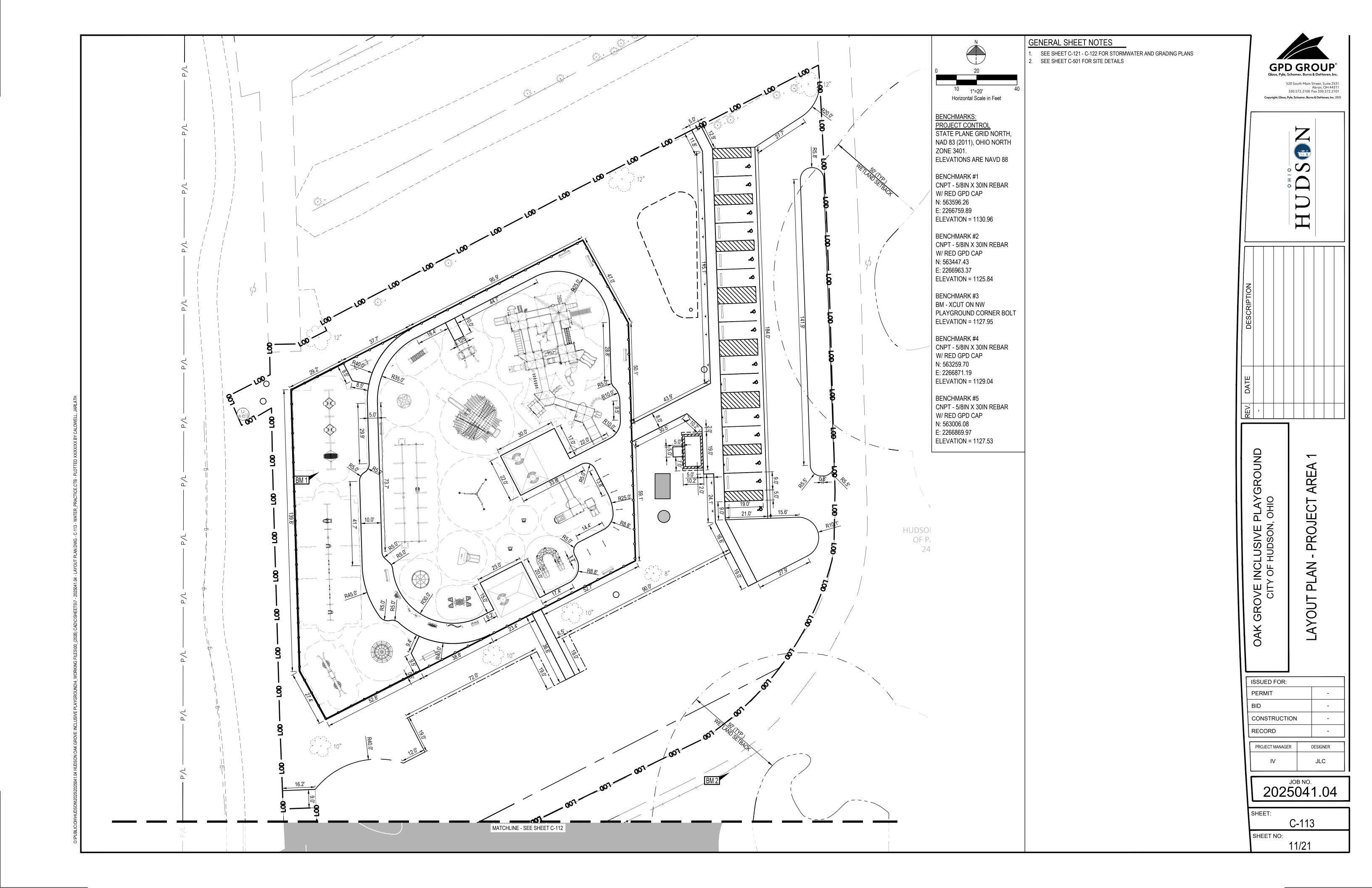


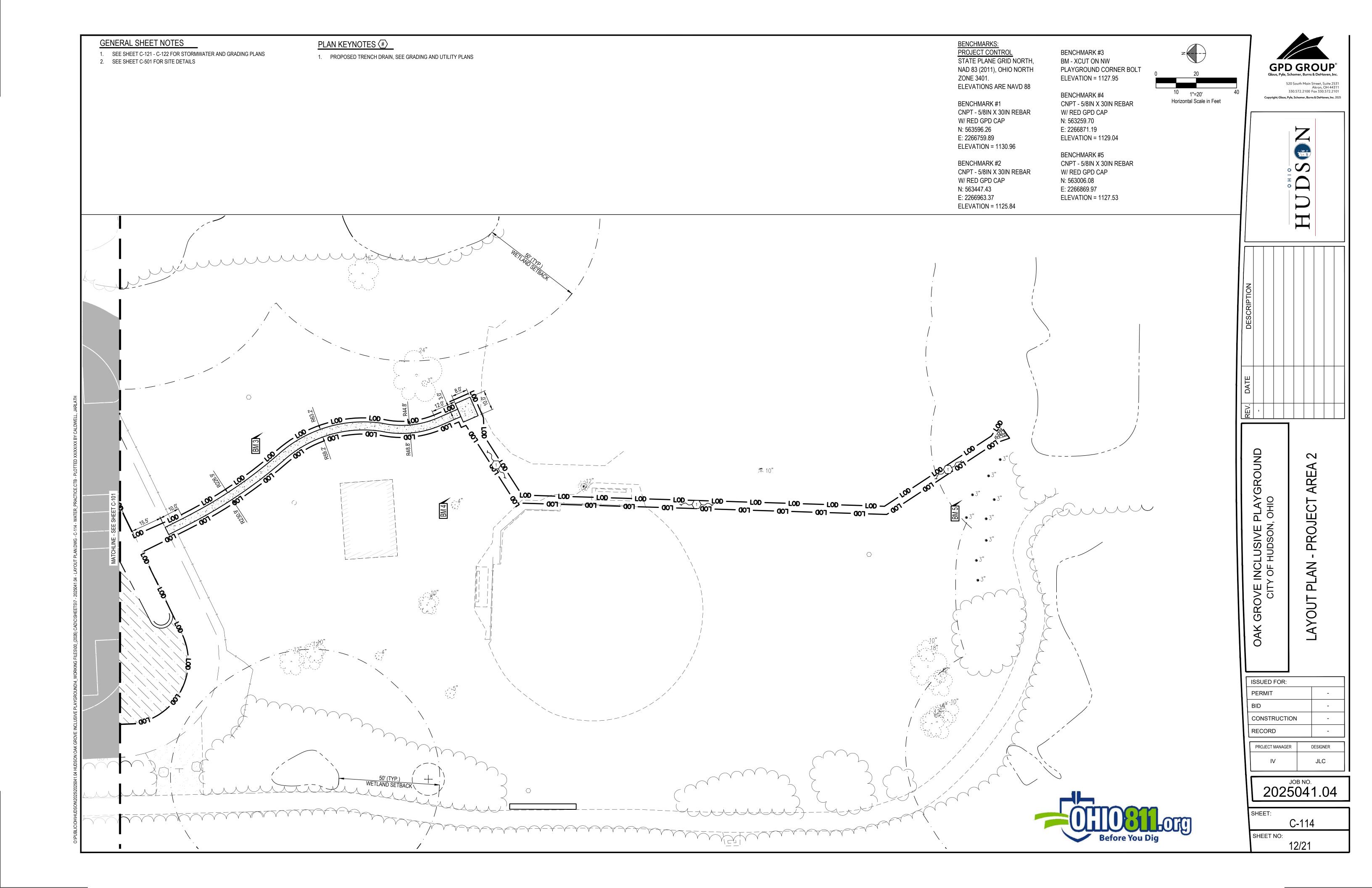


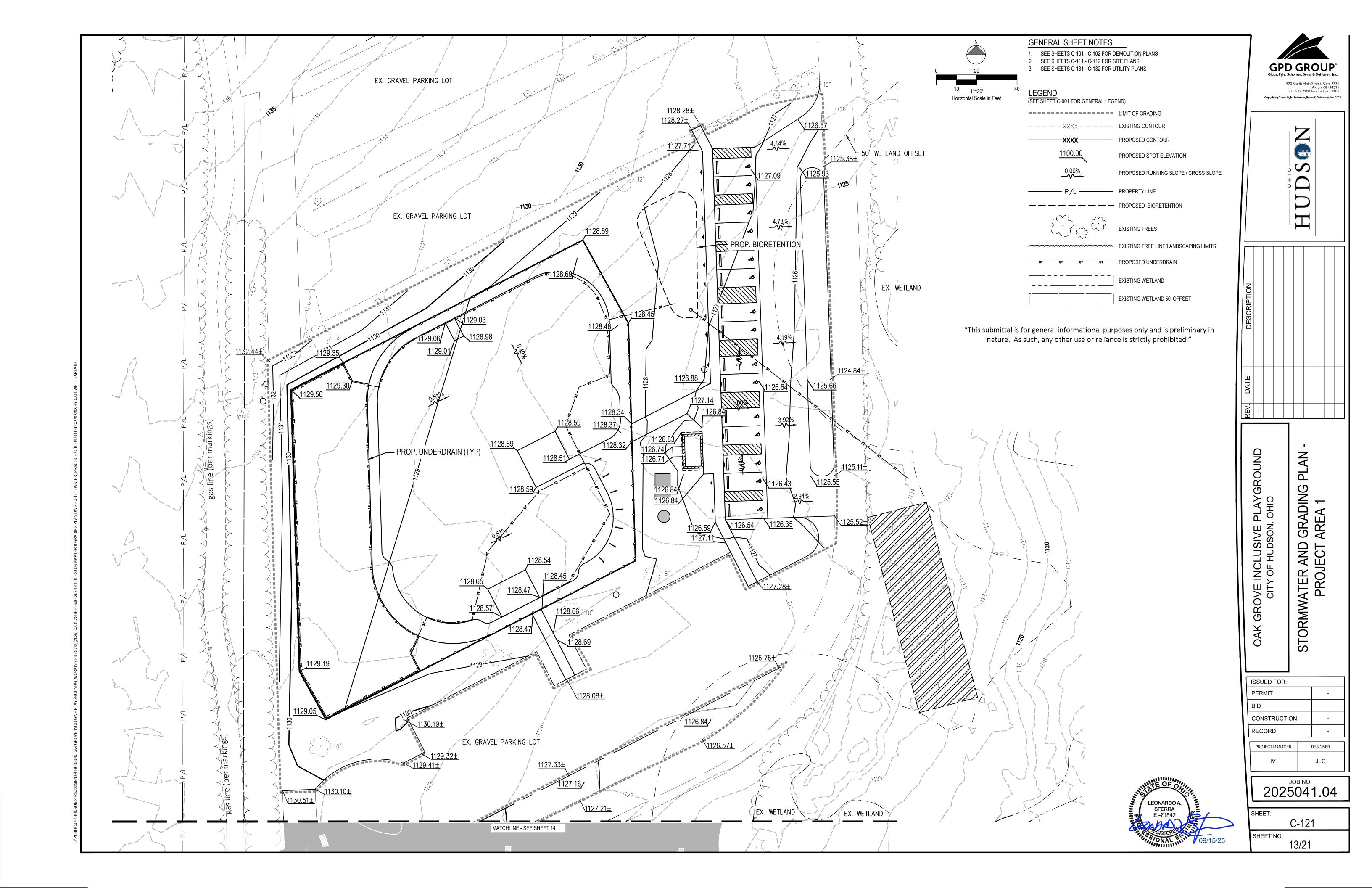


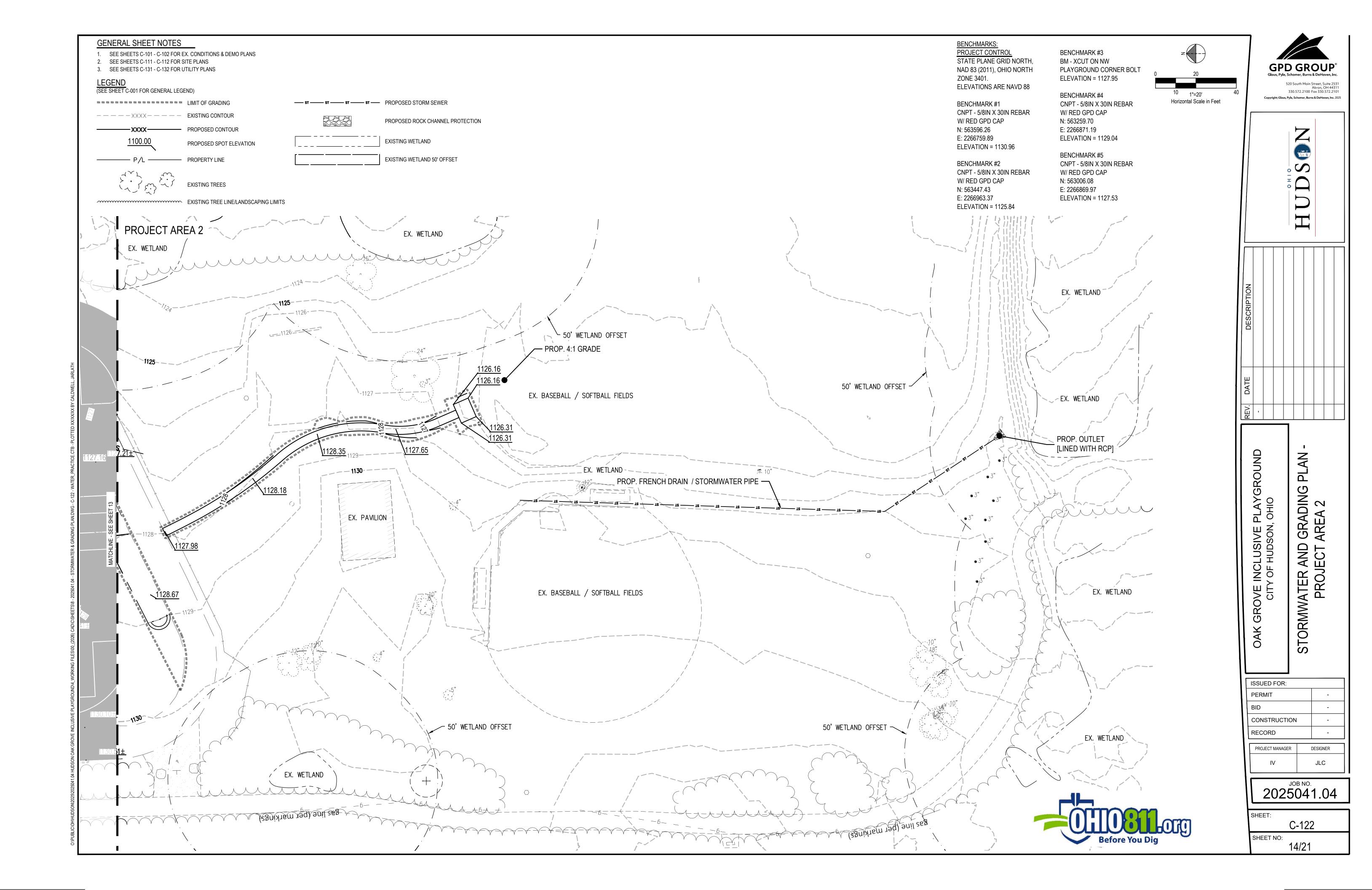


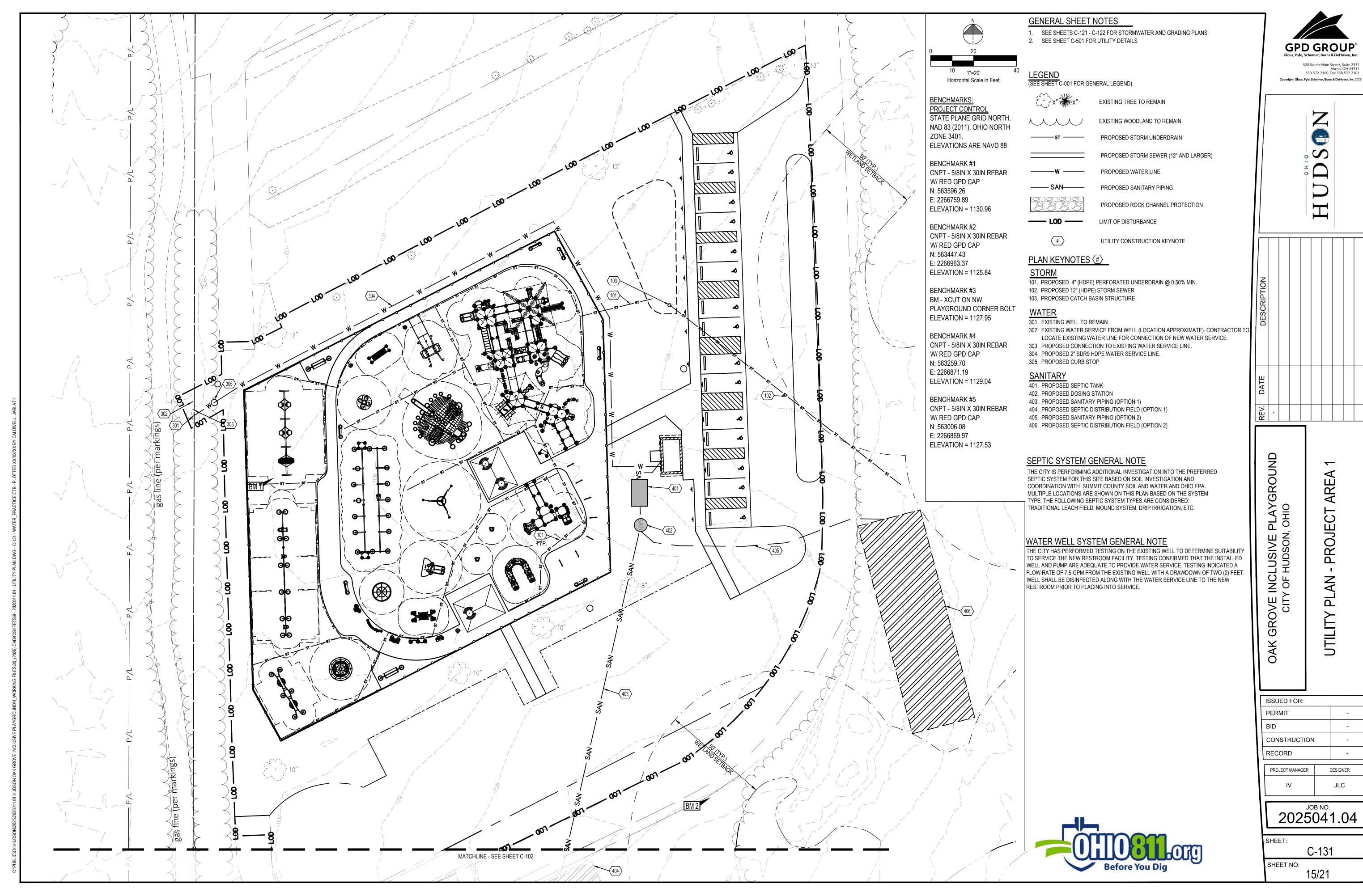


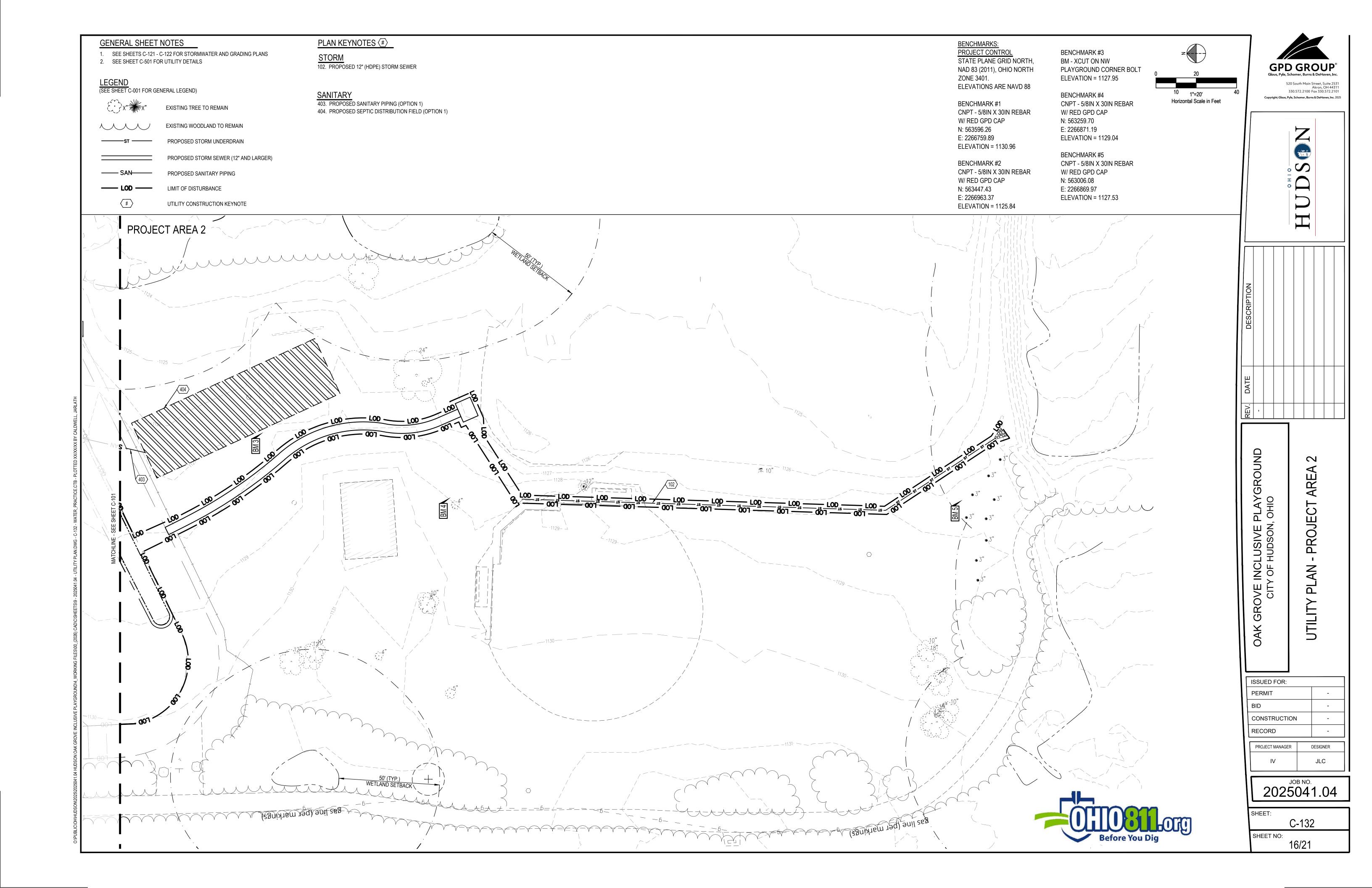


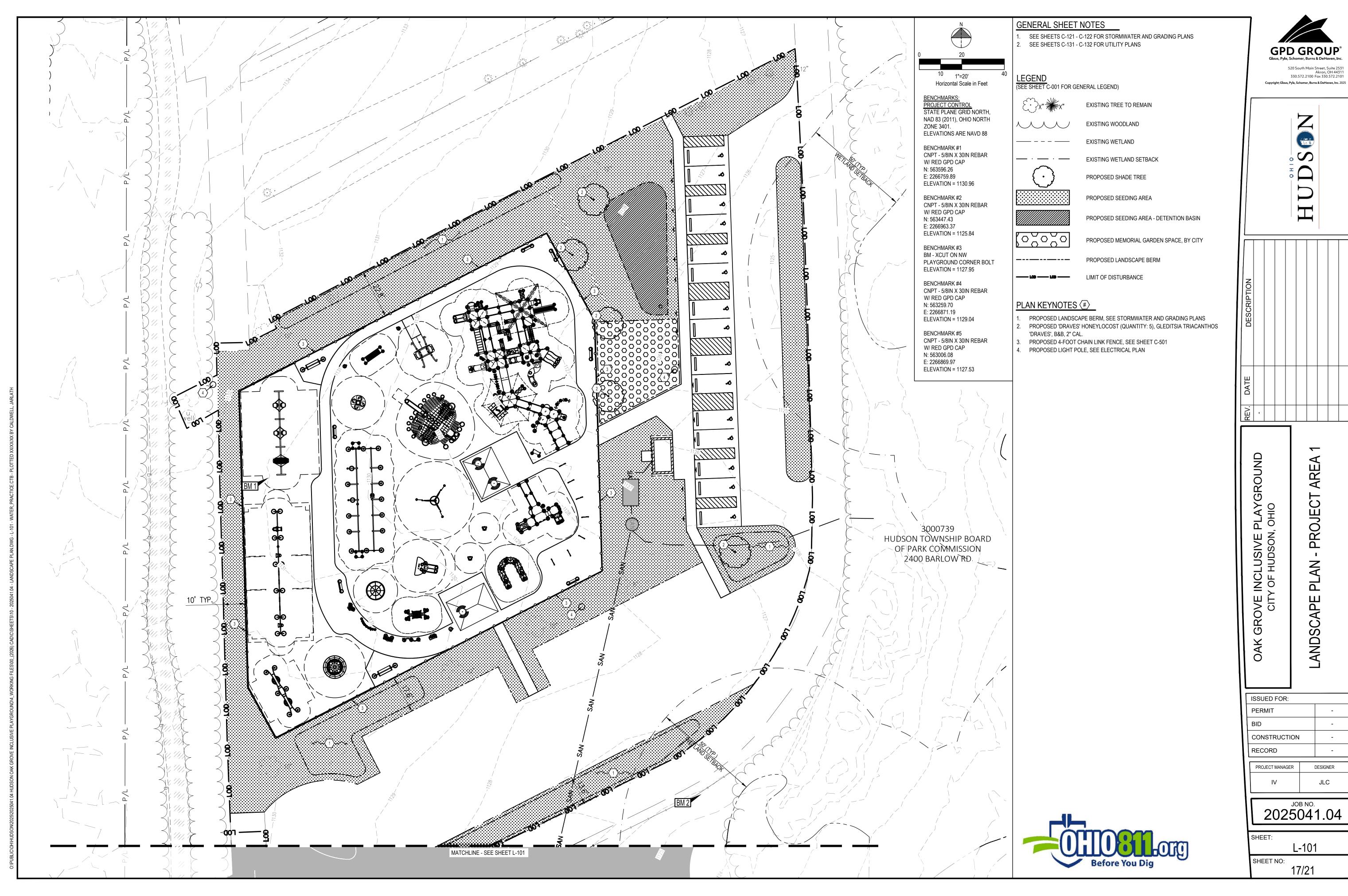


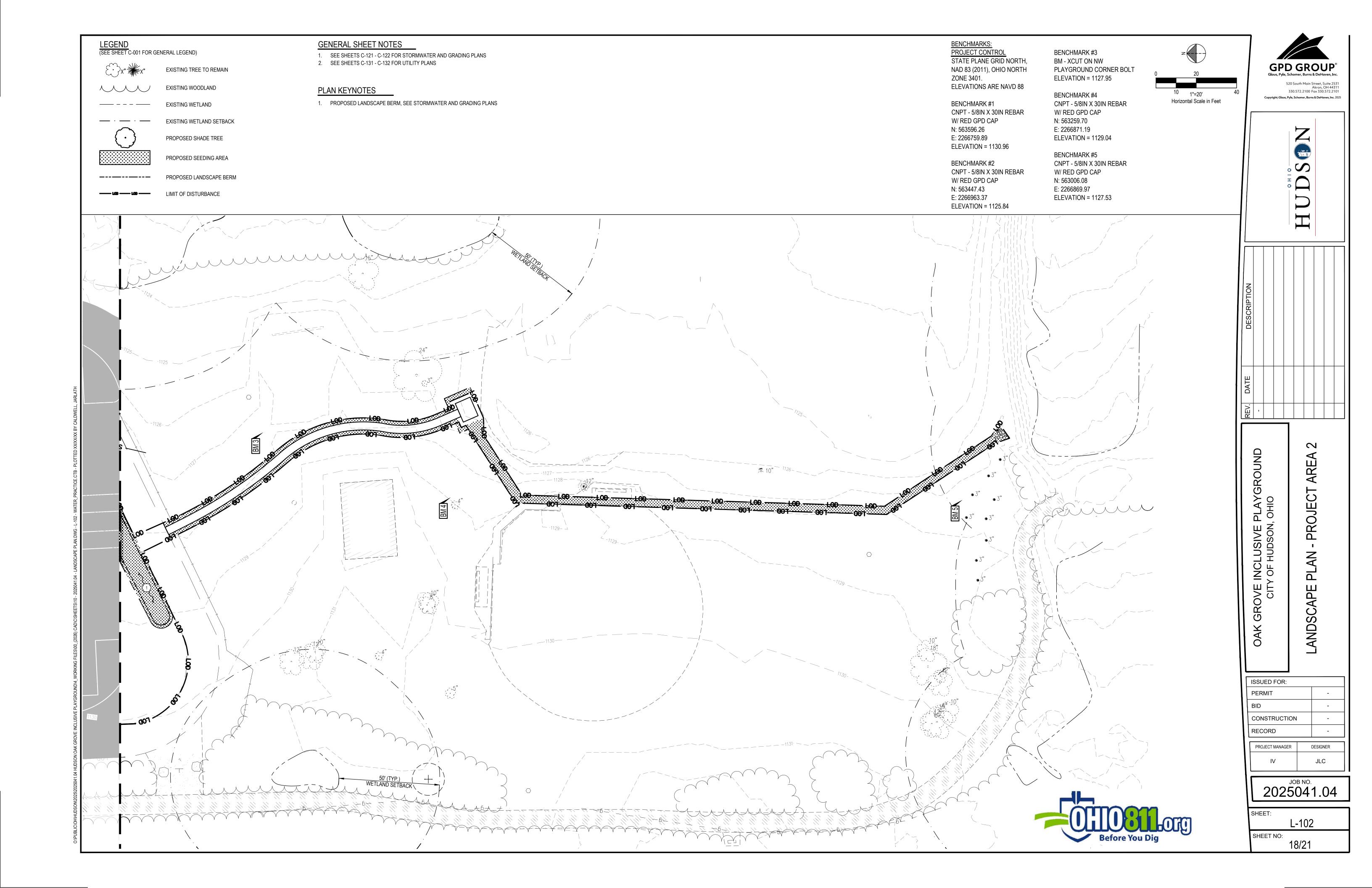


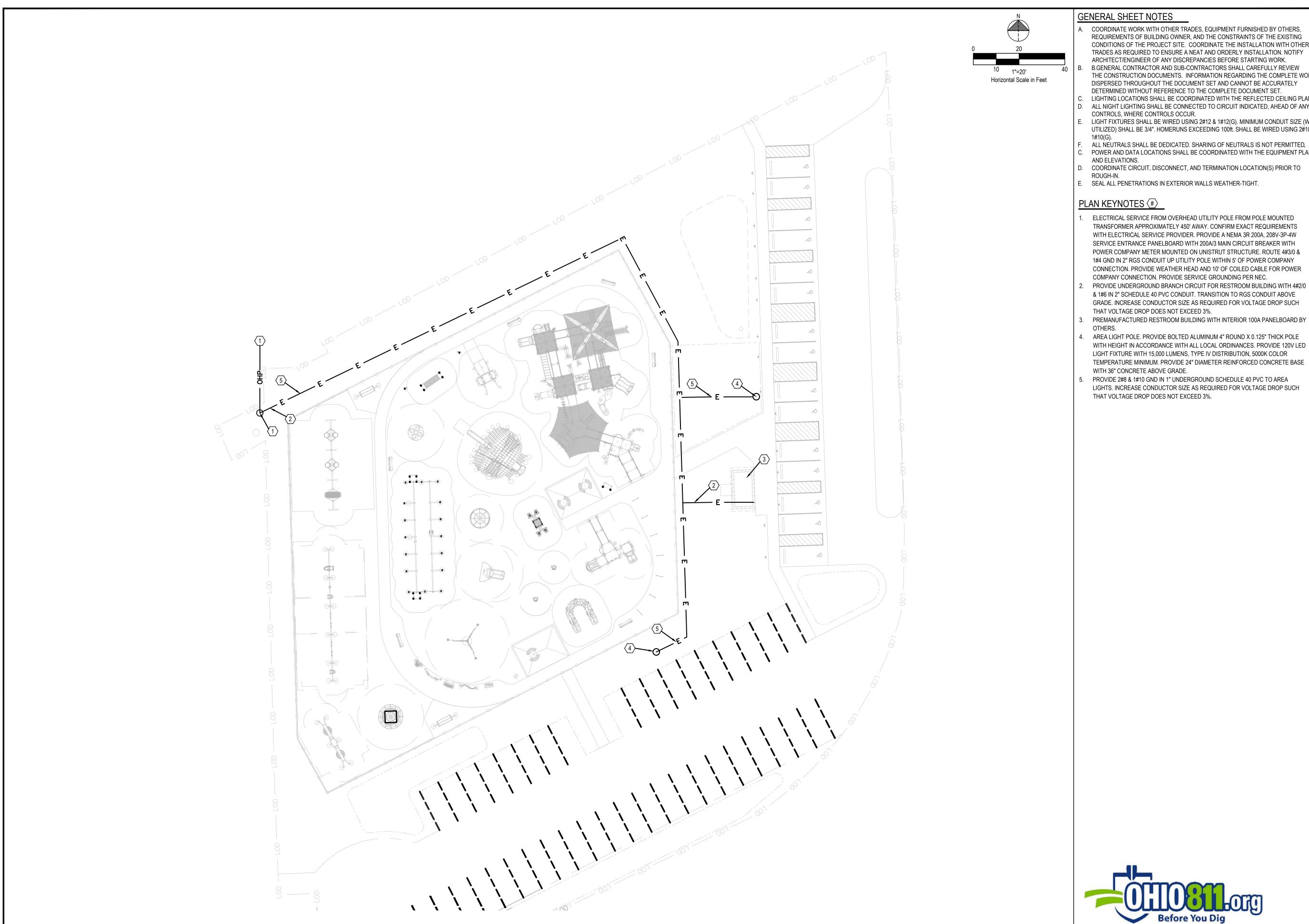












# GENERAL SHEET NOTES

COORDINATE WORK WITH OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF BUILDING OWNER, AND THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. COORDINATE THE INSTALLATION WITH OTHER TRADES AS REQUIRED TO ENSURE A NEAT AND ORDERLY INSTALLATION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES BEFORE STARTING WORK. B.GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY

DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET. LIGHTING LOCATIONS SHALL BE COORDINATED WITH THE REFLECTED CEILING PLAN.

- ALL NIGHT LIGHTING SHALL BE CONNECTED TO CIRCUIT INDICATED, AHEAD OF ANY CONTROLS, WHERE CONTROLS OCCUR.
- LIGHT FIXTURES SHALL BE WIRED USING 2#12 & 1#12(G). MINIMUM CONDUIT SIZE (WHER UTILIZED) SHALL BE 3/4". HOMERUNS EXCEEDING 100ft. SHALL BE WIRED USING 2#10 &
- POWER AND DATA LOCATIONS SHALL BE COORDINATED WITH THE EQUIPMENT PLANS AND ELEVATIONS. COORDINATE CIRCUIT, DISCONNECT, AND TERMINATION LOCATION(S) PRIOR TO
- ROUGH-IN.
- SEAL ALL PENETRATIONS IN EXTERIOR WALLS WEATHER-TIGHT.

# PLAN KEYNOTES (#)

- ELECTRICAL SERVICE FROM OVERHEAD UTILITY POLE FROM POLE MOUNTED TRANSFORMER APPROXIMATELY 450' AWAY. CONFIRM EXACT REQUIREMENTS WITH ELECTRICAL SERVICE PROVIDER. PROVIDE A NEMA 3R 200A, 208V-3P-4W SERVICE ENTRANCE PANELBOARD WITH 200A/3 MAIN CIRCUIT BREAKER WITH POWER COMPANY METER MOUNTED ON UNISTRUT STRUCTURE. ROUTE 4#3/0 & 1#4 GND IN 2" RGS CONDUIT UP UTILITY POLE WITHIN 5' OF POWER COMPANY CONNECTION. PROVIDE WEATHER HEAD AND 10' OF COILED CABLE FOR POWER COMPANY CONNECTION. PROVIDE SERVICE GROUNDING PER NEC.
- PROVIDE UNDERGROUND BRANCH CIRCUIT FOR RESTROOM BUILDING WITH 4#2/0 & 1#6 IN 2" SCHEDULE 40 PVC CONDUIT. TRANSITION TO RGS CONDUIT ABOVE GRADE. INCREASE CONDUCTOR SIZE AS REQUIRED FOR VOLTAGE DROP SUCH THAT VOLTAGE DROP DOES NOT EXCEED 3%.
- PREMANUFACTURED RESTROOM BUILDING WITH INTERIOR 100A PANELBOARD BY
- AREA LIGHT POLE. PROVIDE BOLTED ALUMINUM 4" ROUND X 0.125" THICK POLE WITH HEIGHT IN ACCORDANCE WITH ALL LOCAL ORDINANCES. PROVIDE 120V LED LIGHT FIXTURE WITH 15,000 LUMENS, TYPE IV DISTRIBUTION, 5000K COLOR TEMPERATURE MINIMUM. PROVIDE 24" DIAMETER REINFORCED CONCRETE BASE WITH 36" CONCRETE ABOVE GRADE.
- PROVIDE 2#8 & 1#10 GND IN 1" UNDERGROUND SCHEDULE 40 PVC TO AREA LIGHTS. INCREASE CONDUCTOR SIZE AS REQUIRED FOR VOLTAGE DROP SUCH THAT VOLTAGE DROP DOES NOT EXCEED 3%.



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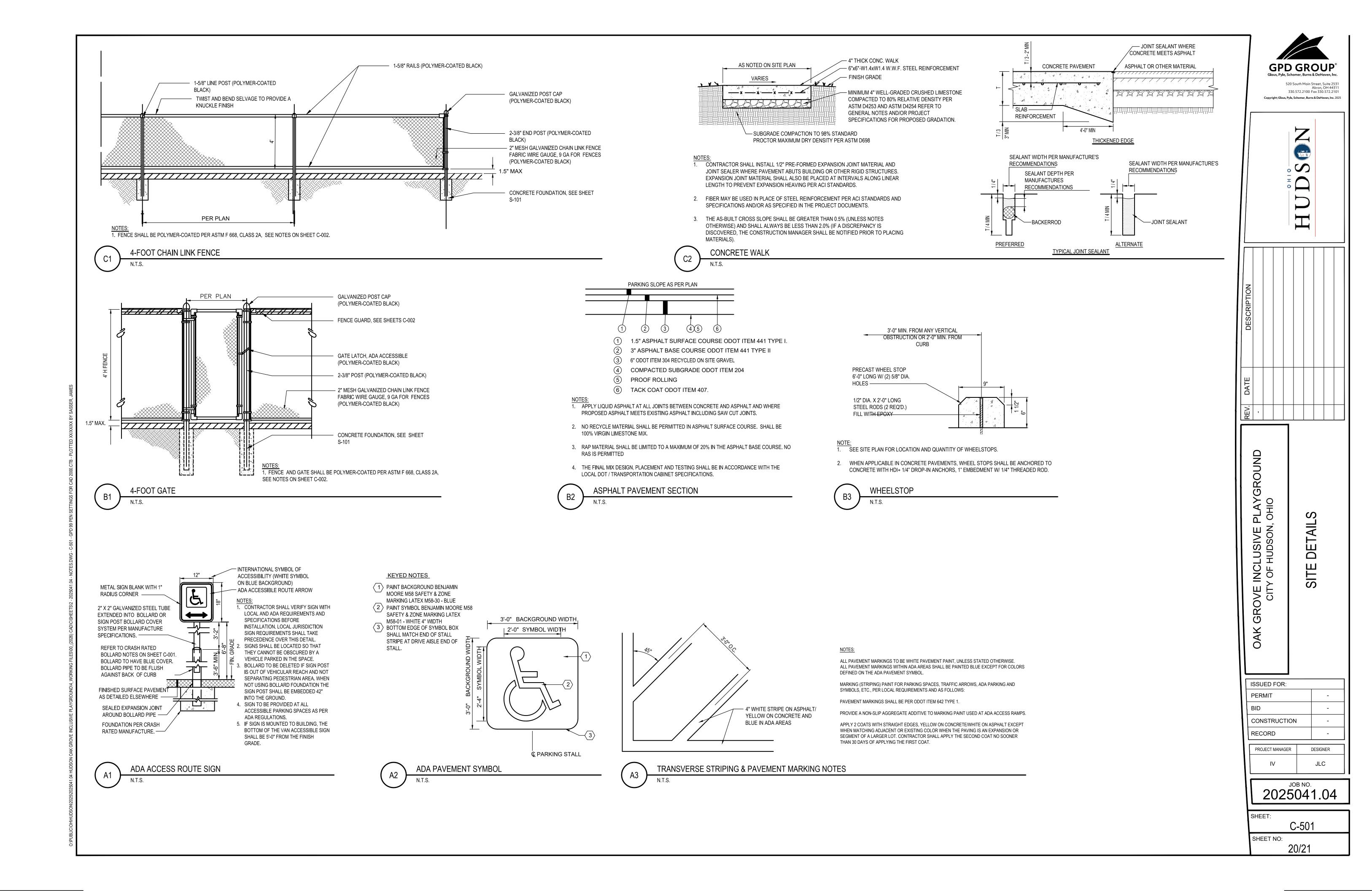
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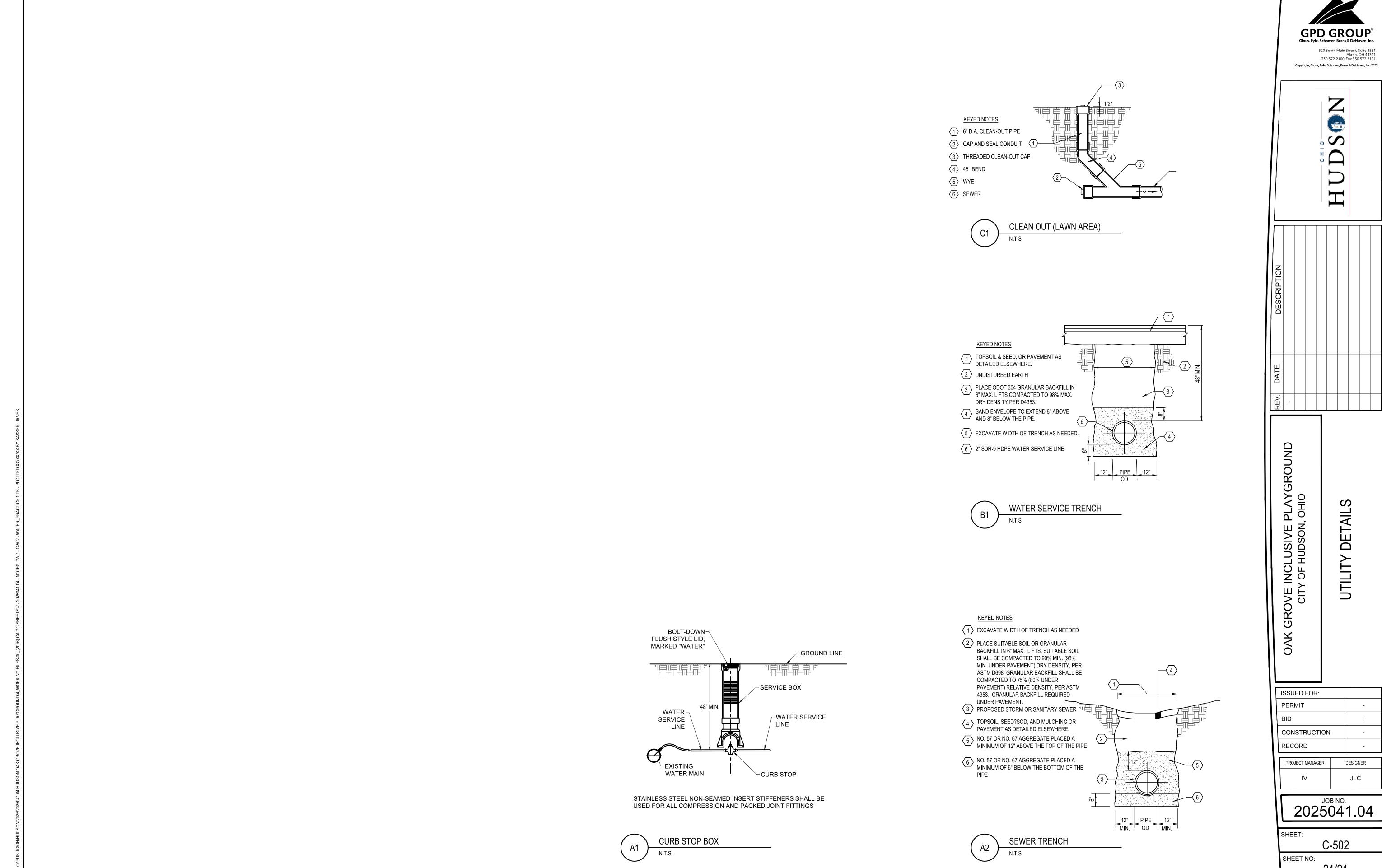
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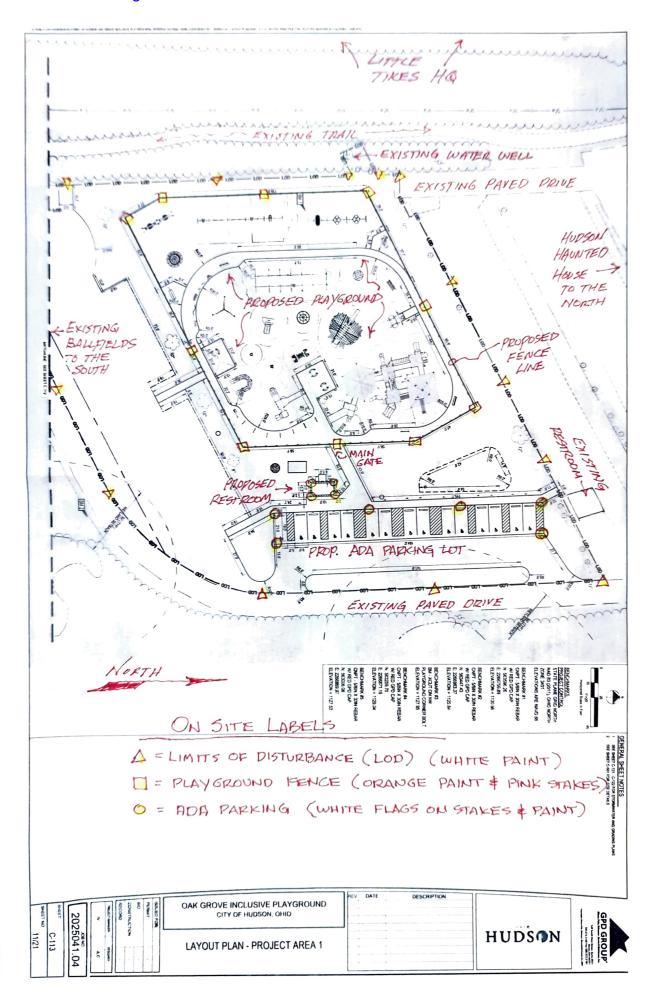
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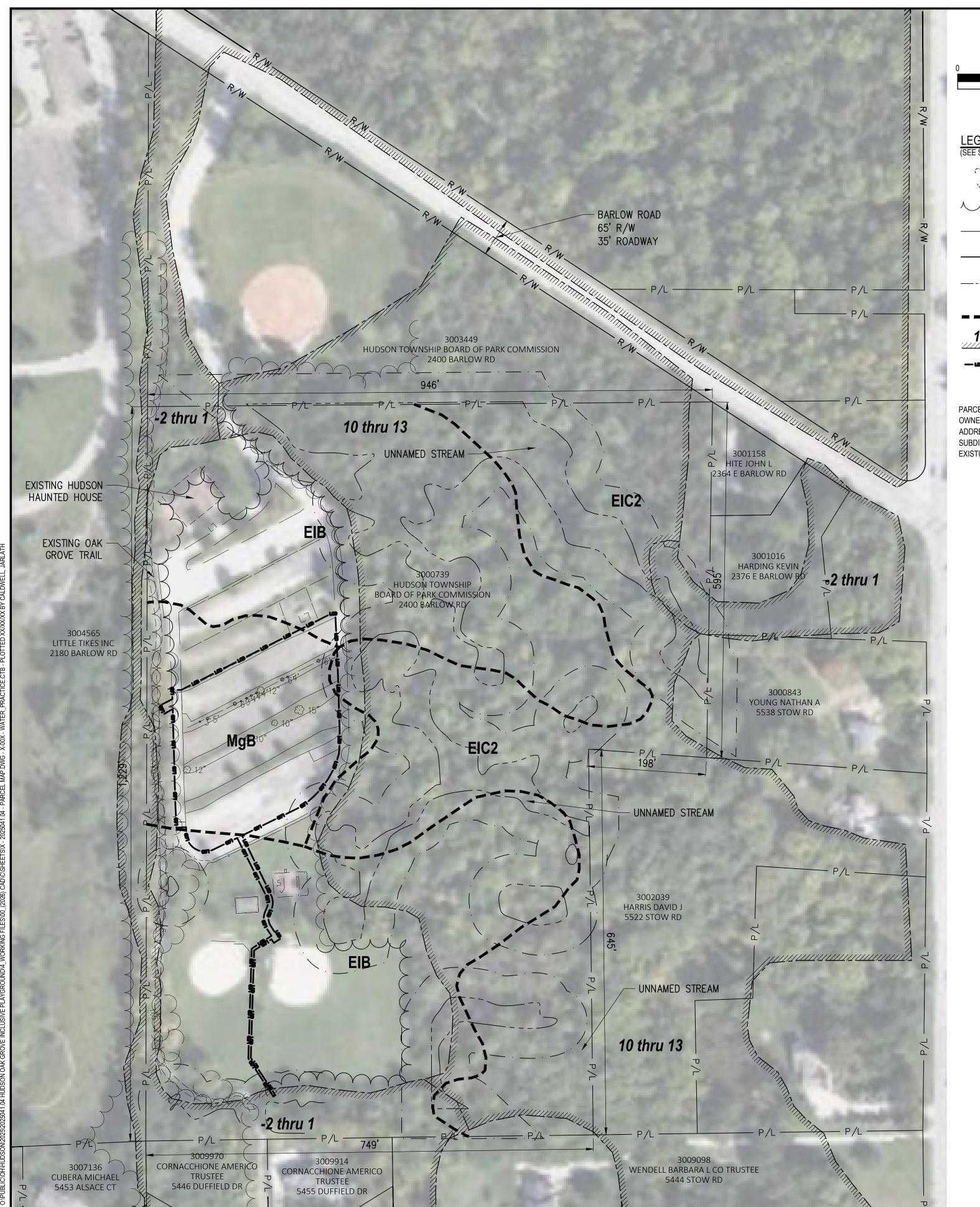
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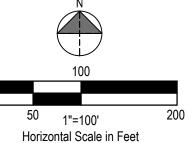




21/21







**LEGEND** (SEE SHEET C-001 FOR GENERAL LEGEND)

EXISTING WOODLAND

----- WETLAND BOUNDARY —— 50' WETLAND SETBACK

----- STREAM ALIGNMENT

SOIL CLASSIFICATION

INDEX OF ECOLOGICAL INTEGRITY UNDEVELOPED COMPOSITE

PROJECT LIMITS OF DISTURBANCE

HUDSON TOWNSHIP BOARD OF PARK COMMISSION

2400 BARLOW ROAD SUBDIVISION: LOT 8 N E BARLOW RD 21.410A EXISTING LAND USE: CITY PARK

USE THE FOLLOWING PRIMARY PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PRIMARY PROJECT CONTROL

POSITIONING METHOD: ODOT VRS MONUMENT TYPE: 5/8"x 30" Rebar with red "GPD" cap

ORTHOMETRIC HEIGHT DATUM: NAVD88 GEOID:18

HORIZONTAL POSITIONING:

REFERENCE FRAME: NAD83(2011)

ELLIPSOID:GRS80

MAP PROJECTION: Lambert Conformal Conic COORDINATE SYSTEM: Ohio State Plane, North Zone, 3401 PROJECT IS IN GRID COORDINATES

ORIGIN OF COORDINATE SYSTEM: 0,0

ALL SURFACE UTILITIES ARE (PER PLAN) UNLESS OTHERWISE NOTED. AS A RESULT OF OHIO811 COORDINATION AS DESCRIBED IN O.R.C. 153.64, SUBSURFACE UTILITY LINES SHOWN HEREON WERE MARKED ON THE GROUND BY THIRD PARTIES, OR DEPICTED IN RECORDS/MAPPING PROVIDED BY THIRD PARTIES THAT MAY OR MAY NOT SHOW ACCURATE LOCATION INFORMATION. THE THIRD PARTIES INVOLVED IN SAID COORDINATION WERE NOT CONTRACTUALLY OBLIGATED TO GPD GROUP. GPD GROUP ACCEPTS NO LIABILITY OR RESPONSIBILITY ARISING OUT OF ANY MATTERS RELATING TO THE MARKINGS OR INFORMATION PROVIDED BY THE 811 COORDINATION OF SAID SUBSURFACE UTILITIES. NO WARRANTY OR GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE LOCATION OR ACCURACY OF ANY 811 PROVIDED SUBSURFACE UTILITY LABELED IN THE DRAWING AS (PER PLAN) AND SHOWN FOR INFORMATIONAL PURPOSES ONLY.

EXTREME CARE SHOULD BE TAKEN WHEN WORKING IN THESE AREAS AS THE LOCATIONS OF THE SERVICES SHOWN HEREIN ARE ASSUMED FROM WHAT WE COULD INTERPRET FROM THE RECORDS RECEIVED. AS A RESULT OF OHIO811 COORDINATION AS DESCRIBED IN O.R.C. 153.64, SUBSURFACE UTILITY LINES SHOWN HEREON WERE MARKED ON THE GROUND BY THIRD PARTIES, OR DEPICTED IN RECORDS/MAPPING PROVIDED BY THIRD PARTIES THAT MAY OR MAY NOT SHOW ACCURATE LOCATION INFORMATION.

THE THIRD PARTIES INVOLVED IN SAID COORDINATION WERE NOT CONTRACTUALLY OBLIGATED TO GPD GROUP. GPD GROUP ACCEPTS NO LIABILITY OR RESPONSIBILITY ARISING OUT OF ANY MATTERS RELATING TO THE MARKINGS OR INFORMATION PROVIDED BY THE 811 COORDINATION OF SAID SUBSURFACE UTILITIES. NO WARRANTY OR GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE LOCATION OR ACCURACY OF ANY 811 PROVIDED SUBSURFACE UTILITY IN THE DRAWING AS (PER PLAN) AND SHOWN FOR INFORMATIONAL PURPOSES ONLY.

ALL STORM AND SANITARY SEWER LINES SIZES REFLECT FIELD MEASUREMENTS AND NOT THE MAP PROVIDED BY THE UTILITY ENTITY.

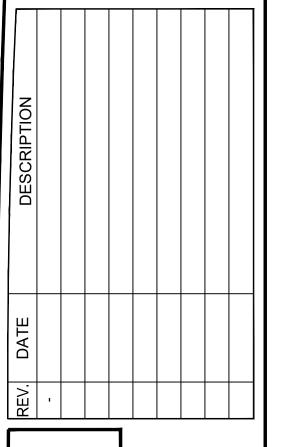
ALL PROPERTY LINES ARE FROM COUNTY PROVIDED GIS AND DO NOT REPRESENT A BOUNDARY SURVEY.

SITEINFORMATION

DESCRIPTION	ACR
TOTAL AREA OF PROPERTY	23.27
PERCENTAGE COVERED BY IMPERMOUS COVER	13.65
TOTAL BUILDING COVER	0.12
FLOOR AREA TO LOT RATIO	0.00
GROSS FLOW RATE	
TOTAL AREA OF PROJECT (LIMITS OF DISTURBANCE)	1.87
% TOTAL AREA OF UNDISTURBED LAND WITH A BREAKDOWN BY USE	92%
FORESTED WOODLAND	76.099
OPEN LAWN/BALL FIELD	14.119
GRAVEL PARKING LOT (WITH LANDSCAPE STRIPS)	9.21%
EXISTING STRUCTURE (HAUNTED HOUSE)	0.58%

GPD GROUP 520 South Main Street, Suite 2531 Akron, OH 44311 330.572.2100 Fax 330.572.2101

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INCLUSIVE Y OF HUDSO

ISSUED FOR: PERMIT CONSTRUCTION RECORD PROJECT MANAGER DESIGNER JLC

**PROPERT** 

2025041.04

**EXHIBIT** SHEET NO:





#### **PureForm**

P26 Area light



Gardco PureForm LED P26 features a sleek, low profile design and optimal performance. PureForm large area light is designed to achieve maximum pole spacing, with lumen output up to 62,000 lumens. Multiple distribution and shielding options are available to achieve maximum control. A full range of control options provides additional energy savings.

Project:	
Location:	
Cat.No:	
Туре:	
Lamps:	Qty:
Notes:	

#### Ordering guide

#### Example: P26-A08-830-T4M-HIS-AR1-120-DALI-WIAPHW-SP2-BK

Prefix P26	Nomina	al Lumens Selection	CCT/	CRI	Distr	ibution						Shield	ling	Moun	ting		Voltaç	je
P26 PureFor area ligh	A02 A03 A04 A05 A06 A07 A08 A09 A10 A11 A12 A13	12,000 lumens 15,500 lumens 18,000 lumens 22,000 lumens 25,000 lumens 32,000 lumens 32,000 lumens 40,000 lumens 44,000 lumens 55,000 lumens 57,000 lumens	840 730 740 750	80CRI, 4000K 70CRI, 3000K 70CRI, 4000K 70CRI, 5000K 80CRI, 2700K	AFR AFR- AFR- Type T2M T2M: T2M: T3M: T3M: T3M: LEEC	90 Ro -270 Ro 2 Typ -90 Ro -270 Ro 3 Typ -90 Ro -270 Ro O Optics	to front row tated left 90° tated left 270° be 2 Medium tated left 270° be 3 Medium tated left 90° tated left 270° brated left 270° care optic left river optic left	Type 4 Mr T4M T4M-90 T4M-270 Type 4 Wr T4W-90 T4W-270 Type 5 T5N T5M T5W BLC	Type Rota Rota Type Rota Rota Type Type Type	e 4 Medated leated leat	ft 90° ft 270° e ft 90° ft 270° rrow dium e	None HIS	- Internal house side shield (clip-on)	The formoun must separ (See a SF <sup>3</sup>	Arm mo (standa Round padapter billowing ting kits be order ately accessor Adjusta Slipfitte mount i Wall mo	red ries) ble er arm kit	208 240 277 UNV 347 480	120-277V 347V
Driver type	Dimming C	xact configurations.  ontrols y be selected)			,	Lighting ( (controls ar only one ma	controls e mutually exclusive, y be selected)	BLC-270		oted le					Finis	h		
0-10V										ТВ	Termina	l block	<		Star	ndard	textur	ed finish
<b>010V</b> 0-10V	None DLEA FAWS BL50L3 BL50L7 DCC	- Dimming leads externally accessible (controls by others) Field adjustable wattage selector PIR motion response dim to 50% L3 lens PIR motion response dim to 50% L7 lens Dual circuit control			None PCB <sup>4,6</sup> TLR7 <sup>6</sup> TLRPC <sup>4,6</sup>	- Photocontrol 7-pin twist lo w/ 0-10v drive 7-pin twist lo w/ 0-10v drive & on/off phot	ck er (non-D4 ck er (non-D4	4i) 4i)	F2 <sup>4</sup> Double fur F3 <sup>4</sup> Double fur (208V, 240		fuse (120V, 277V, or 347V) e fuse (208V, 240V, or 480V) e fuse Canadian double pole 240V, or 480V) ction (10kA standard)			WH Wh BZ Bro DG Da MG Me		ack		
DALI										SP2	Surge p	rotect	tor 20kV/10	kA	ос	Op:	ional	color
DALI SR/ DALI	None CS50 CM50 CS30	Security 50 % dimming, 7 hours Median 50 % dimming, 8 hours		hours	ļ	None PCB <sup>4,6</sup> TR7 <sup>6,7</sup>	- Photocontrol 7-pin twist lo	ck		(option)		)			sc	col cor Spe	or or F tact f cial c	actory) olor
	CM30 SRDR <sup>7</sup> WIAPHW WIAPHB DCC <sup>5</sup>	M30 Median 30 % dimming, 8 hours RDR? SR driver connected to Zhaga socket (D4 Wireless Interact outdoor high mounting (15-40'), white housing Wireless Interact outdoor high mounting (15-40'), black housing			g	TLP <sup>4,6</sup>	SR/DALI drive 7-pin twist lo SR/DALI drive & on/off phot	ck er (D4i)	(D4i)							col		

- ${\bf 1.} \quad {\bf Extended \ lead \ times \ apply. \ Contact \ factory \ for \ details.}$
- 2. Mounts to a 4-5" round pole with adapter included for square poles.
- 3. Limited to a maximum of 45 degrees aiming above horizontal.
- 4. Must specify input voltage.
- 5. Not available with HVU [374-480V] in A01-A04.

- 6. Not allowed with DCC or Outdoor Interact (WIAP).
- 7. For luminaire to be ZD4i compliant luminaire must include both SRDR and TR7.
- 8. Only 3000K CCT and below are IDA International Dark Sky Approved.











# Area light

PureForm P26 Accessories (ordered separately, field installed)

**Shielding Accessories** 

#### Clip on back light shielding

#### For use with Lumen Selection A01-A05

P26-HIS-T23-2B	Internal house side shields. For optic types T2M, and T3M (qty 2)
P26-HIS-T4-2B	Internal house side shield for optic types T4M and T4W (qty 2)
P26-HIS-T5NMW-2B	Internal house side shield for optic types T5M, T5N and T5W (qty 2)

#### For use with Lumen Selection A06-A13

P26-HIS-T23-4B	Internal house side shields. For optic types T2M, and T3M (qty 4)
P26-HIS-T4-4B	Internal house side shield for optic types T4M and T4W (qty 4)
P26-HIS-T5NMW-4B	Internal house side shield for optic types T5M, T5N and T5W (qty 2)

Note: Shielding can be included in ordering guide (HIS) to be installed in the factory or ordered as an accessory to be installed in the field.

#### **Controls Accessories**

IRT9015	Handheld remote for grouping and configuration of Outdoor Interact WIAP (at least 1 recommended per site or use the Interact Pro app).
FSIR-100	Optional handheld remote for PIR motion sensor programming.

#### **Pole Top Fitters**

#### (F) = Specify finish

#### PTF2 - Pole top fitter fits 2%-2½" OD x 4" depth tenon

P26-PTF2-1-90-(F)	1 luminiare at 90°
P26-PTF2-2-90-(F)	2 luminiares at 90°
P26-PTF2-2-180-(F)	2 luminiares at 180°
P26-PTF2-3-90-(F)	3 luminiares at 90°
P26-PTF2-4-90-(F)	4 luminiares at 90°
P26-PTF2-3-120-(F)	3 luminiares at 120°

#### PTF3 - Pole top fitter fits 3-3½" OD x 6" depth tenon

P26-PTF3-1-90-(F)	1 luminiare at 90°
P26-PTF3-2-90-(F)	2 luminiares at 90°
P26-PTF3-2-180-(F)	2 luminiares at 180°
P26-PTF3-3-90-(F)	3 luminiares at 90°
P26-PTF3-4-90-(F)	4 luminiares at 90°
P26-PTF3-3-120-(F)	3 luminiares at 120°

#### **Mounting Accessories**

#### (F) = Specify finish

P26-SF-G2-(F)	Slip fitter mount (fits to 2¾" O.D. tenon)
P26-RAM-G2-(F)	Retrofit arm mount kit
P26-WS-G2-(F)	Wall mount with surface conduit rear entry permitted
P26-BD-G2	Bird deterrent (order as an accessory)

# Area light

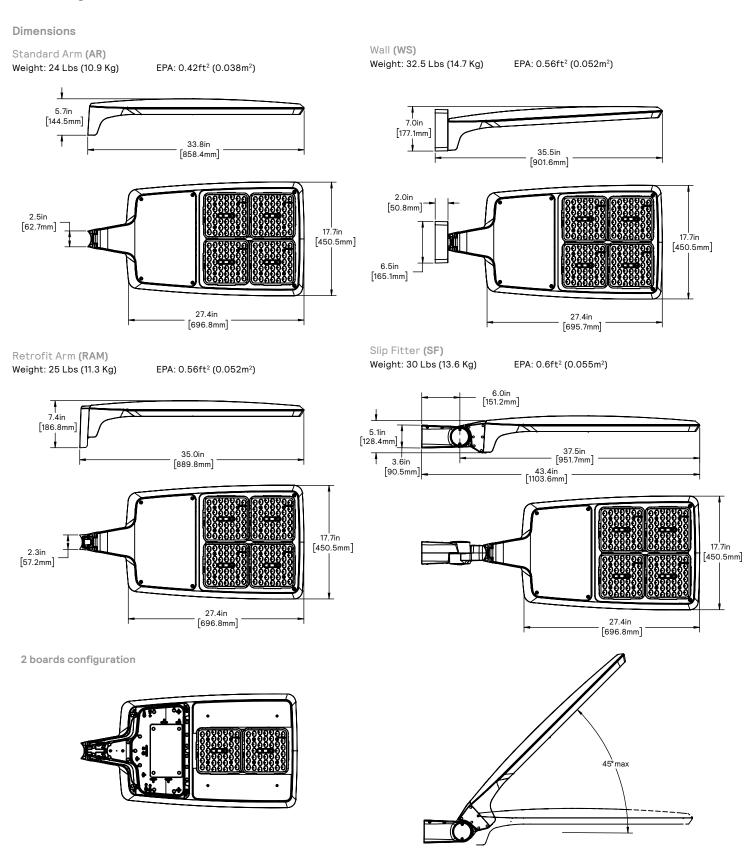
#### **Predicted Lumen Depreciation Data**

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.  $L_{70}$  is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published  $L_{70}$  hours limited to 6 times actual LED test hours

Ambient Temperat	ure °C	Calculated L <sub>70</sub> Hours	L <sub>70</sub> per TM-21	Lumen Maintenance % at 70,000 hrs
25°C		>100,000 hours	>100,000 hours	>93%

# Optical Distributions Type 2 Medium Type 3 Medium Type 4 Wide Autofront Row Back Light Control Type 5 Narrow Type 5 Narrow Type 5 Medium Type 5 Medium Type 5 Wide LCL LCR

# Area light



T2M

BUG

Efficacy

# Area light

P26 lumen values

LED Wattage and Lumen Values - 70CRI 3000K

Average System

Ordering Code	Watts (W)	Output	Rating	(LPW)	Output	Rating	(LPW)	Output	Rating	(LPW)	Output	Rating	(LPW)
P26-A01-730-x	68	12,076	B3-U0-G3	178	11,861	B2-U0-G3	175	11,751	B2-U0-G3	173	11,689	B2-U0-G3	172
P26-A02-730-x	85	14,816	B3-U0-G3	174	14,552	B3-U0-G3	170	14,418	B2-U0-G3	169	14,342	B2-U0-G3	168
P26-A03-730-x	103	17,835	B3-U0-G3	173	17,517	B3-U0-G3	170	17,355	B2-U0-G3	168	17,264	B3-U0-G3	167
P26-A04-730-x	123	20,904	B3-U0-G3	170	20,531	B3-U0-G4	167	20,342	B3-U0-G4	166	20,235	B3-U0-G3	165
P26-A05-730-x	149	24,768	B3-U0-G3	167	24,327	B3-U0-G4	164	24,102	B3-U0-G4	162	23,976	B3-U0-G4	162
P26-A06-730-x	154	27,459	B3-U0-G3	179	26,970	B3-U0-G4	176	26,721	B3-U0-G4	174	26,580	B3-U0-G4	173
P26-A07-730-x	178	31,381	B4-U0-G4	176	30,822	B3-U0-G4	173	30,537	B3-U0-G4	172	30,377	B3-U0-G4	171
P26-A08-730-x	206	34,998	B4-U0-G4	170	34,375	B3-U0-G5	167	34,057	B3-U0-G5	166	33,878	B3-U0-G5	165
P26-A09-730-x	230	38,714	B4-U0-G4	169	38,024	B4-U0-G5	166	37,673	B3-U0-G5	164	37,475	B4-U0-G5	163
P26-A10-730-x	267	44,284	B4-U0-G4	166	43,495	B4-U0-G5	163	43,094	B4-U0-G5	161	42,867	B4-U0-G5	160
P26-A11-730-x	304	49,169	B4-U0-G4	162	48,294	B4-U0-G5	159	47,848	B4-U0-G5	158	47,596	B4-U0-G5	157
P26-A12-730-x	344	54,280	B5-U0-G5	158	53,313	B4-U0-G5	155	52,821	B4-U0-G5	154	52,543	B4-U0-G5	153
P26-A13-730-x	383	59,343	B5-U0-G5	155	58,286	B4-U0-G5	152	57,748	B4-U0-G5	151	57,443	B4-U0-G5	150
			T5M		ļ	T5N			T5W			AFR	
		Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
		12,471	B4-U0-G2	184	12,588	B3-U0-G2	186	11,740	B4-U0-G3	173	12,463	B3-U0-G3	184
		15,301	B4-U0-G2	179	15,444	B4-U0-G2	181	14,404	B4-U0-G3	169	15,291	B3-U0-G3	179
		18,419	B4-U0-G2	178	18,590	B4-U0-G2	180	17,338	B4-U0-G3	168	18,407	B3-U0-G3	178
		21,589	B4-U0-G2	176	21,790	B4-U0-G2	178	20,322	B5-U0-G3	166	21,574	B3-U0-G3	176
		25,580	B5-U0-G3	172	25,818	B4-U0-G2	174	24,079	B5-U0-G4	162	25,563	B4-U0-G3	172
		28,358	B5-U0-G3	185	28,623	B5-U0-G3	186	26,695	B5-U0-G4	174	28,340	B4-U0-G4	184
		32,409	B5-U0-G3	182	32,711	B5-U0-G3	184	30,508	B5-U0-G4	172	32,388	B4-U0-G4	182
		36,145	B5-U0-G4	176	36,482	B5-U0-G3	177	34,024	B5-U0-G5	166	36,121	B4-U0-G4	176
		39,982	B5-U0-G4	174	40,355	B5-U0-G4	176	37,637	B5-U0-G5	164	39,956	B4-U0-G4	174
		45,735	B5-U0-G4	171	46,161	B5-U0-G4	173	43,052	B5-U0-G5	161	45,705	B4-U0-G4	171
		50,780	B5-U0-G4	167	51,254	B5-U0-G4	169	47,802	B5-U0-G5	157	50,747	B5-U0-G4	167
		56,058	B5-U0-G5	163	56,581	B5-U0-G4	165	52,770	B5-U0-G5	154	56,022	B5-U0-G4	163
		61,287	B5-U0-G5	160	61,858	B5-U0-G4	162	57,692	B5-U0-G5	151	61,247	B5-U0-G5	160
			BL			<u> </u>	LC					CR	
		Lumen Output	BU Rati		Efficacy (LPW)	Lumen Output	Bl Rat	JG ing	Efficacy (LPW)	Lumen Output		UG ting	Efficacy (LPW)
		8,448	B1-U0	)-G2	125	5,598		-	83	5,598		-	83
		10,365	B1-U0	)-G2	121	6,868	-	-	80	6,868		-	80
		12,476	B1-U0	)-G2	121	8,268		-	80	8,268		-	80
		14,624	B1-UC	)-G3	119	9,690		-	79	9,690		-	79
		17,327	B1-U0	)-G3	117	11,482	-	-	77	11,482		-	77
		19,210	B1-U0		125	12,729		-	83	12,729		-	83
		21,953	B1-U0	)-G4	123	14,547		-	82	14,547		-	82
		24,483	B1-U0		119	16,224	-		79	16,224		-	79
		27,083	B1-U0		118	17,947			78	17,947		-	78
		30,980			116	20,529		-	77	20,529		-	77
		34,398	B2-U0		113	22,794			75	22,794		-	75
		37,973	B2-U0	)-G5	111	25,163		-	73	25,163		-	73

тзм

BUG

Efficacy

T4M

BUG

Efficacy

27,510

72

T4W

BUG

Efficacy

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

27,510

 $NOTE: Some\ data\ may\ be\ scaled\ based\ on\ tests\ of\ similar\ (but\ not\ identical)\ luminaires.\ Contact\ factory\ for\ configurations\ not\ shown.$ 

41,515

B2-U0-G5

108

# Area light

P26 lumen values

LED Wattage and Lumen Values - 70CRI 4000K

	Average				!			!					
Ordering Code	System Watts (W)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-A01-740-x	68	12,141	B3-U0-G3	179	11,924	B2-U0-G3	176	11,814	B2-U0-G3	174	11,752	B2-U0-G3	173
P26-A02-740-x	85	14,896	B3-U0-G3	174	14,630	B3-U0-G3	171	14,495	B2-U0-G3	170	14,419	B2-U0-G3	169
P26-A03-740-x	103	17,931	B3-U0-G3	174	17,611	B3-U0-G3	171	17,449	B2-U0-G3	169	17,357	B3-U0-G3	168
P26-A04-740-x	123	21,016	B3-U0-G3	171	20,642	B3-U0-G4	168	20,451	B3-U0-G4	167	20,344	B3-U0-G3	166
P26-A05-740-x	149	24,902	B3-U0-G3	168	24,458	B3-U0-G4	165	24,232	B3-U0-G4	163	24,105	B3-U0-G4	162
P26-A06-740-x	154	27,607	B3-U0-G3	180	27,115	B3-U0-G4	176	26,865	B3-U0-G4	175	26,723	B3-U0-G4	174
P26-A07-740-x	178	31,550	B4-U0-G4	177	30,988	B3-U0-G4	174	30,702	B3-U0-G4	173	30,540	B3-U0-G4	172
P26-A08-740-x	206	35,187	B4-U0-G4	171	34,560	B3-U0-G5	168	34,241	B3-U0-G5	167	34,060	B3-U0-G5	166
P26-A09-740-x	230	38,923	B4-U0-G4	169	38,229	B4-U0-G5	166	37,876	B3-U0-G5	165	37,677	B4-U0-G5	164
P26-A10-740-x	267	44,523	B4-U0-G4	167	43,730	B4-U0-G5	164	43,326	B4-U0-G5	162	43,098	B4-U0-G5	161
P26-A11-740-x	304	49,434	B4-U0-G4	163	48,554	B4-U0-G5	160	48,105	B4-U0-G5	158	47,852	B4-U0-G5	158
P26-A12-740-x	344	54,573	B5-U0-G5	159	53,600	B4-U0-G5	156	53,106	B4-U0-G5	155	52,826	B4-U0-G5	154
P26-A13-740-x	383	59,662	B5-U0-G5	156	58,600	B4-U0-G5	153	58,059	B4-U0-G5	152	57,753	B4-U0-G5	151
			T5M			T5N			T5W			AFR	
		Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
		12,538	B4-U0-G2	185	12,655	B3-U0-G2	187	11,803	B4-U0-G3	174	12,530	B3-U0-G3	185
		15,384	B4-U0-G2	180	15,527	B4-U0-G2	182	14,481	B4-U0-G3	170	15,374	B3-U0-G3	180
		18,518	B4-U0-G2	179	18,691	B4-U0-G2	181	17,432	B4-U0-G3	169	18,506	B3-U0-G3	179
		21,705	B4-U0-G2	177	21,907	B4-U0-G2	179	20,432	B5-U0-G3	167	21,691	B3-U0-G3	177
		25,717	B5-U0-G3	173	25,957	B5-U0-G3	175	24,209	B5-U0-G4	163	25,701	B4-U0-G3	173
		28,511	B5-U0-G3	186	28,777	B5-U0-G3	187	26,839	B5-U0-G4	175	28,493	B4-U0-G4	185
		32,584	B5-U0-G3	183	32,887	B5-U0-G3	185	30,672	B5-U0-G4	172	32,562	B4-U0-G4	183
		36,339	B5-U0-G4	177	36,678	B5-U0-G3	178	34,208	B5-U0-G5	166	36,315	B4-U0-G4	177
		40,198	B5-U0-G4	175	40,572	B5-U0-G4	177	37,840	B5-U0-G5	165	40,171	B4-U0-G4	175
		45,981	B5-U0-G4	172	46,410	B5-U0-G4	174	43,284	B5-U0-G5	162	45,951	B4-U0-G4	172
		51,054	B5-U0-G4	168	51,530	B5-U0-G4	170	48,059	B5-U0-G5	158	51,020	B5-U0-G4	168
		56,360	B5-U0-G5	164	56,886	B5-U0-G4	166	53,054	B5-U0-G5	154	56,324	B5-U0-G4	164
		61,617	B5-U0-G5	161	62,191	B5-U0-G4	162	58,003	B5-U0-G5	152	61,577	B5-U0-G5	161
			BL	.c			LC	CL			L	CR	
		Lumen Output	BU Rat		Efficacy (LPW)	Lumen Output		JG ting	Efficacy (LPW)	Lumen Output		UG ting	Efficacy (LPW)
		8,930	B1-U0	D-G2	132	5,628		-	83	5,628		-	83
		10,956	B1-U0	0-G2	128	6,905	-	-	81	6,905		-	81
		13,189	B1-U0	D-G2	128	8,312		-	81	8,312		-	81
		15,459	B1-U0	D-G3	126	9,743		-	79	9,743		-	79
		18,316	B1-U0	D-G3	123	11,544		-	78	11,544		-	78
		20,306	B1-U0	D-G4	132	12,798		-	83	12,798		-	83
		23,206	B1-U0	D-G4	130	14,626		-	82	14,626		-	82

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

16,312

18,043

20,639

22,916

25,298

27,658

79

79

77

76

74

72

16,312

18,043

20,639

22,916

25,298

27,658

79

79

77

76

74

72

 $NOTE: Some\ data\ may\ be\ scaled\ based\ on\ tests\ of\ similar\ (but\ not\ identical)\ luminaires.\ Contact\ factory\ for\ configurations\ not\ shown.$ 

25,881

28,629

32,748

36,361

40,141

43,885

B1-U0-G4

B1-U0-G4

B2-U0-G5

B2-U0-G5

B2-U0-G5

B2-U0-G5

126

125

120

117

115

T2M

BUG

Efficacy

# Area light

P26 lumen values

LED Wattage and Lumen Values - 70CRI 5000K

Lumen

Average System

Ordering Code	Watts (W)	Output	Rating	(LPW)	Output	Rating	(LPW)	Output	Rating	(LPW)	Output	Rating	(LPW)
P26-A01-750-x	68	12,141	B3-U0-G3	179	11,924	B2-U0-G3	176	11,814	B2-U0-G3	174	11,752	B2-U0-G3	173
P26-A02-750-x	85	14,896	B3-U0-G3	174	14,630	B3-U0-G3	171	14,495	B2-U0-G3	170	14,419	B2-U0-G3	169
P26-A03-750-x	103	17,931	B3-U0-G3	174	17,611	B3-U0-G3	171	17,449	B2-U0-G3	169	17,357	B3-U0-G3	168
P26-A04-750-x	123	21,016	B3-U0-G3	171	20,642	B3-U0-G4	168	20,451	B3-U0-G4	167	20,344	B3-U0-G3	166
P26-A05-750-x	149	24,902	B3-U0-G3	168	24,458	B3-U0-G4	165	24,232	B3-U0-G4	163	24,105	B3-U0-G4	162
P26-A06-750-x	154	27,607	B3-U0-G3	180	27,115	B3-U0-G4	176	26,865	B3-U0-G4	175	26,723	B3-U0-G4	174
P26-A07-750-x	178	31,550	B4-U0-G4	177	30,988	B3-U0-G4	174	30,702	B3-U0-G4	173	30,540	B3-U0-G4	172
P26-A08-750-x	206	35,187	B4-U0-G4	171	34,560	B3-U0-G5	168	34,241	B3-U0-G5	167	34,060	B3-U0-G5	166
P26-A09-750-x	230	38,923	B4-U0-G4	169	38,229	B4-U0-G5	166	37,876	B3-U0-G5	165	37,677	B4-U0-G5	164
P26-A10-750-x	267	44,523	B4-U0-G4	167	43,730	B4-U0-G5	164	43,326	B4-U0-G5	162	43,098	B4-U0-G5	161
P26-A11-750-x	304	49,434	B4-U0-G4	163	48,554	B4-U0-G5	160	48,105	B4-U0-G5	158	47,852	B4-U0-G5	158
P26-A12-750-x	344	54,573	B5-U0-G5	159	53,600	B4-U0-G5	156	53,106	B4-U0-G5	155	52,826	B4-U0-G5	154
P26-A13-750-x	383	59,662	B5-U0-G5	156	58,600	B4-U0-G5	153	58,059	B4-U0-G5	152	57,753	B4-U0-G5	151
			Т5М			T5N			T5W			AFR	
		Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
		12,538	B4-U0-G2	185	12,655	B3-U0-G2	187	11,803	B4-U0-G3	174	12,530	B3-U0-G3	185
		15,384	B4-U0-G2	180	15,527	B4-U0-G2	182	14,481	B4-U0-G3	170	15,374	B3-U0-G3	180
		18,518	B4-U0-G2	179	18,691	B4-U0-G2	181	17,432	B4-U0-G3	169	18,506	B3-U0-G3	179
		21,705	B4-U0-G2	177	21,907	B4-U0-G2	179	20,432	B5-U0-G3	167	21,691	B3-U0-G3	177
		25,717	B5-U0-G3	173	25,957	B5-U0-G3	175	24,209	B5-U0-G4	163	25,701	B4-U0-G3	173
		28,511	B5-U0-G3	186	28,777	B5-U0-G3	187	26,839	B5-U0-G4	175	28,493	B4-U0-G4	185
		32,584	B5-U0-G3	183	32,887	B5-U0-G3	185	30,672	B5-U0-G4	172	32,562	B4-U0-G4	183
		36,339	B5-U0-G4	177	36,678	B5-U0-G3	178	34,208	B5-U0-G5	166	36,315	B4-U0-G4	177
		40,198	B5-U0-G4	175	40,572	B5-U0-G4	177	37,840	B5-U0-G5	165	40,171	B4-U0-G4	175
		45,981	B5-U0-G4	172	46,410	B5-U0-G4	174	43,284	B5-U0-G5	162	45,951	B4-U0-G4	172
		51,054	B5-U0-G4	168	51,530	B5-U0-G4	170	48,059	B5-U0-G5	158	51,020	B5-U0-G4	168
		56,360	B5-U0-G5	164	56,886	B5-U0-G4	166	53,054	B5-U0-G5	154	56,324	B5-U0-G4	164
		61,617	B5-U0-G5	161	62,191	B5-U0-G4	162	58,003	B5-U0-G5	152	61,577	B5-U0-G5	161
			Bl	LC			L	CL			L	CR	
		Lumen Output		JG ting	Efficacy (LPW)	Lumen Output		JG ting	Efficacy (LPW)	Lumen Output		UG ting	Efficacy (LPW)
		8,930	B1-U	0-G2	132	5,628		-	83	5,628		-	83
		10,956	B1-U	0-G2	128	6,905		-	81	6,905		-	81
		13,189	B1-U	0-G2	128	8,312		-	81	8,312		-	81
		15,459	B1-U	0-G3	126	9,743		-	79	9,743		-	79
		18,316	B1-U	0-G3	123	11,544		-	78	11,544		-	78
		20,306	B1-U	0-G4	132	12,798		-	83	12,798		-	83
		23,206	B1-U	0-G4	130	14,626		-	82	14,626		-	82
		25,881	B1-U	0-G4	126	16,312		-	79	16,312		-	79
		28,629	B1-U	0-G4	125	18,043		-	79	18,043		-	79
		32,748	B2-U	0-G5	123	20,639		-	77	20,639		-	77
		36,361	B2-U	0-G5	120	22,916		-	76	22,916		-	76
		40,141	B2-U	0-G5	117	25,298		-	74	25,298		-	74
									72	27,658			72

тзм

BUG

Efficacy

T4M

BUG

Efficacy

T4W

BUG

Efficacy

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

 $NOTE: Some\ data\ may\ be\ scaled\ based\ on\ tests\ of\ similar\ (but\ not\ identical)\ luminaires.\ Contact\ factory\ for\ configurations\ not\ shown.$ 

# Area light

P26 lumen values

LED Wattage and Lumen Values -80CRI 3000K

	Average				<del>!</del>			<del> </del>					
Ordering Code	System Watts (W)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-A01-830-x	68	10,840	B2-U0-G2	160	10,647	B2-U0-G2	157	10,549	B2-U0-G2	156	10,493	B2-U0-G3	155
P26-A02-830-x	85	13,300	B3-U0-G3	156	13,063	B2-U0-G3	153	12,942	B2-U0-G3	152	12,874	B2-U0-G3	151
P26-A03-830-x	103	16,009	B3-U0-G3	155	15,724	B3-U0-G3	152	15,579	B2-U0-G3	151	15,497	B3-U0-G3	150
P26-A04-830-x	123	18,765	B3-U0-G3	153	18,430	B3-U0-G3	150	18,260	B2-U0-G3	149	18,164	B3-U0-G3	148
P26-A05-830-x	149	22,234	B3-U0-G3	150	21,838	B3-U0-G4	147	21,636	B3-U0-G4	146	21,522	B3-U0-G4	145
P26-A06-830-x	154	24,649	B3-U0-G3	160	24,210	B3-U0-G4	158	23,986	B3-U0-G4	156	23,860	B3-U0-G4	155
P26-A07-830-x	178	28,170	B3-U0-G3	158	27,668	B3-U0-G4	156	27,412	B3-U0-G4	154	27,268	B3-U0-G4	153
P26-A08-830-x	206	31,417	B4-U0-G4	153	30,857	B3-U0-G4	150	30,572	B3-U0-G4	149	30,411	B3-U0-G4	148
P26-A09-830-x	230	34,752	B4-U0-G4	151	34,133	B3-U0-G5	149	33,818	B3-U0-G5	147	33,640	B3-U0-G5	146
P26-A10-830-x	267	39,752	B4-U0-G4	149	39,044	B4-U0-G5	146	38,684	B3-U0-G5	145	38,480	B4-U0-G5	144
P26-A11-830-x	304	44,138	B4-U0-G4	145	43,351	B4-U0-G5	143	42,951	B4-U0-G5	141	42,725	B4-U0-G5	141
P26-A12-830-x	344	48,726	B4-U0-G4	142	47,858	B4-U0-G5	139	47,416	B4-U0-G5	138	47,166	B4-U0-G5	137
P26-A13-830-x	383	53,270	B5-U0-G5	139	52,321	B4-U0-G5	137	51,838	B4-U0-G5	135	51,565	B4-U0-G5	135
			Т5М			T5N			T5W			AFR	
		Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
		11,195	B4-U0-G2	165	11,299	B3-U0-G2	167	10,538	B4-U0-G3	155	11,188	B3-U0-G2	165
		13,735	B4-U0-G2	161	13,863	B4-U0-G2	162	12,930	B4-U0-G3	151	13,726	B3-U0-G3	161
		16,534	B4-U0-G2	160	16,688	B4-U0-G2	162	15,564	B4-U0-G3	151	16,523	B3-U0-G3	160
		19,379	B4-U0-G2	158	19,560	B4-U0-G2	159	18,243	B5-U0-G3	149	19,367	B3-U0-G3	158
		22,962	B5-U0-G3	155	23,176	B4-U0-G2	156	21,615	B5-U0-G4	146	22,947	B3-U0-G3	155
		25,456	B5-U0-G3	166	25,694	B4-U0-G2	167	23,963	B5-U0-G4	156	25,440	B4-U0-G3	166
		29,092	B5-U0-G3	164	29,364	B5-U0-G3	165	27,386	B5-U0-G4	154	29,073	B4-U0-G4	163
		32,446	B5-U0-G3	158	32,748	B5-U0-G3	159	30,543	B5-U0-G4	149	32,424	B4-U0-G4	158
		35,891	B5-U0-G4	156	36,225	B5-U0-G3	158	33,786	B5-U0-G5	147	35,867	B4-U0-G4	156
		41,055	B5-U0-G4	154	41,437	B5-U0-G4	155	38,646	B5-U0-G5	145	41,028	B4-U0-G4	153
		45,584	B5-U0-G4	150	46,009	B5-U0-G4	152	42,910	B5-U0-G5	141	45,554	B4-U0-G4	150
		50,322	B5-U0-G4	146	50,791	B5-U0-G4	148	47,370	B5-U0-G5	138	50,289	B4-U0-G4	146
		55,015	B5-U0-G5	144	55,528	B5-U0-G4	145	51,788	B5-U0-G5	135	54,979	B5-U0-G4	144
			BL	.c		<u> </u>	L	CL				CR	
		Lumen Output	Bl Rat	JG ing	Efficacy (LPW)	Lumen Output		UG ting	Efficacy (LPW)	Lumen Output		UG ting	Efficacy (LPW)
		7,483	B1-U	0-G2	110	5,025		-	74	5,025		-	74
		9,181	B1-U	0-G2	108	6,165		-	72	6,165		-	72
		11,052	B1-U	0-G2	107	7,422		-	72	7,422		-	72
		12,954	B1-U	0-G2	106	8,699		-	71	8,699		-	71
		15,349	B1-U0	0-G3	103	10,307		-	69	10,307		-	69
		17,017	B1-U	0-G3	111	11,427		-	74	11,427		-	74
		19,447	B1-U	0-G3	109	13,059		-	73	13,059		-	73
		21,688	B1-U	0-G4	106	14,564		-	71	14,564		-	71

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

16,110

18,428

20,461

22,588

24,695

 $NOTE: Some\ data\ may\ be\ scaled\ based\ on\ tests\ of\ similar\ (but\ not\ identical)\ luminaires.\ Contact\ factory\ for\ configurations\ not\ shown.$ 

70

69

67

66

65

16,110

18,428

20,461

22,588

24,695

70

69

67

66

65

23,991

27,443

30,471

33,638

36,775

B1-U0-G4

B1-U0-G4

B2-U0-G4

B2-U0-G5

B2-U0-G5

104

103

100

98

96

T2M

BUG

Efficacy

# Area light

P26 lumen values

LED Wattage and Lumen Values -80CRI 4000K

Average System

Ordering Code	Watts (W)	Output	Rating	(LPW)	Output	Rating	(LPW)	Output	Rating	(LPW)	Output	Rating	(LPW)
P26-A01-840-x	68	11,381	B2-U0-G2	168	11,178	B2-U0-G2	165	11,075	B2-U0-G2	163	11,017	B2-U0-G3	163
P26-A02-840-x	85	13,963	B3-U0-G3	164	13,715	B2-U0-G3	161	13,588	B2-U0-G3	159	13,516	B2-U0-G3	158
P26-A03-840-x	103	16,808	B3-U0-G3	163	16,509	B3-U0-G3	160	16,356	B2-U0-G3	158	16,270	B3-U0-G3	158
P26-A04-840-x	123	19,701	B3-U0-G3	161	19,350	B3-U0-G3	158	19,171	B3-U0-G3	156	19,070	B3-U0-G3	155
P26-A05-840-x	149	23,343	B3-U0-G3	157	22,927	B3-U0-G4	154	22,716	B3-U0-G4	153	22,596	B3-U0-G4	152
P26-A06-840-x	154	25,879	B3-U0-G3	168	25,418	B3-U0-G4	165	25,183	B3-U0-G4	164	25,051	B3-U0-G4	163
P26-A07-840-x	178	29,575	B4-U0-G4	166	29,048	B3-U0-G4	163	28,780	B3-U0-G4	162	28,629	B3-U0-G4	161
P26-A08-840-x	206	32,984	B4-U0-G4	160	32,397	B3-U0-G5	158	32,098	B3-U0-G5	156	31,929	B3-U0-G5	155
P26-A09-840-x	230	36,486	B4-U0-G4	159	35,836	B4-U0-G5	156	35,506	B3-U0-G5	155	35,319	B3-U0-G5	154
P26-A10-840-x	267	41,736	B4-U0-G4	156	40,993	B4-U0-G5	153	40,614	B3-U0-G5	152	40,400	B4-U0-G5	151
P26-A11-840-x	304	46,340	B4-U0-G4	153	45,515	B4-U0-G5	150	45,095	B4-U0-G5	149	44,857	B4-U0-G5	148
P26-A12-840-x	344	51,157	B4-U0-G5	149	50,246	B4-U0-G5	146	49,782	B4-U0-G5	145	49,520	B4-U0-G5	144
P26-A13-840-x	383	55,928	B5-U0-G5	146	54,932	B4-U0-G5	144	54,425	B4-U0-G5	142	54,138	B4-U0-G5	141
			Т5М			T5N			T5W			AFR	
		Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
		11,754	B4-U0-G2	173	11,863	B3-U0-G2	175	11,064	B4-U0-G3	163	11,746	B3-U0-G3	173
		14,421	B4-U0-G2	169	14,555	B4-U0-G2	170	13,575	B4-U0-G3	159	14,411	B3-U0-G3	169
		17,359	B4-U0-G2	168	17,521	B4-U0-G2	170	16,341	B4-U0-G3	158	17,348	B3-U0-G3	168
		20,346	B4-U0-G2	166	20,536	B4-U0-G2	167	19,153	B5-U0-G3	156	20,333	B3-U0-G3	166
		24,108	B5-U0-G3	162	24,333	B4-U0-G2	164	22,694	B5-U0-G4	153	24,092	B3-U0-G3	162
		26,727	B5-U0-G3	174	26,976	B5-U0-G3	176	25,159	B5-U0-G4	164	26,709	B4-U0-G3	174
		30,544	B5-U0-G3	172	30,829	B5-U0-G3	173	28,753	B5-U0-G4	162	30,524	B4-U0-G4	172
		34,065	B5-U0-G4	166	34,382	B5-U0-G3	167	32,067	B5-U0-G5	156	34,042	B4-U0-G4	166
		37,682	B5-U0-G4	164	38,033	B5-U0-G3	166	35,471	B5-U0-G5	154	37,657	B4-U0-G4	164
		43,103	B5-U0-G4	161	43,505	B5-U0-G4	163	40,575	B5-U0-G5	152	43,075	B4-U0-G4	161
		47,858	B5-U0-G4	158	48,304	B5-U0-G4	159	45,051	B5-U0-G5	148	47,827	B4-U0-G4	158
		52,833	B5-U0-G4	154	53,325	B5-U0-G4	155	49,734	B5-U0-G5	145	52,798	B5-U0-G4	154
		57,760	B5-U0-G5	151	58,299	B5-U0-G4	152	54,372	B5-U0-G5	142	57,723	B5-U0-G5	151
			BL	c			L	CL	L		L	.CR	
		Lumen Output			Efficacy (LPW)	Lumen Output		JG ting	Efficacy (LPW)	Lumen Output		ting	Efficacy (LPW)
		7,957	B1-U0	)-G2	117	5,276		-	78	5,276		-	78
		9,762	B1-U0	)-G2	114	6,473		-	76	6,473		-	76
		11,751	B1-U0	)-G2	114	7,792		-	75	7,792		-	75
		13,774	B1-U0	)-G3	112	9,133		-	74	9,133		-	74
		16,320	B1-U0	)-G3	110	10,821		-	73	10,821		-	73
		18,093	B1-U0	)-G3	118	11,997		-	78	11,997		-	78
		20,677	B1-U0	)-G4	116	13,710		-	77	13,710		-	77
		23,060	B1-UC	)-G4	112	15,291		-	74	15,291		-	74
		25,509	B1-U0	)-G4	111	16,914		-	74	16,914		-	74
		29,179	B2-U0	D-G4	109	19,348		-	72	19,348		-	72
		32,398	B2-U0	D-G5	107	21,482		-	71	21,482		-	71

тзм

BUG

Efficacy

T4M

BUG

T4W

BUG

Efficacy

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

23,715

25,927

 $NOTE: Some\ data\ may\ be\ scaled\ based\ on\ tests\ of\ similar\ (but\ not\ identical)\ luminaires.\ Contact\ factory\ for\ configurations\ not\ shown.$ 

69

68

23,715

25,927

69

68

35,765

39,101

B2-U0-G5

B2-U0-G5

104

102

#### Area light

#### **Specifications**

#### Housing

Two-piece sealed enclosure with main part of the housing designed as the structural and heat sink frame enclosed by cover to give its unique form. It also includes integral arm and separate, self-retained hinged, one-piece die cast door. All die-cast parts made of low copper die cast aluminum alloy for a high resistance to corrosion. The sleek profile with optimized surface area allows housing to provide excellent heat transfer with minimum use of heat fins, giving the freedom to have a clean minimalist aesthetic design. Luminaire housing rated to IP66, tested in accordance to Section 9 of IEC 60598-1.

#### Vibration resistance

Luminaire is tested and rated Level 2 for Bridge and Overpass application (formerly 3G) cycles conforming to standards set forth by ANSI C136.31-2023. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

#### Light engine

Light engine comprises of a module of 40-LED aluminum metal clad board fully sealed with optics offered in multiples of 2 or 4 modules depending on lumen package selection. A01-A05 use 2 LED modules, A06-A13 come with 4 LED modules. Module is RoHS compliant. Color temperature as per ANSI/NEMA bin 2700 Kelvin nominal (2725 ±145K), 3000 Kelvin nominal (3045K +/- 175K) or 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical. Other CCT/CRI also available, consult factory. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1. Contact factory for details. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

#### **Energy saving benefits**

System efficacy up to 185 lms/W with significant energy savings over legacy technology luminaires. Optional control options provide added energy savings during unoccupied periods.

#### Optical systems

Types 2M, 3M, 4M, 4W, 5N, 5M, 5W, and Auto Front Row distributions available. Back light control (BLC) and Corner optics (LCL,RCL) optics are offered to meet LEED Standards and to provide the best lighting control possible for stringent requirements around property lines. All optics when specified and used as rotated, are factory set only. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (UO per IESNA TM-15).

#### Mounting

Standard luminaire arm mounts to 4" O.D. round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles. PureForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, PureForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are slipfitter and wall mounting accessories. Note that only fixed mounts (AR, RAM, WS) are required to meet IDA Dark Sky compliance. SF mounting will not meet IDA.

#### Control options

**DLEA:** Access to 0-10V dimming leads supplied through the yoke of the luminaire (for secondary dimming controls by others). Cannot be used with other control options.

Sensor Ready Zhaga Socket Connector (SRDR): Product is D4i Certified and equipped with Sensor Ready drivers connected to 4-pin Zhaga Book 18 compliant receptacle designed for sensor and other control system applications. Receptacle is rated IP66 assembly in a compact design that provides a sealed electrical interface and rated UV resistance, mounted on underside of the luminaire, protective dust cap included. When a controller not provided by Signify is used with Sensor Ready Zhaga socket connector, the controller must be certified to work with the Xitanium SR LED drivers as part of the SR certified program. SRDR can be used with NEMA 7-pin twist lock receptacle, which is mounted on top of the luminaire. D4i certification validates compliance with specifications for data exchange in connected lighting systems, ensuring interoperability, compatibility, and efficient operation. It also assures customers that the device meets industry standards.

**Dual Circuit Control (DCC):** Luminaire equipped with the ability to have two separate circuits controlling drivers and light engines independently. Permits separate switching of separate modules controlled by use of two sets of leads, one for each circuit. Not recommended to be used with other control options, motion response, or photocells.

Automatic Profile Dimming (CM/CA): Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. Automatic dimming profile scheduled with the following settings:

- CS50/CS30: Security for 7 hours night duration (Ex., 11 PM 6 AM)
- CM50/CM30: Median for 8 hours night duration (Ex., 10 PM 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Time clock or photocell is required for on/off functionality to allow for midpoint calculation. Cannot be used with other dimming control options.

**Field Adjustable Wattage Selector (FAWS):** Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest of 10 output positions. Consult factory for specific dimming settings for each position.

	P26 A05-A07	•
FAWS Position	Typical Delivered Lumens Multiplier	Typical System Wattage
1	0.27	0.29
2	0.49	0.52
3	0.57	0.61
4	0.70	0.72
5	0.74	0.77
6	0.81	0.80
7	0.88	0.83
8	0.92	0.93
9	0.98	0.98
10	1.00	1.00

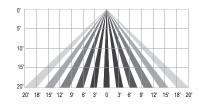
	P26 A08-A13	
FAWS Position	Typical Delivered Lumens Multiplier	Typical System Wattage
1	0.12	0.12
2	0.23	0.24
3	0.30	0.32
4	0.41	0.44
5	0.48	0.51
6	0.56	0.59
7	0.65	0.68
8	0.74	0.76
9	0.81	0.83
10	1.00	1.00

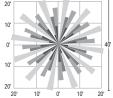
#### Motion response options

BL50L2/BL50L3: Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming. BL50Lx options are set/operate in the following fashion: The motion sensor is set to a constant 50% dim. When motion is detected by the PIR sensor, the luminaire returns to full power/ light output. Low dimming is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required through use of option FSIR 100 programming remote or if alternate programming is required from the factory consult technical support.

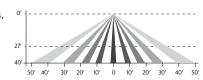
Infrared Motion Response Lenses (BL50L3/BL50L7): Lens #3 (L3) is designed for higher mounting heights up to 20' with a 40' diameter coverage area. Lens #7 (L7) is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns.

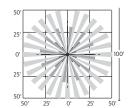
#### IMRI3 Luminaire with #3 lens





IMRI7 Luminaire with #7 lens





## Area light

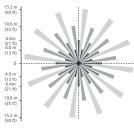
#### Specifications (continued)

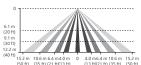
Outdoor Interact: Scalable connected sensor with integral occupancy and daylight sensing, supports wireless mesh connectivity. Sensor works in the Foundation mode when configured without a gateway or in an Interact Advanced mode if a compatible gateway (can be added later) is used. Interact offers an app, a portal and a broad portfolio of Interact ready Indoor and Outdoor luminaires, lamps and retrofit kits all working on the same system. Startup is implemented via Interact Pro App (available in iOS® or Android®) and Bluetooth® connectivity. The app provides flexibility to choose between a gateway or non gateway mode for setup. Setup with the gateway requires wired Internet access to the gateway. Prepare project configuration steps remotely and use IRT9015 remote accessory (ordered separately) or the App on-site to identify and group devices together. WIAP includes SR driver and SR receptacle. Daylight harvesting supported through dimming – activated via the Interact app. Sensors are available in black or white finish. IP66 rated.

For more information on Interact visit:

https://www.interact-lighting.com/en-us/interact-offering

#### HB or HW high sensor





**Note:** The beam patterns shown are intended solely as a general guide and are not to scale. Sensing capabilities and coverage area depend on many factors including the size, speed and direction of travel of persons and vehicles; sensor mounting height; environmental and site conditions; etc.

#### Electrica

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. RoHS compliant.

Surge protection (SP1/SP2): Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

**Button Photocontrol (PCB):** Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated input voltage must be specified 120V, 208-277V, 347V, or 480V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Twist-Lock Receptacle (TLR7/TLRPC): TLR options come with 7 pins connected to 0-10V driver. Not all pins will be connected. Dimming Receptacle Type D-24 (7-pin) in accordance to ANSI C136.41. can be used with third-party control system. Receptacle located on top of luminaire housing. When specified with receptacle and photoelectric cell(TLRPC), 7-pin receptacle is supplier and voltage must be specified. When ordering Twist-lock receptacle (TLR7), photocell or shorting cap is not included. If Twistlock receptacle option is ordered with Dimming Control option, then dimming leads from driver will not be connected to TLR but consumed by selected device. Devices installed to NEMA twist-lock Receptacle must be IPX6 rated.

Twist-Lock Receptacle (TR7/TLP): TR7 includes (Type D-24) connected to SR/DALI driver with all leads connected for use of 3rd party control systems. Receptacles are in accordance to ANSI C136.41. Receptacle located on top of luminaire housing. When specified with receptacle and photoelectric cell (TRPC), 7-pin receptacle is supplied and voltage must be specified. When ordering Twist-lock receptacle (TR7), photocell or shorting cap is not included.

#### Listings

UL/cUL wet location listed to the UL 1598 standard. All configurations suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F) without shielding. A01-A12 UL rated up +50°C without shielding. With Shielding A01-A11 up to 50°C, A12-A13 rated to 25°C. Most PureForm P26 configurations are qualified under Premium DesignLights Consortium® category. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are IDA Dark Sky Listed. Luminaire selection is approved. CCTs 3000K and warmer are IDA Dark Sky Listed.

• Declare label certified, ID SGY-0011 (View full Declare label)

#### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

#### Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed on the inside of the mast door, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the app and register your product. For more details visit: <a href="mailto:signify.com/servicetag">signify.com/servicetag</a>

#### Warranty

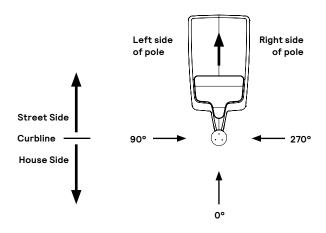
PureForm luminaires feature a 5-year limited warranty.
See signify.com/warranties for complete details and exclusions.

# Area light

**Optical Orientation Information** 

#### **Standard Optic Position**

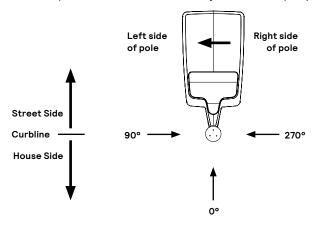
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:



Note: The hand hole will normally be located on the pole at the 0° point.

#### Optic Rotated Left (90°) Optic Position

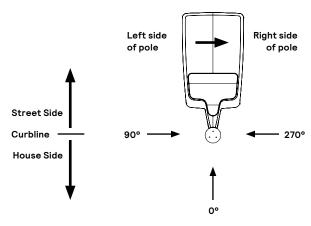
Luminaires ordered with optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

#### Optic Rotated Right (270°) Optic Position

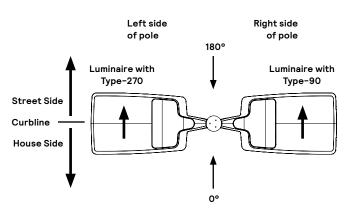
Luminaires ordered with optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

# Twin Luminaire Assemblies with Type-90/Type-270 Rotated Optical Systems

Twin luminaire assemblies installed with rotated optical systems are an excellent way to direct light toward the interior of the site (Street Side) without additional equipment. It is important, however, that care be exercised to insure that luminaires are installed in the proper location.



Luminaires with Optic Rotated Right (270°) are installed on the LEFT side of pole Luminaires with Optic Rotated Left (90°) are installed on the RIGHT side of pole

Note: The hand hole location will depend on the drilling configuration ordered for the pole.

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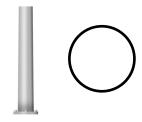
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#### Poles & Brackets



#### Site and Area Poles

**Straight Round Steel** 



The Gardco SRS Straight Round Steel pole consists of a one-piece high tensile carbon steel tube welded and secured to the carbon steel base plate providing excellent strength and integrity. The poles are finished with an electrostatically applied, thermally cured polyester powdercoat. All poles include base cover, hand hole, ground lug and top cap. Anchor bolts and templates are ordered as a separate accessory.

Project:	
Location:	
Cat.No:	
Туре:	
Lamps:	Qty:
Notes:	

#### Ordering guide

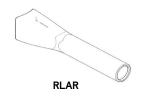
example: SRS-CB-5-7-25-T2D4L-N-BZ

Family	Pole Shaft Size (in.)  CB  Pole Shaft Wall Thicknes  CB  CB Carbon 3		l Thickness	Height (ft) ⁵	Drilling/T Configur	ations 1	Ů	emplate <sup>2</sup>	Finish	Black	Options <sup>3</sup> FES <sup>6</sup> Festoon Outlet		
ъкъ	Steel Base w/ Base	3		0.120"	12 14 16	D1 D1@180	1 Way 1 Way @ 180	DT1 DT2	Drill Template 1 Drill Template 2	BZ WH	Bronze White	VDA <sup>11</sup>	Vibration Dampener
	Cover					D2 D2@90	2 Way @ 180 2 Way @ 90	DT3 DT4	Drill Template 3 Drill Template 4	DG MG	Dark Grey Medium Grey	AHH <sup>6</sup> DR <sup>6, 8</sup>	Additional Hand Hole Duplex
						D3 D3@120	3 Way @ 90 3 Way @ 120	DT5 DT6 See drill tem	Drill Template 5 Drill Template 6 plate chart for details.	GY3 8 SSDGY 8	Light Grey, Smooth SolarForm Dark Grey (RAL7011)	VPA	Receptacle Vandalproof Screws
						<b>D4</b> 4 Way @ 90		[DTX-xxx] <sup>6,7</sup> Custom Template		GV	Galvanized (No Paint)	GFI <sup>6</sup>	DR with GFI (120V only)
		4	11	11 ga. / 0.120"	10 12	T2D4L	2-3/8" OD	nons	No Drilling	FP/GV	Finished Textured Paint	BAC 9	Buy American Compliant
					14 16 20	T2D4L T2D6L8	x 4" length 2-3/8" OD	IN .	Template (for Tenon and Plain Top		over Galvanized (Specify, ex: MG/GV)	CL1/2 <sup>6</sup> CL3/4 <sup>6</sup>	Coupling 1/2" Coupling 3/4"
					25	T3D4L	x 6" length 3" OD x 4" length		Options)	ос	Optional Color Paint (ex: RAL7024)	CL1 <sup>6</sup> CL1-1/4 <sup>6</sup> CL1-1/2 <sup>6</sup>	Coupling 1" Coupling 1-1/4" Coupling 1-1/2"
						T4D6L	4" OD x 6" length			SC <sup>6</sup>	Special/Custom Color (Specify, must supply	NL1/2 <sup>6</sup> NL3/4 <sup>6</sup>	Nipple 1/2" Nipple 3/4"
L/SRS		5	11	11 ga. / 0.120"	20 25	No Drilli	ng/No Tenon				color chip)	NL1 <sup>6</sup>	Nipple 1"
			7		30 25 30	P Plain Top					above base a	Nipple 1-1/4"  I, NR, GFI, CL*, and NL- licate height in inches and orientation to hand age 2 and 3 for details.	

- See Drilling Configurations on Page 3.
- See Luminaire Drilling Templates on Page 3
- Not all options available with all configurations. Consult factory for more details
- Options listed with gray text will be shipped with the Legacy SRS design. Use the L/SRS family code whenever these options are specified.
- Pole heights can be cut to length. Specify as a whole number in ft. (ex. 11, 13) or to the inch as a decimal (ex. 15.33 = 15' 4") or as "15FT 4IN" for Legacy designs.
   Option must be specified, including install location, by the customer before order
- release. FES, DR, GFI, AHH options typically must be placed 12-18" away from standard hand hole (20" or 12" above base).
- Custom drill templates (DTX) require factory quote.
- Option not available with Legacy SRS designs.
   Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
- 10. Consult Signify to confirm whether specific accessories are BAA-compliant.
- 11. Not available with 3" shaft size.

#### Accessories 10

Accessories												
Service	Pole Size	12NC	Description (Diameter x Length x Hook)									
Anchor Bolts + Templates												
For shipment with the pole	3" Poles	912401597399	AB 3/4x17x3-G DEC w/ 8.5 BC ABT									
(order 1 per pole)	4" & 5" Poles	912401597397	AB 3/4x24x3-G DEC w/ 8.5 BC ABT									
For Pre-Ship service	3" Poles	912401597407	AB 3/4x17x3-G DEC w/ 8.5 BC ABT-RS									
(order 1 per pole)	4" & 5" Poles	912401597405	AB 3/4x24x3-G DEC w/ 8.5 BC ABT-RS									
Part No.	Pole Size	Description										
RLAR-1A-R4@4.9-(finish)	4" Poles	Cast Aluminum mounting arm, 15" long with DT6 drill pattern (order 1 per luminaire).										
For use with Lumec Roadway and Gardco SolarForm lumin (For SolarForm: use RLAR bracket to mount horizontally, T2D6L tenon to mount vertically). Specify finish to match												

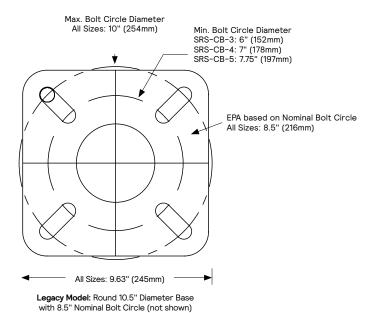


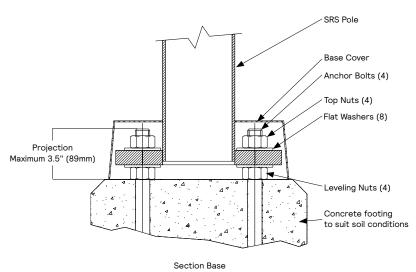
#### Quick Ship ordering guide

example: SRS-CB-4-11-20-D1-DT5-BZ-RS

Family	Base	Pole Shaft Pole Gauge Size (in.) Wall Thicknown		•	Height (ft.)⁵	Drilling Configuration		Drilling Template		Finish		Options	
SRS Straight Round Steel	CB Carbon Steel Base w/ Cover	4	11	11 ga. / 0.120"	20 25	D1 D1@180 D2 D2@90 D3 D3@120 D4	1 Way @ 180 2 Way @ 180 2 Way @ 90 3 Way @ 90 3 Way @ 120 4 Way @ 90	DT5	Drill Template 5	BZ MG BK	Bronze Medium Grey Black	RS	RapidShip*

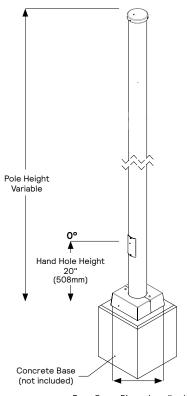
#### **Dimensions**





- Anchor Bolt Lock Washers are not normally required and are not included in standard anchor bolt sets. They are available upon request at additional cost.
- \*\*Grouting should include a drainage slot or tube (by others) to permit water to drain from the base of the pole. Failure to provide drainage may weaken the pole base structure over time and may result in pole base failure, for which Gardco is not responsible.

NOTE: Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

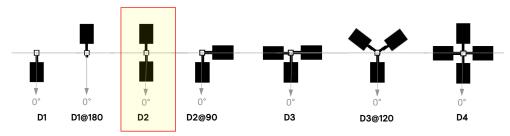


Base Cover Dimensions (L x W x H)
All Sizes: 10.32" x 10.32" x 4.08"
(262mm x 262mm x 104mm)

SRS Legacy Design not shown. **Legacy Base Cover**: Round – 10.7" Diameter x 4.5" Height **Hand Hole**: 12" Above Base

#### **Drilling Configuration**

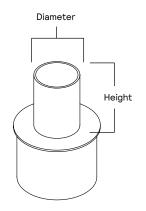
Code	Description						
D1	Single luminaire						
D1@180	Single luminaire @ 180						
D2	Two luminaires @ 180						
D2@90	Two luminaires @ 90						
D3	Three luminaires @ 90						
D3@120	Three luminaires @ 120						
D4	Four luminaires @ 90						



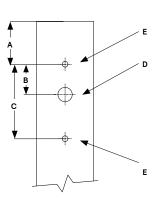
Ref. access door at 0° for all Legacy design places access door at 180°

#### **Tenon Dimensions**

Tenon	Diameter	Height
T2D4L	2.375" (60mm)	4" (102mm)
T2D6L	2.375" (60mm)	6" (152mm)
T3D4L	3" (76mm)	4" (102mm)
T4D6L	4" (102mm)	6" (152mm)



#### **Pole Top Drilling**



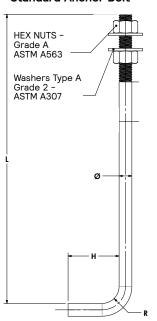
#### **Luminaire Drill Pattern**

			Pole Drilling								
Code			A To Pole Top	В	C Full Extent	D Wireway Hole	E Bolt Hole				
DT1	Drill Template 1	Gardco SlenderForm Round SFRA	2.25" (57mm)	1.5" (38.1mm)	3" (76mm)	0.875" (22.2mm)	0.40" (10.2mm)				
DT2	Drill Template 2	Gardco SlenderForm Square - SFA Gardco Gullwing - GL13, GL18 Gardco Form Ten - EH14L, EH19L, CAL17, CAL22, MAL17, MAL22	2.25" (57mm)	2.17" (55mm)	3.84" (98mm)	0.875" (22.2mm)	0.39" (9.9mm)				
DT3	Drill Template 3	Gardco PowerForm PFAS	2.25" (57mm)	1.75" (44mm)	3.84" (98mm)	0.875" (22.2mm)	0.41" (10.4mm)				
DT4	Drill Template 4	Gen1 Stonco/Keene AL150-G1, AL200-G1	2.5" (64mm)	1.7" (43mm)	3.5" (89mm)	0.875" (22.2mm)	0.41" (10.4mm)				
DT5	Drill Template 5	Gardco EcoForm Gen2 - ECF-S, ECF-L Gardco PureForm Gen2 - P15, P20, P26, P34 OptiForm Small - OPF-S OptiForm Med - OPF-M OptiForm Large - OPF-L	3" (76mm)	1" (25mm)	3" (76mm)	1" (25mm)	0.41" (10.4mm)				
DT6	Drill Template 6	Hole pattern drilled for the following: Attach RLAR bracket accessory, suitable for use with: Lumec Capella CPLM, CPLS Lumec RoadStar GPLM, GPLS Lumec RoadFocus RFS, RFM, RFL Lumec RoadView RVM, RVS Lumec MiniView SVS Lumec StreetView SVM Gardco SolarForm BRP710	2.5" (64mm)	1" (25mm)	2" (50mm)	0.875" (22mm)	0.5" (12.7mm)				

#### Pole Data

			Pole	Specs		Anchor Bolt Data							
	Product Catalog Number	Height Diameter Thick		Wall Thickness (in.)	Pole Weight (lbs)	Bolt Circle (in.)	Legacy Bolt Circle (in.) Anchor Bolt Spec (in.)		Legacy Anchor Bolt Spec (in.)	Anchor Bolt Max Proj. (in.)			
•	SRS-CB-3-11-10	10	3	0.12	37	8.5 (6-10)	8.5 (8-9)	3/4 x 17 x 3	3/4 x 17 x 3	3.5			
•	SRS-CB-3-11-12	12	3	0.12	44	8.5 (6-10)	8.5 (8-9)	3/4 x 17 x 3	3/4 x 17 x 3	3.5			
•	SRS-CB-3-11-14	14	3	0.12	52	8.5 (6-10)	8.5 (8-9)	3/4 x 17 x 3	3/4 x 17 x 3	3.5			
•	SRS-CB-3-11-16	16	3	0.12	59	8.5 (6-10)	8.5 (8-9)	3/4 x 17 x 3	3/4 x 17 x 3	3.5			
	SRS-CB-4-11-10	10	4	0.12	50	8.5 (7-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-4-11-12	12	4	0.12	59	8.5 (7-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-4-11-14	14	4	0.12	69	8.5 (7-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-4-11-16	16	4	0.12	79	8.5 (7-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-4-11-20	20	4	0.12	99	8.5 (7-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-4-11-25	25	4	0.12	123	8.5 (7-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-5-11-20	20	5	0.12	124	8.5 (7.75-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-5-11-25	25	5	0.12	155	8.5 (7.75-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
•	SRS-CB-5-11-30	30	5	0.12	186	8.5 (7.75-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-5-7-25	25	5	0.18	229	8.5 (7.75-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			
	SRS-CB-5-7-30	30	5	0.18	275	8.5 (7.75-10)	8.5 (8-9)	3/4 x 24 x 3	3/4 x 24 x 3	3.5			

#### **Standard Anchor Bolt**



#### Pole Data (cont.)

	Pole Data (Cont	)															
				AASI	HTO 200	01 - EPA	ft²			CSA - EPA ft²							
	Product Catalog Number	80 MPH	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH	300 Pa 79 MPH	400 Pa 91 MPH	500 Pa 102 MPH	600 Pa 111 MPH	700 Pa 120 MPH	800 Pa 129 MPH	900 Pa 136 MPH	1000 Pa 144 MPH
•	SRS-CB-3-11-10	14.20	10.96	8.66	6.93	5.61	4.61	3.79	3.15	15.28	11.12	8.62	6.96	5.76	4.87	4.18	3.62
•	SRS-CB-3-11-12	11.47	8.75	6.80	5.35	4.26	3.40	2.72	2.17	12.13	8.68	6.61	5.24	4.26	3.50	2.94	2.48
•	SRS-CB-3-11-14	9.22	6.99	5.38	4.12	3.18	2.45	1.86	1.39	9.68	6.76	5.02	3.85	3.03	2.40	1.92	1.53
•	SRS-CB-3-11-16	6.51	4.79	3.56	2.68	1.98	1.45	1.02	N/A	7.66	5.18	3.68	2.70	1.98	1.45	1.04	N/A
	SRS-CB-4-11-10	26.56	20.65	16.39	13.26	10.94	9.24	7.90	6.82	28.97	21.28	16.66	13.58	11.38	9.73	8.45	7.43
	SRS-CB-4-11-12	21.80	16.80	13.23	10.57	8.62	7.25	6.17	5.32	23.58	17.13	13.26	10.69	8.83	7.46	6.37	5.53
	SRS-CB-4-11-14	18.19	13.87	10.77	8.48	6.82	5.71	4.83	4.12	19.44	13.93	10.63	8.42	6.84	5.67	4.73	4.01
	SRS-CB-4-11-16	15.30	11.51	8.80	6.78	5.35	4.44	3.71	3.15	16.14	11.35	8.48	6.55	5.20	4.17	3.38	2.74
	SRS-CB-4-11-20	10.47	7.57	5.49	3.97	2.89	2.31	1.86	1.51	10.98	7.29	5.06	3.59	2.53	1.74	1.12	N/A
	SRS-CB-4-11-25	6.35	4.15	2.56	1.41	N/A	N/A	N/A	N/A	6.12	3.38	1.74	N/A	N/A	N/A	N/A	N/A
	SRS-CB-5-11-20	17.94	13.29	10.30	8.31	6.78	5.64	4.73	4.03	19.67	13.56	9.89	7.45	5.71	4.40	3.68	3.15
	SRS-CB-5-11-25	11.74	8.19	6.08	4.75	3.77	3.03	2.45	2.00	12.72	8.04	5.23	3.36	2.01	1.02	N/A	N/A
•	SRS-CB-5-11-30	7.29	4.48	2.95	2.11	1.51	1.08	N/A	N/A	7.29	3.64	1.47	N/A	N/A	N/A	N/A	N/A
	SRS-CB-5-7-25	19.65	14.46	11.14	8.93	7.29	6.02	5.04	4.26	21.58	14.69	10.55	7.78	5.82	4.34	3.56	3.01
•	SRS-CB-5-7-30	13.62	9.48	6.99	5.46	4.32	3.47	2.80	2.27	14.22	8.85	5.63	3.48	1.94	N/A	N/A	N/A

<sup>1.</sup> Warning: Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability. Specifying BAA or BAC compliant poles may result in different EPA ratings.

SRS Legacy Design

<sup>2.</sup> Factory supplied template must be used when setting anchor bolts. Gardoo will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates. Exact length of anchor bolts may vary.

<sup>3.</sup> EPA ratings are based on the listed, optimal nominal dimension of the bolt circle listed above. The bolt circle has limited variability but the EPA rating will change. **Note:** Above EPA (Effective Projected Area) rating is in accordance with AASHTO 2001, with a 50 pound load (22.7 kg) placed at 1 foot (305mm) above its center.

#### **Specifications**

#### Pole shaft

The pole shaft is fabricated from a single piece of 11 ga (0.1196") or 7 ga (0.180") high tensile carbon steel. The formed steel plate is longitudinally welded providing minimum yield strength of 50 ksi. Shaft includes factory installed copper ground lug, 10–7 copper wire, and ground lug screw.

#### **Anchor Base**

The pole anchor base is fabricated from 44W structural quality carbon steel with a minimum yield strength of 44 ksi. The base plate is circumferentially welded on both top and bottom.

#### **Anchor Bolts**

Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar that meets or exceeds a minimum guaranteed yield strength of 55 ksi. Bolts have an "L" bend on one end and threaded on the opposite end. Anchor bolts are galvanized in accordance with ASTM A-153.6 C1.C. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts and two (2) flat washers, are provided per pole (priced and ordered separately), unless otherwise specified. Conforms to AASHTO M 314 90 and ASTM F1554.

#### **Customer Specified Options**

The options, DTX, FES, DR, GFI, AHH, CL\*, and NL\* require factory quotation. Poles with custom drilling templates (DTX) are provided as a service, however Signify holds no liability for improper installation and safety when using non-Signify luminaires or attachments on Gardco poles via drilling, tenon mounting, or coupling and nipple mounting. It is the responsibility of the customer to ensure the pole is loaded and installed in a safe manner to the limitations of the pole structure. See "Warning" paragraph for more details.

#### Base Cover

A two-piece painted square aluminum base cover that completely conceals the entire base plate and anchorage. Base cover is provided standard. Legacy model includes a round 0.125" thick composite base cover.

#### Hand hole

The hand hole has a nominal rectangular 2"x4.5" inside opening in the pole shaft. Included is an aluminum cover plate, EPDM gasket, and captive attachment screws. The hand hole is located 20" above the base and 0° clockwise with respect to the luminaire arm when viewed from the top of the pole for one arm. For two arms the hand hole is located directly under one arm. Legacy design includes an easy to install, self-contained Swing Latch hand hole cover assembly. U.S. Patent Swing Latch cover is fabricated from durable polycarbonate/ABS blend plastic. All pole assemblies are provided with a 2.50" x 5.00" rectangular hand hole.

#### Pole Top Cap

Each pole assembly is provided with a removable aluminum pole top cap painted to match the specified pole and attached with three pressure screws. Legacy design is provided with a removable plastic top push cap. Finish is Black.

#### Finish

Poles are available with Gardco's standard textured color finishes - Black, White, Bronze, Dark Grey, Medium Grey, and Lumec GY3 for a match with roadway luminaire finishes. Optional Galvanized finish and custom colors also available. Legacy design is provided with gloss paint on standard finishes.

#### Couplings and Nipples

Couplings (NPSC standard internal threads) and Nipples (NPT standard external threads) are available to mount 3rd party objects to the pole. For most applications Couplings and Nipples must be at least 4' from the base of the pole. Lengths are as follows:

Couplings < 1" dia. = 1" length Couplings >= 1" dia. = 1.5" length Nipples < 1" dia. = 1.5" length Nipples >= 1" dia. = 2" length

Legacy pole designs may deviate from specifications listed here. See "Customer Specified Options" paragraph for more details.

#### Duplex Receptacle (DR and GFI)

DR and GFI options are placed at 2' below the pole top on the same side as the hand hole unless otherwise specified. DR or GFI options cannot be placed within 1' of the the hand hole. Options can typically be placed 32" above base for utility purposes. Maximum output of the receptacles are 15A.

#### **General Pole Information**

#### Design

EPA specs conform to AASHTO 2001. The poles as charted are designed to withstand dead loads and predicted dynamic loads developed by variable wind pressure with an additional 2.5 gust factor under the following conditions: The charted weights include luminaire(s) and/or mounting bracket(s). Poles installed in areas of known abnormal conditions may require special consideration. For example: coastal areas, airports and areas of special winds. Poles are designed for ground mounted applications. Poles mounted on structures (such as buildings and bridges) may also necessitate special consideration requiring Gardco's recommendation. Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the pole.

#### Warning

This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessory and foundation under the given site conditions and intended usage. The addition of any items to the pole, in addition to the luminaire, will dramatically impact the EPA load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Gardco assumes no responsibility for such proper analysis or product selections. Failure to ensure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.

#### Warranty

Gardoo Steel poles are covered by a 3-year structural and finish warranty. Legacy designs are covered by a 1-year warranty. For more information visit signify.com/warranties.