

Project Name	<u>Hough Community Greenspace</u>
Project Location	<u>1605 E 85th St, Cleveland, OH 44103</u>
Owner	<u>Western Reserve Land Conservancy</u>
Project Manager	<u>Tim Dehm</u>
Design Team	<u>City Architecture and Layer Cake Design</u>
Delivery Method	<u>Construction Manager at Risk with a Guaranteed Maximum Price</u>
Agreement	<u>AIA Document A133</u>
Response Deadline	<u>03/08/2024 at 5:00 PM</u>

Submit the requested number of Request for Qualifications directly to Tim Dehm at tdehm@wrlandconservancy.org. See Section E of this RFQ for additional submittal instructions.

Submit all questions or Requests for Information (RFI) regarding this RFQ and/or the attached exhibits in writing to Andrew Sargeant at (asargeant@layercakedesign.com) and include Tim Dehm at tdehm@wrlandconservancy.org with the project name included in the subject line (no phone calls please). Questions will be answered regularly until one week before the response deadline.

Electronic submittals should be combined into one PDF file named with the Project name listed on the RFQ and your firm’s name. Please insert the Project name and firm name in the email subject line. Proposals must be submitted electronically by email. Submittals are limited to one email with a maximum file size of 15 MB.

Please use the following link to access information about the project’s background:
<https://wrlandconservancy.org/neighborhood-stabilization/hough-community-greenspace>

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Project Overview

A. Project Description

Western Reserve Land Conservancy ("Owner") is seeking proposals for Construction Manager-at-Risk ("CMR") services during pre-construction and construction phase for the Hough Community Greenspace at 1605 E 85th St, Cleveland, OH 44103 (the "Project"). City Architecture and Layer Cake Design ("Design Team") is engaged to provide Landscape Architectural and Engineering services for the Project under a separate contract.

The project is in the Construction Documentation Phase focusing on defining the overall scope of work. The Owner has engaged (under separate contract) with the City Architecture and Layer Cake Design ("Design Team") to provide professional design services for the project. Please see Exhibit B for the preliminary pricing set. Please forward RFIs to Andrew Sargeant (asargeant@layercakedesign.com) and include Tim Dehm (tdehm@wrlandconservancy.org) on all correspondences.

The Hough Community Greenspace is a proposed high-quality passive park in the eastside Cleveland neighborhood of Hough. In response to a 2021 City of Cleveland and Cleveland Metropolitan School District's joint RFP for vacant property re-development, the Owner expressed interest in repurposing the 2.6-acre lot where the former John W. Raper school site once stood. After a community-engaged design process, the Owner contracted with the Design Team to further develop the design in preparation for implementation.

The Project will be constructed in two phases. During Phase 1, The Owner will oversee the design and construction of the Project as detailed in the scope of work in this document. Upon completion of Phase 1, the Owner will transfer ownership of the Project to the City of Cleveland. Phase 2 will be overseen by the City of Cleveland and will include installing playground equipment. To facilitate the playground installation in Phase 2, select areas of the project will remain incomplete to provide access. Following playground installation, final elements of the scope, including planting and signage, will be installed. The City of Cleveland will continue to own and maintain the Project.

The project budget for the Phase 1 scope of work, inclusive of hard and soft costs, is \$1,250,000. The Phase 1 scope of work will include site demolition, regrading, hardscape and site lighting, infrastructure improvements, installation of a prefabricated pavilion structure, poured in place playground surfacing, site furnishings, and landscaping exclusively with native plants. The CMR will work closely with the Owner and Design Team to further define this scope of work and identify add-alternates that can be incorporated into the project as unused Contingency funds become available.

Construction work is expected to commence in May 2024 with substantial completion by November 2024.

B. Scope of Services

The selected Construction Manager at Risk (CMR) will provide a full range of Pre-Construction and Construction Services for the project. It is anticipated that AIA Contract A133 along with the associated General Conditions A201 will be utilized for this project. The scope of services required will include (but not limited to) the following:

Preconstruction Services:

The Pre-Construction Phase will commence upon awarding of the project. These services will include the following tasks:

1. Attend and actively participate in Project Team meetings at regularly scheduled intervals throughout the Pre-Construction Phase. Meetings will include conference calls and on-line-based meetings. It is anticipated that the CMR will attend these frequent meetings throughout the Pre-Construction Phase prior to the acceptance of the GMP and during the Construction Documents Phase.
2. Provide a preliminary evaluation of the initial Design Criteria, Project Schedule, and Project Budget each in terms of the other.
3. Visit the site and inspect the existing facilities, systems and conditions and become thoroughly familiar with the existing conditions to ensure an accurate understanding of how the project can proceed.
4. Provide information and recommendations to the Project Team on all issues that are normal and customary province of the Construction Contractor such as:
 - a. Site usage and Site Improvements
 - b. Building Equipment, Systems, and Construction Feasibility
 - c. Availability and selection of materials and labor
 - d. Time requirements for construction and equipment installation
 - e. Safety issues and available precautions related to the work under consideration.
 - f. Selection and installation of temporary project facilities, equipment, materials and services needed for common use of the Project Team
 - g. Cost factors, including costs of alternative materials, construction methods or designs
 - h. Conceptual budgets and possible cost savings available in alternative approaches or designs.
 - i. Identification and resolution of conflicts in the drawings and specifications as they evolve.
 - j. Methods of delivering and handling materials, systems, and equipment
 - k. Traffic, parking and materials and equipment storage in and around the site
5. Implement and conduct Constructability Reviews to identify and document Project Cost and Schedule savings opportunities and to eliminate construction problems inherent in the various issues of Construction Documents.
6. Provide and implement a system for tracking questions, resolutions, decisions, directions and other matters relevant to the construction that arise during the development of the Construction Documents for the Project.

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7. Develop a Critical Path Method Schedule for the Project Team review and Owner's approval that coordinates and integrates activities of the Project, including the CMR's services, the Design Team's design services, Owner's Responsibilities, and the Facilities Event Schedule. The schedule must identify all major milestones from the project inception through Project Final Completion. It shall be created and maintained with the requirements of the contract and Owner's expectations.
8. Provide Construction Cost Estimates at intervals mutually agreed upon by the CMR and Design Team.
 - a. The estimates shall be detailed estimates derived from cost/quantity take-offs and based on unit prices for labor, materials, overhead and profit. The estimated cost of construction shall be organized in Construction Specifications Institute (CSI) division format for each portion of the work.
 - b. If the estimated cost of construction exceeds the owners identified Project Budget, the CMR will assist the project in reconciliation of the estimate to align with the Project Budget. The CMR will lead the Team through a value-engineering effort that may include scope reduction, alternative materials, alternative means and methods, etc. with a goal of re-aligning the drawings with the Owner's Identified Project Budget.
 - c. The CMR will provide continuous cost consultation services throughout the duration of the Project, including identification and tracking of the cost implications of decisions that affect the scope or quality of the project.
9. Review all Drawings, Specifications, and other Construction Documents as they are developed by the Design Team during all the different design phases of the Project. Consult with the Project Team on the selection of materials, equipment, component systems, and types of construction to be used for the Project
10. Advise the Project Team on site use, construction feasibility, availability of labor and materials procurement time requirements, and construction coordination.
11. At a mutually agreed upon time by the Owner and the Construction Manager and in consultation with the Design Team, the CMR shall prepare a Guaranteed Maximum Price (GMP) proposal for the owner's review and acceptance. All parties will work in an "open book" pricing method in which the cost of all work will be based upon competitive pricing that is reviewed with the Owner and Design Team. The Owner shall have access to all books, records, documents, and other data in the CMR's possession related to bidding, pricing, scope, subcontract agreements, etc. The Owner may accept or reject the GMP Proposal or attempt to negotiate its amount and its terms and conditions with the CMR. If the Owner accepts the proposed GMP, the contract will be amended to include the GMP proposal with the information and assumptions upon which it is based.

Construction Services:

Upon agreement of the GMP, the CMR shall construct the Project pursuant to the construction documents and in accordance with the schedule requirements. The CMR shall hold all subcontracts and shall be fully responsible for the means and methods of construction, project safety, and project completion within the agreed upon schedule. The CMR will be responsible for compliance with all applicable laws and regulations relating to, but not limited to, equal

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employment, prevailing wages, and minority based (State and Local) participation compliance. The general scope of services required during the Construction Phase is as follows:

1. CMR will be responsible for Job Site Safety and Control and ensuring all individuals working on the project are in compliance and working within the working standards established by OSHA and any other governing authority having jurisdiction.
2. The CMR will organize and maintain a competent, full-time staff at the project site with clearly defined lines of authority and communication necessary to coordinate construction activities, monitor and direct progress of the work, and further the goals of the Project Team.
3. The CMR shall designate a representative who is responsible for the day-to-day management of the Construction Phase Services. The designated representative shall be the Owner's primary contact during the Construction Phase and shall be available as required for the benefit of the Project and the Owner.
4. Schedule and organize regularly scheduled Project progress meetings and fully advise the Project Team of the Project status including schedule, costs, quality, and changes. In addition to the Project progress meetings, attend any other meetings as needed to maintain project progress. The CMR will be responsible for organizing and distributing meeting minutes to each Project Team Member as needed. The minutes shall identify critical activities that require action, the person/entity responsible for completing the action and the dates by which each action must be completed.
5. Manage, maintain, document, and track all submittals and requests for information (RFI's). The CMR shall provide and review updated submittal and RFI reports at each Project Team meeting.
6. Assist owner and Design Team in obtaining building permits and any other special permits as required by law, regulation, or the Construction Documents.
7. Coordinate and oversee all testing operations at the site and coordinate the receipt and proper distribution of all Testing Results.
8. Provide warranties and guarantees that are required by the contract and construction documents.
9. The CMR shall continuously maintain and deliver the Record Documents that describe changes or deviations from the Construction Documents that occurred during construction that reflect the actual "as-built" conditions of the completed work.

C. Compensation

Pre-Construction Phase Fee:

The Pre-Construction Phase Fee is the total compensation required for the CMR to perform the work associated with the pre-construction phase of work. This fee shall be a lump sum based on the amount of work required to complete the pre-construction phase of work.

Construction Services Phase:

Compensation for Construction Services shall be included in the CMR's Guaranteed Maximum Price. The GMP proposal shall include (but limited to):

1. All General Conditions Costs
2. Costs associated with materials, supplies, temporary facilities rentals, etc
3. Personnel Costs
4. Permit and inspection fees
5. Costs associated with insurance, bonds, and taxes
6. All Costs of Construction, sub-contract costs
7. Costs associated the General and Supplemental Conditions

The Construction Phase Fee shall be based on a percentage of the cost of work (GMP). The total GMP will be the sum of the Direct Construction Cost (no mark-up, profit, overhead) plus the Construction Phase Fee.

D. Scoring and Selection

The Owner will evaluate each firm's proposal based on the criteria provided in Section E. The Owner may hold discussions with individual firms to explore further their qualifications, the scope and nature of the services they would provide, and the various technical approaches they may take regarding the Project.

Upon selection of a firm, The CMR will then perform a Page Turn with the Design Team to ensure all parties are familiar with and agree upon the extent of the Project's scope of work.

After the Selection and Page Turn, the Owner shall negotiate the CMR Agreement. Contract negotiations shall be directed toward:

1. Ensuring that the CMR and the Owner mutually understand the essential requirements involved in providing the required services, including the provisions for the use of contingency funds and the possible distribution of savings in the final costs of the project;
2. Ensuring that the CMR will be able to provide the necessary personnel, equipment, and facilities to perform the services within the required timeline;
3. Agreeing upon a procedure and schedule for determining the GMP that shall include the costs of all the work, the cost of its general conditions, the contingency, and the fee payable to the CMR.

E. Requirements for Proposals

At a minimum, all respondents shall provide the following information:

1. Provide a Statement of Interest for the Project including a narrative describing the unique qualifications as they pertain to this project. Describe why your team is the most qualified for this project. Please respond to the following details the Owner believes are important to the overall success of the project:
 - a. Experience with poured-in-place playground surfacing and playground installation
 - b. Experience with installing concrete mixes and ability to utilize various exposed aggregate technique for concrete mixes such as abrasive and sandblasting.
 - c. Experience with native plant procurement and installation. Installation of new plants will be restricted to native plants only.
 - d. Familiarity with public park or playground construction
2. Provide a statement on the availability and commitment of the respondent, its principal(s) and assigned professionals to undertake the Project. Describe the company's current backlog of work and its relationship with your workforce's capacity.
3. Provide the following general information relating the respondent's organization:
 - a. Legal name of Company
 - b. Date of the Company's Formation
 - c. Contact Person with Phone Number, Cell Number, Fax Number, and e-mail address.
 - d. Alternate Contact Person with Phone Number, Cell Number, Fax Number and e-mail address.
 - e. Legal Business Description (Individual, Partnership, Corporation, Joint Venture, etc.)
 - f. Number of Employees by skill group.
 - g. Annual Revenues
 - h. Description of Current Workload and Cost Volume.
4. Provide evidence of your firm's financial strength
5. Provide evidence of your firm's ability to bond and identify limits.
6. Provide evidence of insurance and identify limits.
7. Identify any current claims against your firm.
8. Provide a statement of acceptance and/or any issues with using the AIA A133 Contract as a basis for the final contract for performing the work
9. Describe your management philosophy for the Construction Manager at Risk delivery Method. Describe what systems and methods are used to deliver projects under the CMR delivery system.
10. Identify the key team members that will be assigned to the project. Provide resumes for each team member and describe their primary role, experience with other similar projects, number of years with firm, and number of years with your organization.
11. Provide three (3) verifiable examples of performance on past representative projects within the last five (5) years. This doesn't necessarily have to be sports venues, but projects of similar size, scope, complication, schedule and cost and used the Construction Manager at Risk (CMR) delivery method.

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12. Provide a statement of your company's ability to establish budgets and control costs. Demonstrate a track record (degree of accuracy achieved) of performance of in-house estimating on projects comparable to the project. Outline your methodology for working with an Architect or Landscape Architect, the Owner and their consultants to deliver a GMP and to maintain the GMP throughout the design and construction process for the Project.
13. Describe how you will develop, maintain, and update the project schedule during the design and construction phases of the project. Describe your methods of dealing with difficult and dynamic schedules as well as methods of schedule recovery. Demonstrate a track record of managing schedules to the original schedule.
14. Demonstrate your past performance with promoting and successfully implementing participation of small business enterprises, minority business, female business enterprises and local businesses
15. Indicate the firm's ability to self-perform work and whether your firm will consider self-performing work on this project. If your firm is not considering self-performing work, describe the strategies in not self-performing work. Demonstrate how your firm provides self-performed work through a competitive process.
16. Describe the firm's experience with sustainable practices in demolition and construction waste management; energy savings during demolition, construction or renovation projects; and energy conservation measures during similar past projects.

Each submitted Proposal shall provide a brief, straightforward, concise description of the respondent's ability to meet the requirements of this RFQ. Emphasis shall be on quality, completeness, clarity of content, and responsiveness to the requirements.

F. Fees

Provide an outline of your company’s fee structure for this project. Provide the not to exceed total compensation fee to deliver the pre-construction scope of work and identify any scope or costs and reimbursables not included in the fee. Identify any additional services that you believe should be considered as part of the pre-construction phase and their associated costs.

Provide a draft Project Staffing Plan that defines your preconstruction and construction/close-out phase staffing. Include all personnel and sub-consultants (if any) that are envisioned to be involved in the Project providing the services defined in the draft Contract included in the RFQ. Include a % of time involvement, hourly billable DPE rate with all taxes, fringes, benefits, vacation, training, administrative support, home office costs, and OHP. Provide a total staff cost by month with all related burden for the planned duration of the Project.

Provide a detailed outline of how you will develop the Cost of Construction and the format you intend to use to organize the cost. As previously noted, all costs associated with the construction cost are to be direct cost and the CM will engage with the Owner and Design Team in an open book pricing method to demonstrate competitive pricing was aggressively sought. The CM’s fee will be a percentage applied to the total Direct Construction Cost. Provide an estimated cost for your anticipated Itemized General Conditions, estimated personnel costs, construction contingency (percentage), change order mark-ups (both for self-performed work and sub-contracted), reimbursable (construction and close-out), and Construction Phase Fee Percentage.

The fees provided are intended to give the Owner a conceptual idea of what your costs are. It is not the intent of the Owner to use this information as the primary basis of selection. Your qualifications and ability to demonstrate how you will successfully deliver the project on time and within budget will be the primary basis of selection.

G. Schedule

The schedule is continuously evolving. However, some relative milestones have been identified and should be used as a basis for the development of a Project Schedule. These dates are as follows:

Public Notice / Advertisement Posted for RFQ	<u>02/09/2024</u>
Deadline for Submission of Proposals	<u>03/08/2024 at 5:00 PM</u>
Notify candidates	<u>03/12/2024</u>
Interview, if necessary	<u>03/18/2024</u>
Owner announces successful candidate	<u>03/18/2024</u>
Page Turn with Design Team	<u>03/19/2024</u>
Negotiate of CMR Agreement	<u>03/20/2024 - 03/22/2024</u>

CMR Preconstruction Services Start	03/25/2024
Develop GMP	03/25/2024 - 04/12/2024
Approval of GMP; Approval to Proceed with Construction	04/19/2024
Permitting Process	03/25/2024 – 04/22/2024
CMR Prep Contracts	04/29/2024 – 04/26/2024
Substantial Completion	11/29/2024

H. Attachments

A. Preliminary Pricing Set

Includes 90% Landscape Architecture set, 90% Civil set, and 90% MEP set.

B. Kompan Combined Product Info Sheets

C. Kompan Combined Product Pricing

D. Streetlife Site Furnishing Product Info Sheets

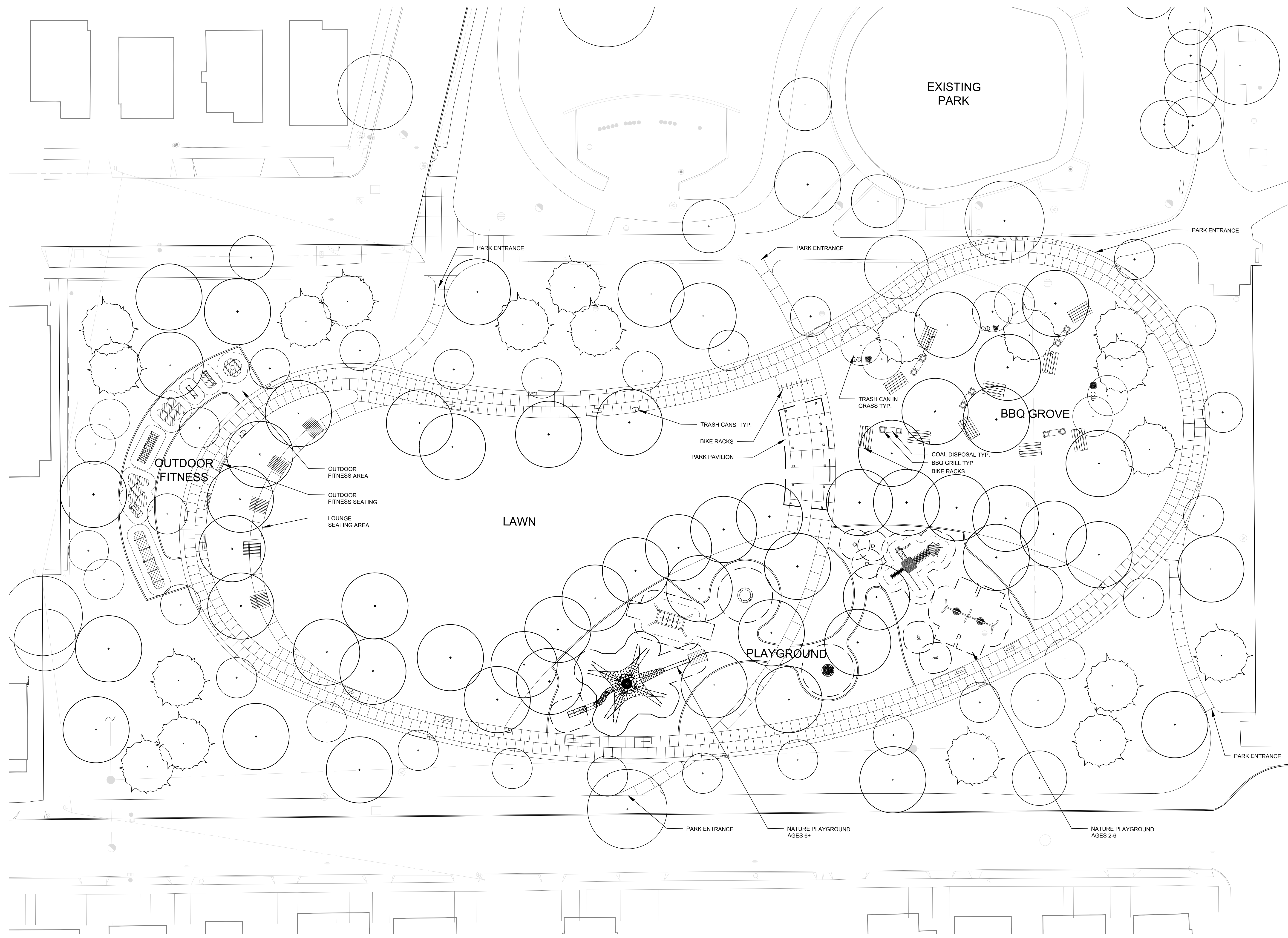
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GREENSPACE**

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CIVIL & STRUCTURAL ENGINEERING
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SITE PLAN

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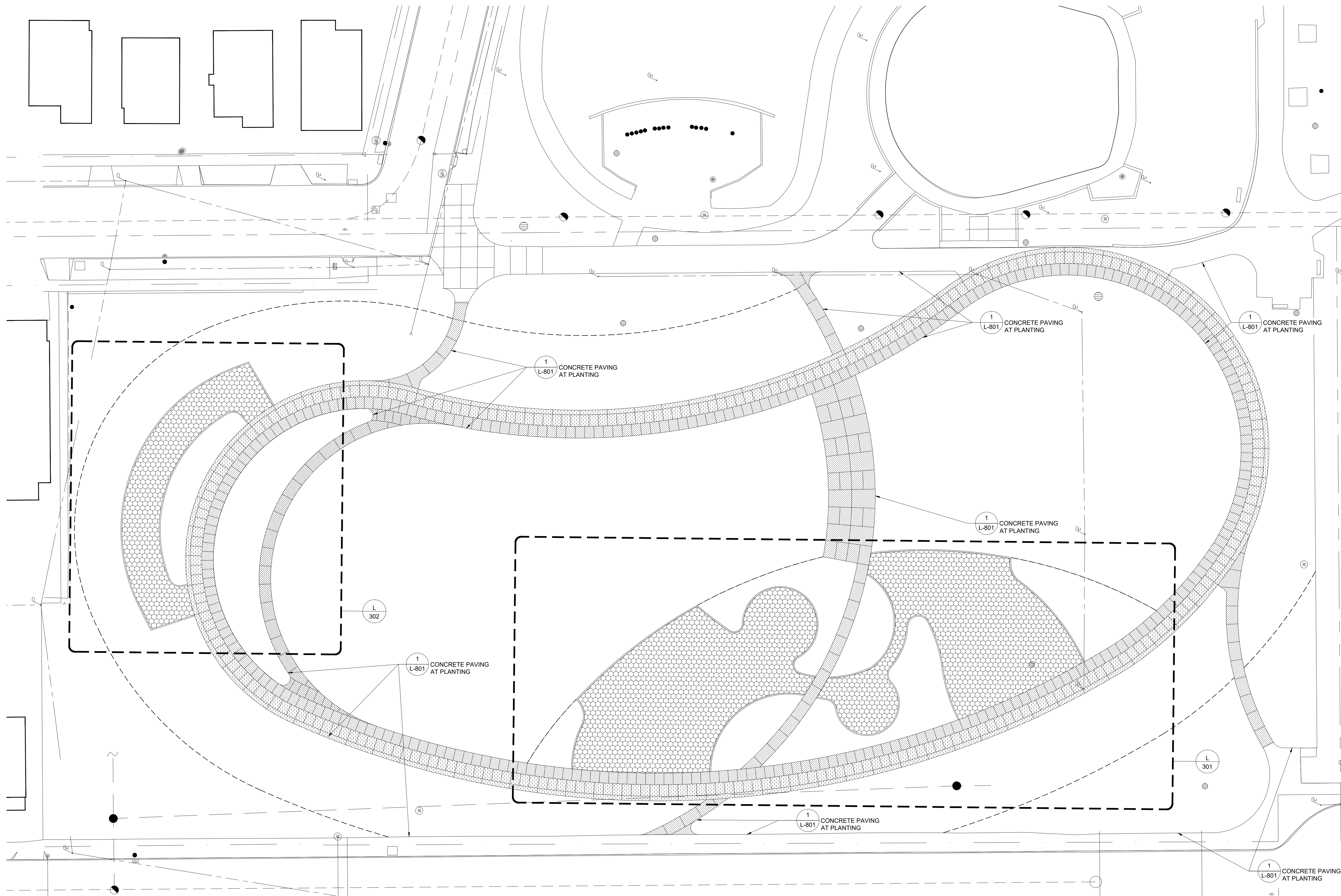
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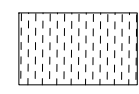
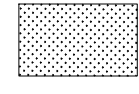

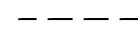
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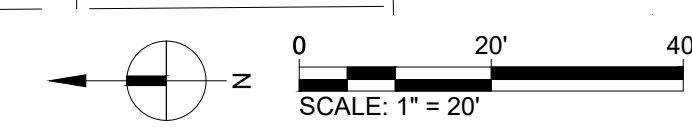
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- LEGEND**
- MATERIALS**
-  C.I.P. CONCRETE PAVING, SEE 1/L801 AND SPECIFICATIONS FOR FINISH 1
 -  C.I.P. CONCRETE PAVING, SEE 1/L801 AND SPECIFICATIONS FOR FINISH 2
 -  PIP SURFACING, SEE 7/L801, ENLARGEMENT PLANS FOR DEPTH AND LAYOUT PLAN FOR COLOR.
 -  STEEL EDGING, SEE 5/L801



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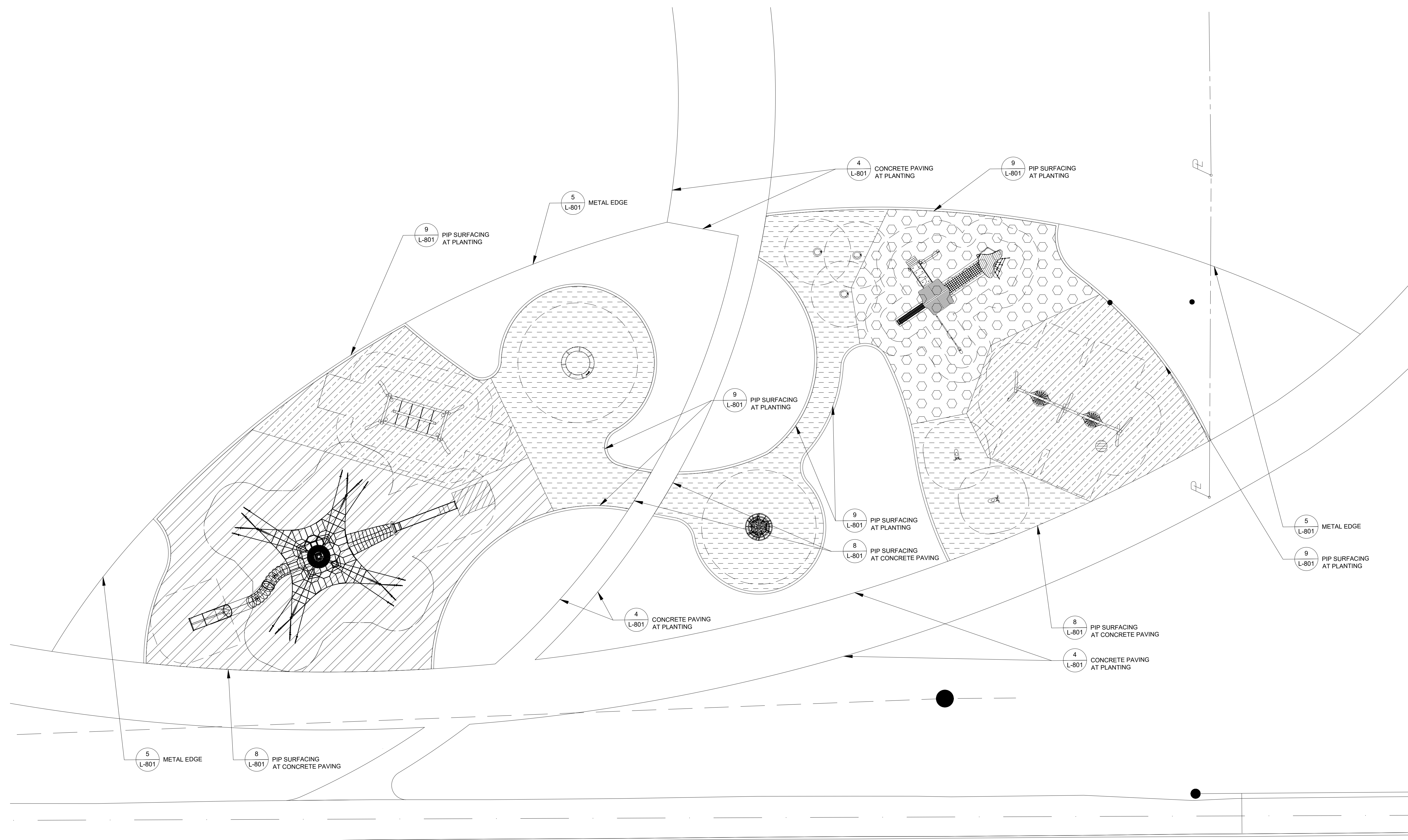
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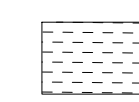
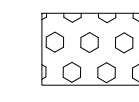
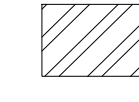

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LEGEND

-  PIP SURFACING 2" DEPTH
-  PIP SURFACING 3.25" DEPTH
-  PIP SURFACING 3.75" DEPTH
-  PIP SURFACING 5.25" DEPTH



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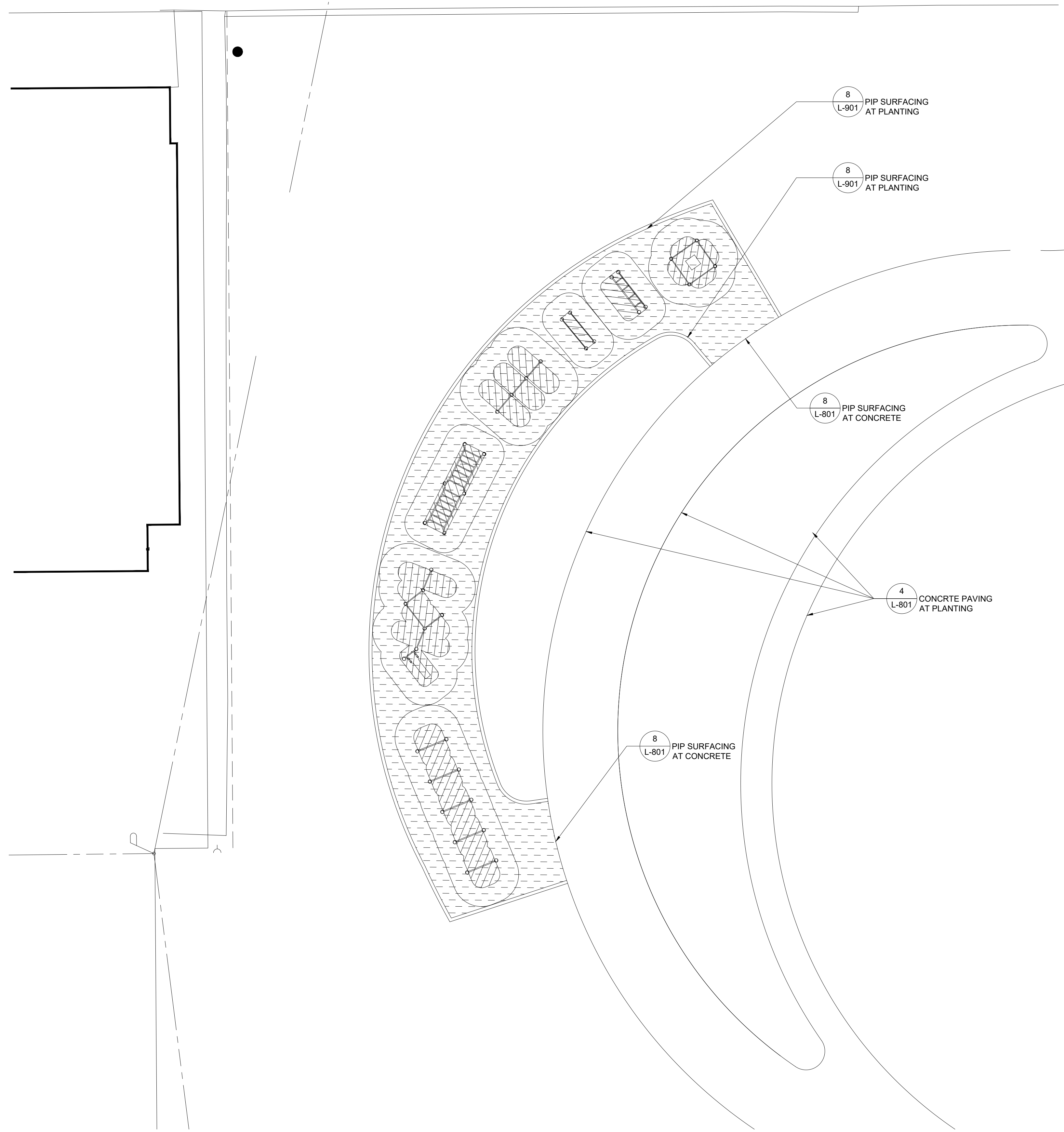
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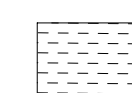
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LEGEND

 PIP SURFACING 2" DEPTH

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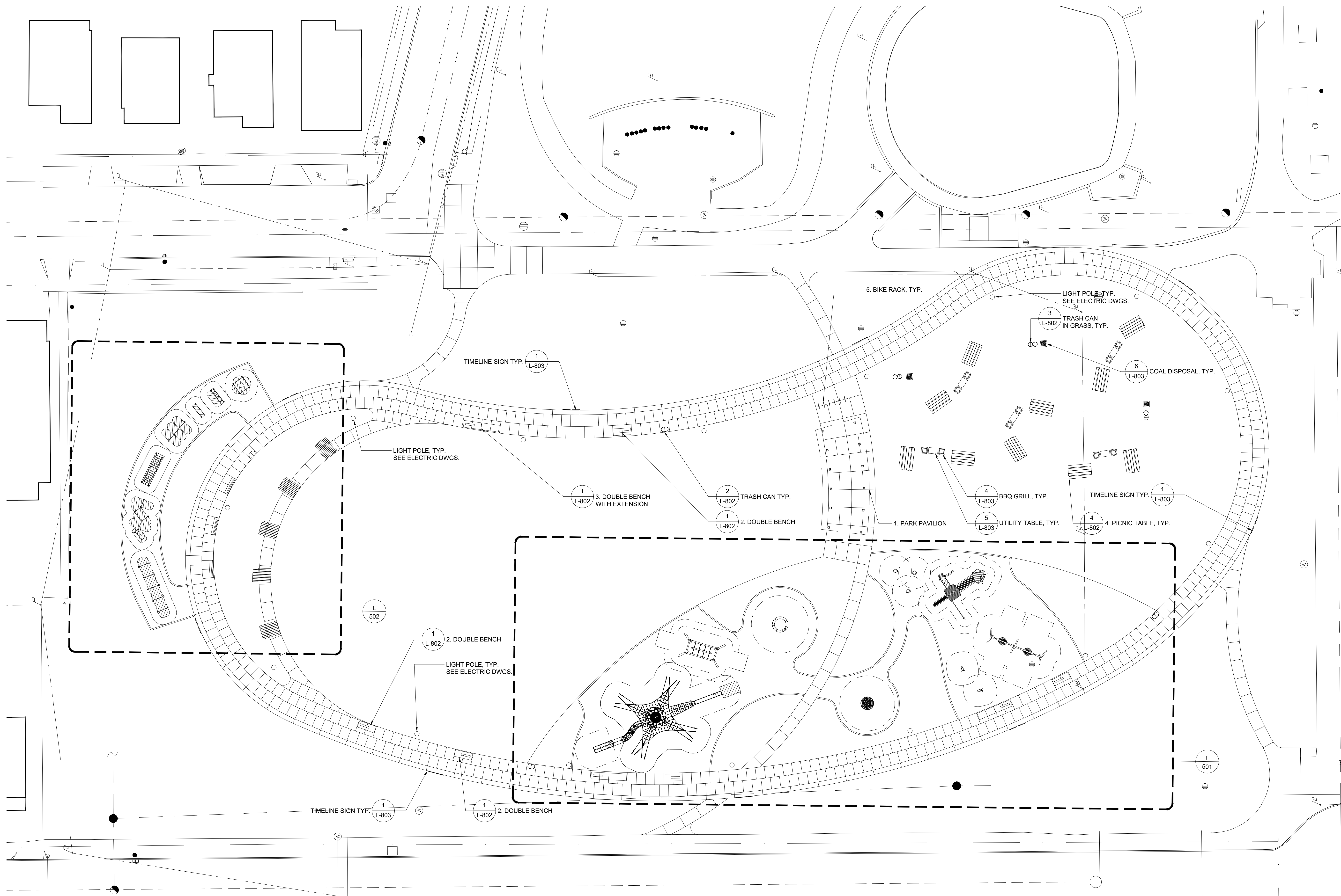
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LEGEND

FITNESS EQUIPMENT

- 1 PARK PAVILION (R&R-SHA-C-1500-600-PC-AC)
- 2 DOUBLE BENCH (SOL-L12-234-TH-CU)
- 3 DOUBLE BENCH WITH EXTENSION (SOL-L12-234-TH-CU-Ext)
- 4 PICNIC TABLE (SOL-PS-L10-234-TH-CU)
- 5 BIKE RACK (SOL-BP-70-TH-CU-IGM)

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SITE FURNISHINGS
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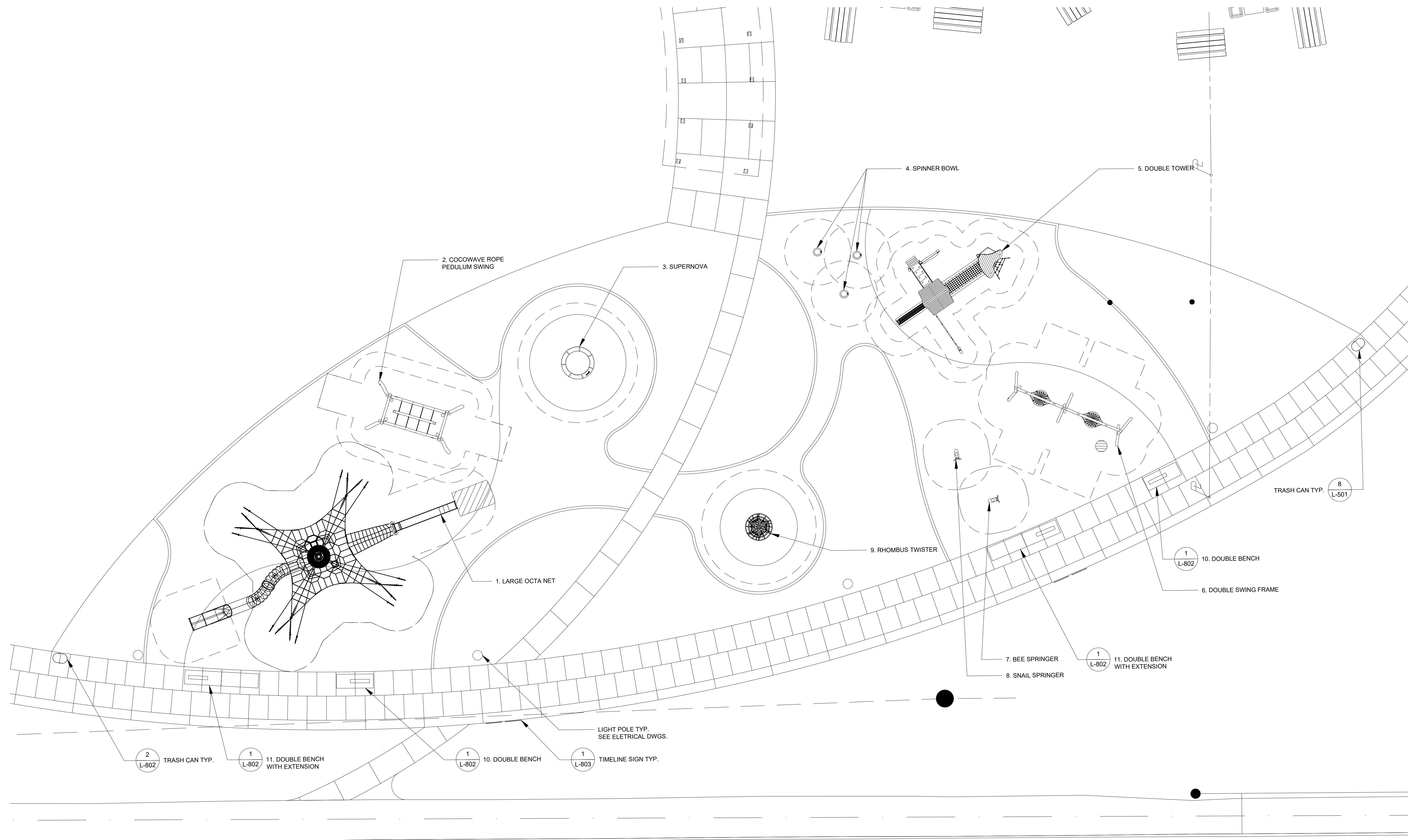
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3800 LAKESIDE AVENUE, SUITE 100
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216.491.9640



REV # DATE DESCRIPTION

SEAL

LEGEND

PLAYGROUND SITE FURNISHINGS

- 1 LARGE OCTA NET, CROWS NEST, STEEL TUNNEL (COR104301-1003)
- 2 COCOWAVE ROPE PENDULUM SWING (NRO915)
- 3 SUPERNOVA - GREENLINE (GXY960021-3717)
- 4 SPINNER BOWL (ELE400024-3717)
- 5 DOUBLE TOWER WITH SPIDER NET (NRO2009-1001)
- 6 DOUBLE SWING FRAME (NRO924-0901)
- 7 BEE SPRINGER (NRO118-0421)
- 8 SNAIL SPRINGER (NRO115-0601)
- 9 RHOMBUS TWISTER (COR203401-1108)
- 10 DOUBLE BENCH (SOL-L12-234-TH-CU)
- 11 DOUBLE BENCH WITH EXTENSION (SOL-L12-234-TH-CU-Ext)



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SITE FURNISHINGS
PLAN
L-501

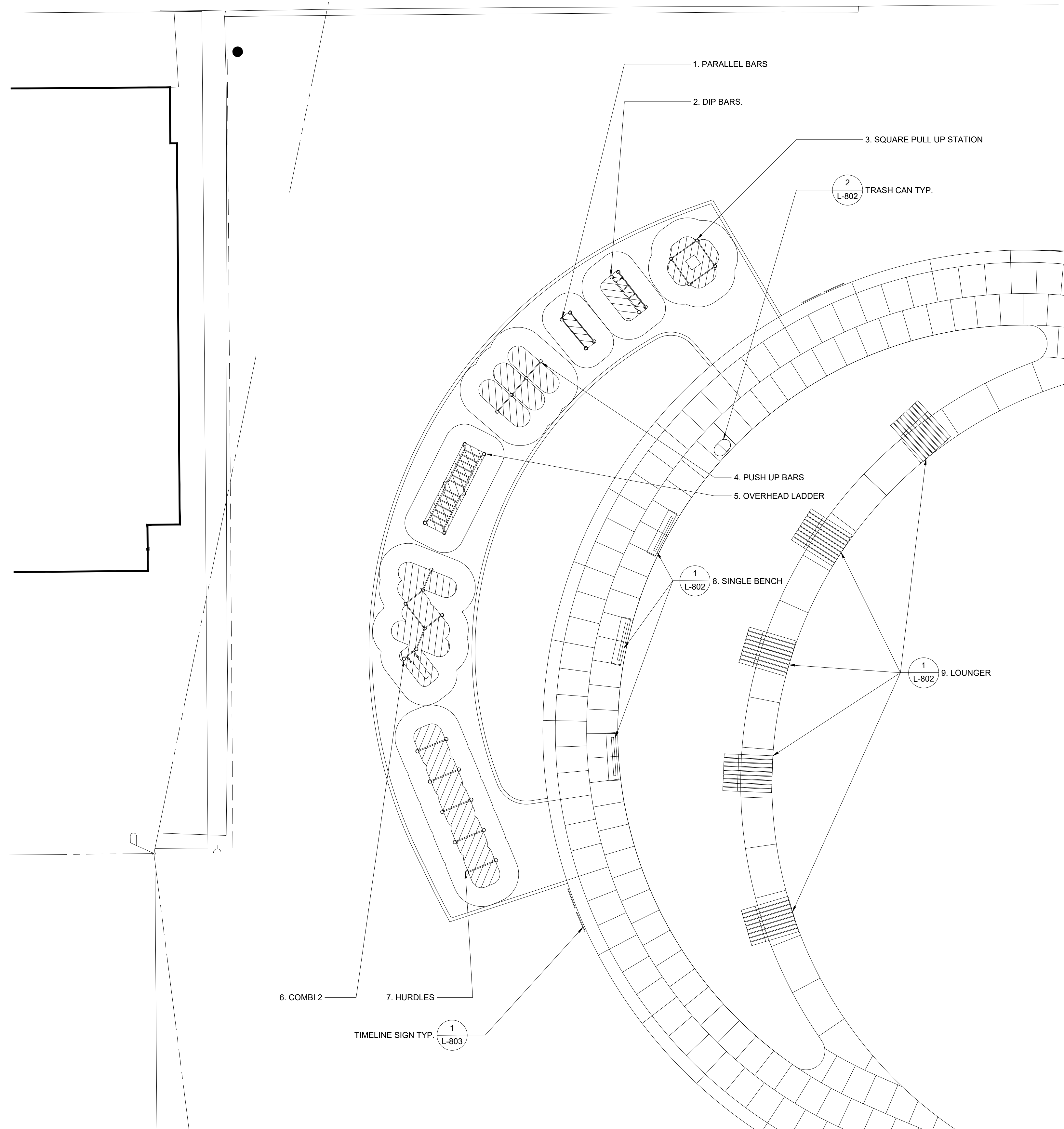
HOUGH
GREENSPACE

East 86th Street
Cleveland, Ohio 44106

OWNER
WESTERN RESERVE
LAND CONSERVANCY
812 HURON ROAD E SUITE 840
CLEVELAND, OH 44115
440-528-4150

LANDSCAPE ARCHITECT
LAYERCAKE, LLC
7405 DETROIT AVE
CLEVELAND, OH 44102
201.290.2645

CIVIL & STRUCTURAL ENGINEERING
RIVERSTONE
3800 LAKESIDE AVENUE, SUITE 100
CLEVELAND, OH 44114
216.491.9640



LEGEND

OUTDOOR FITNESS SITE FURNISHINGS

- 1 PARALLEL BARS (FRO20100-1001)
- 2 DIP BARS (FRO20200-1001)
- 3 SQUARE PULL UP STATION (FRO21800-1001)
- 4 PUSH UP BARS (FRO20900-1001)
- 5 OVERHEAD LADDER (FRO21300-1001)
- 6 COMBI 2 (FRO10200-1001)
- 7 HURDLES (FRO21100-1001)
- 8 SINGLE BENCH (SOL-L6-234-TH-CU)
- 9 LOUNGER (SER-LNG-120-TH-CU)

REV # DATE DESCRIPTION

SEAL

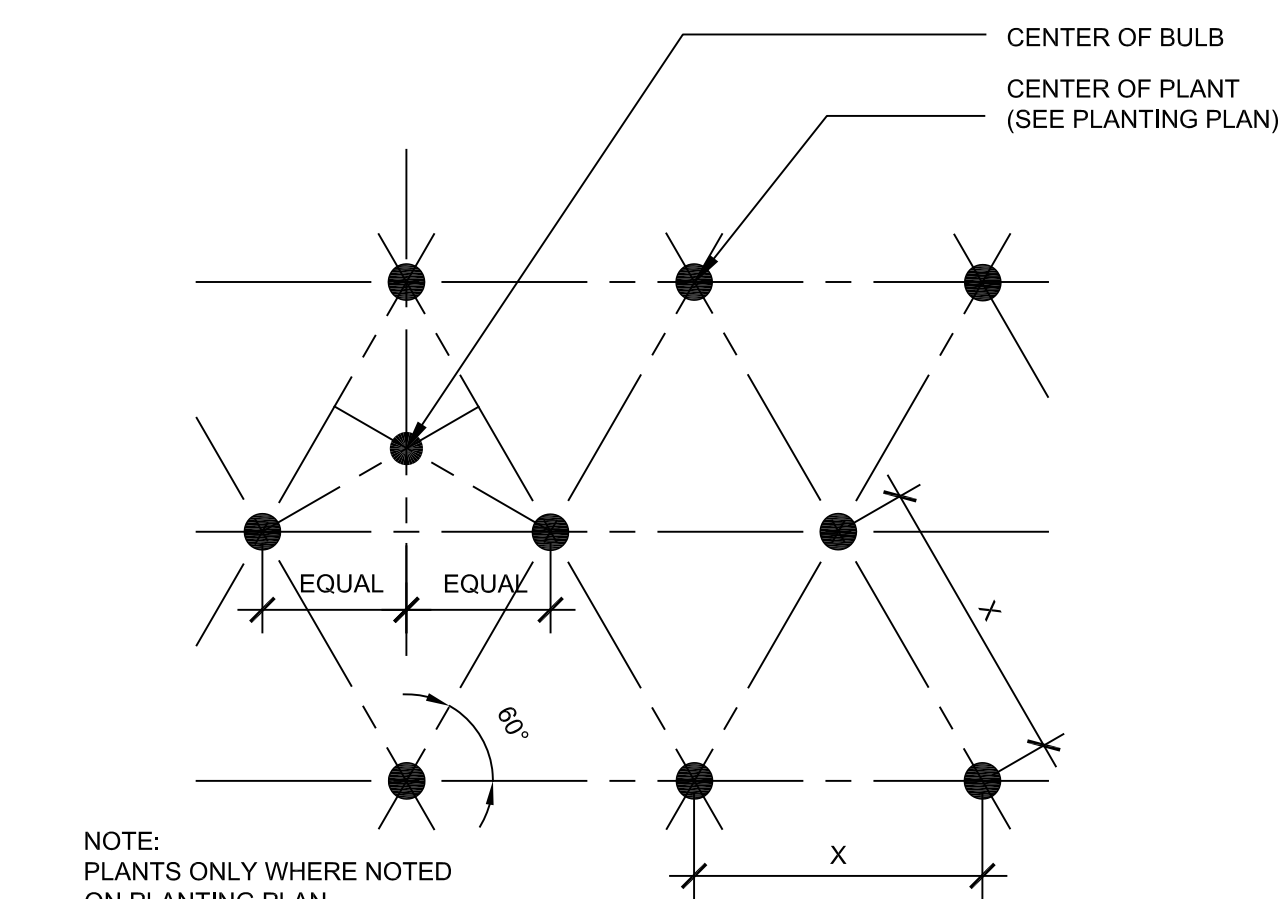
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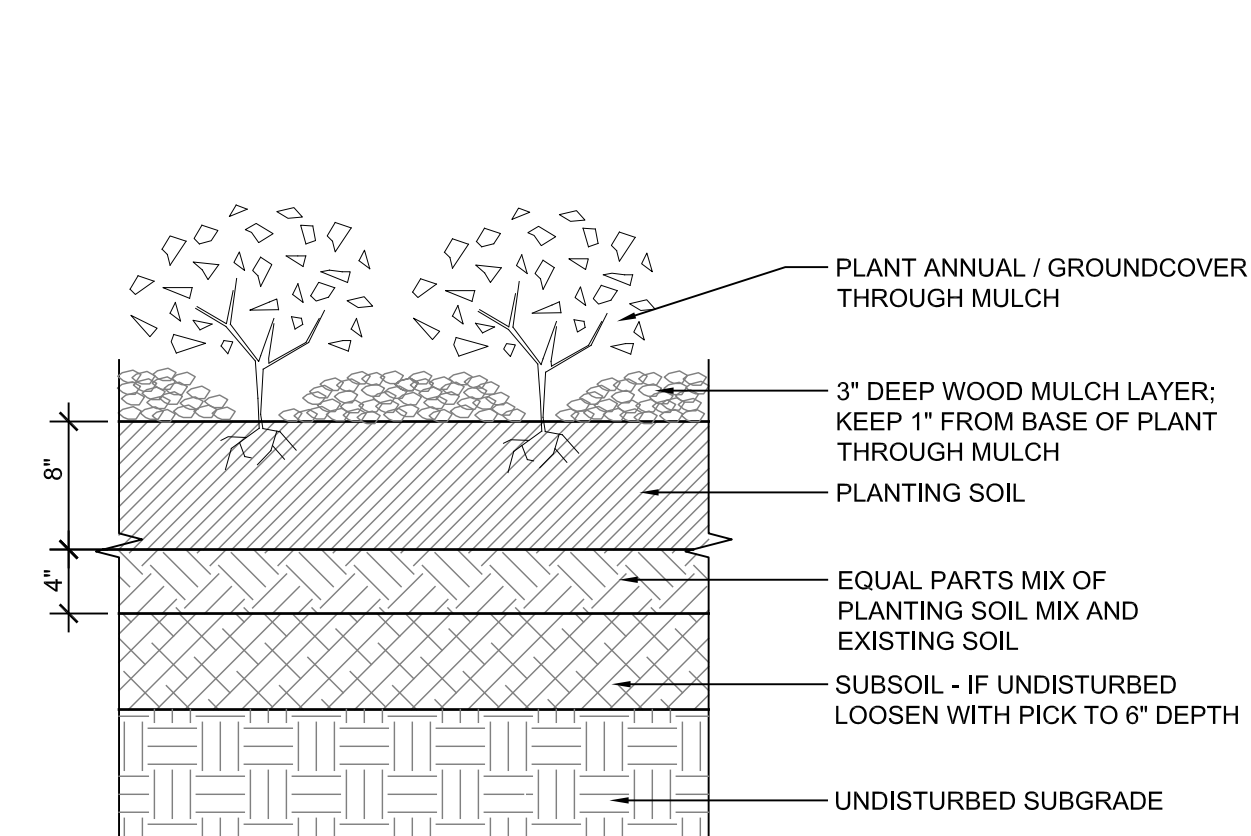
LC PROJECT # 003

ISSUE DATE 01/23/2024
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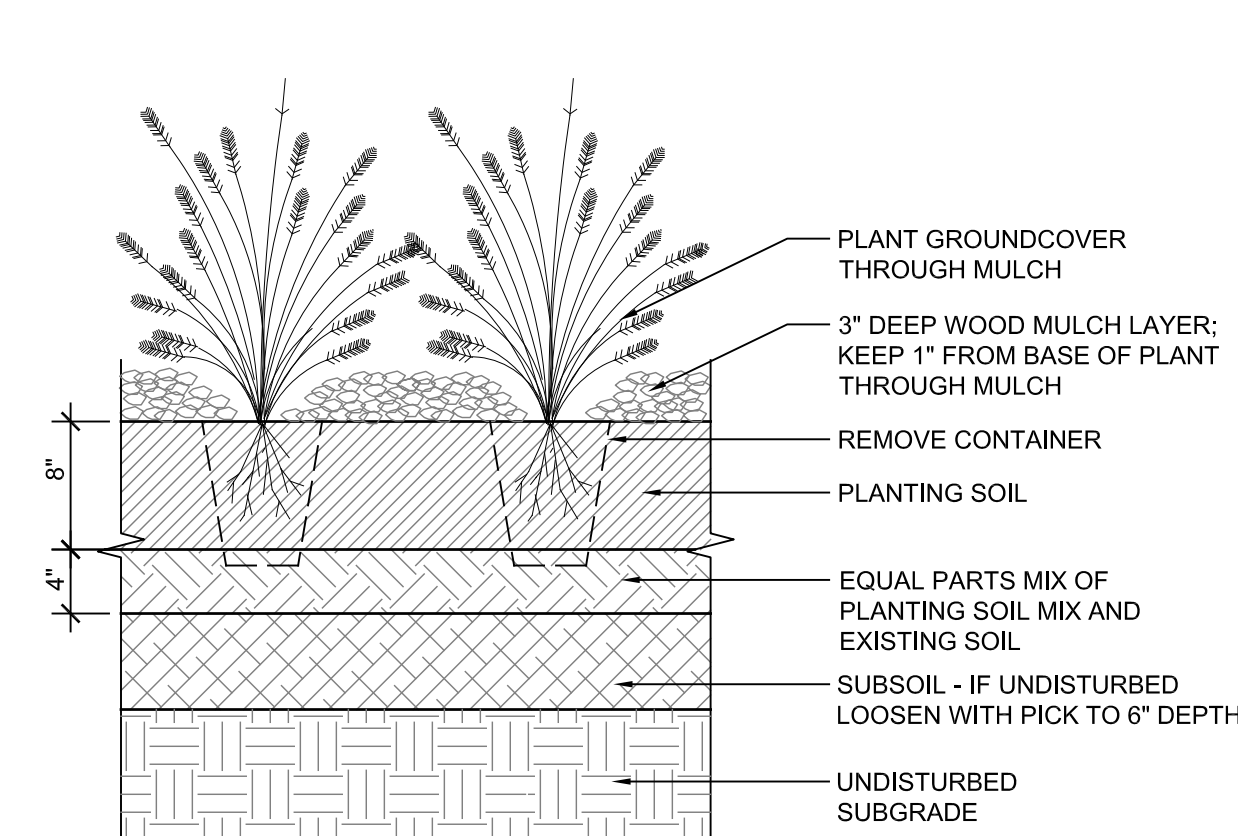
SITE FURNISHINGS
PLAN
L-502



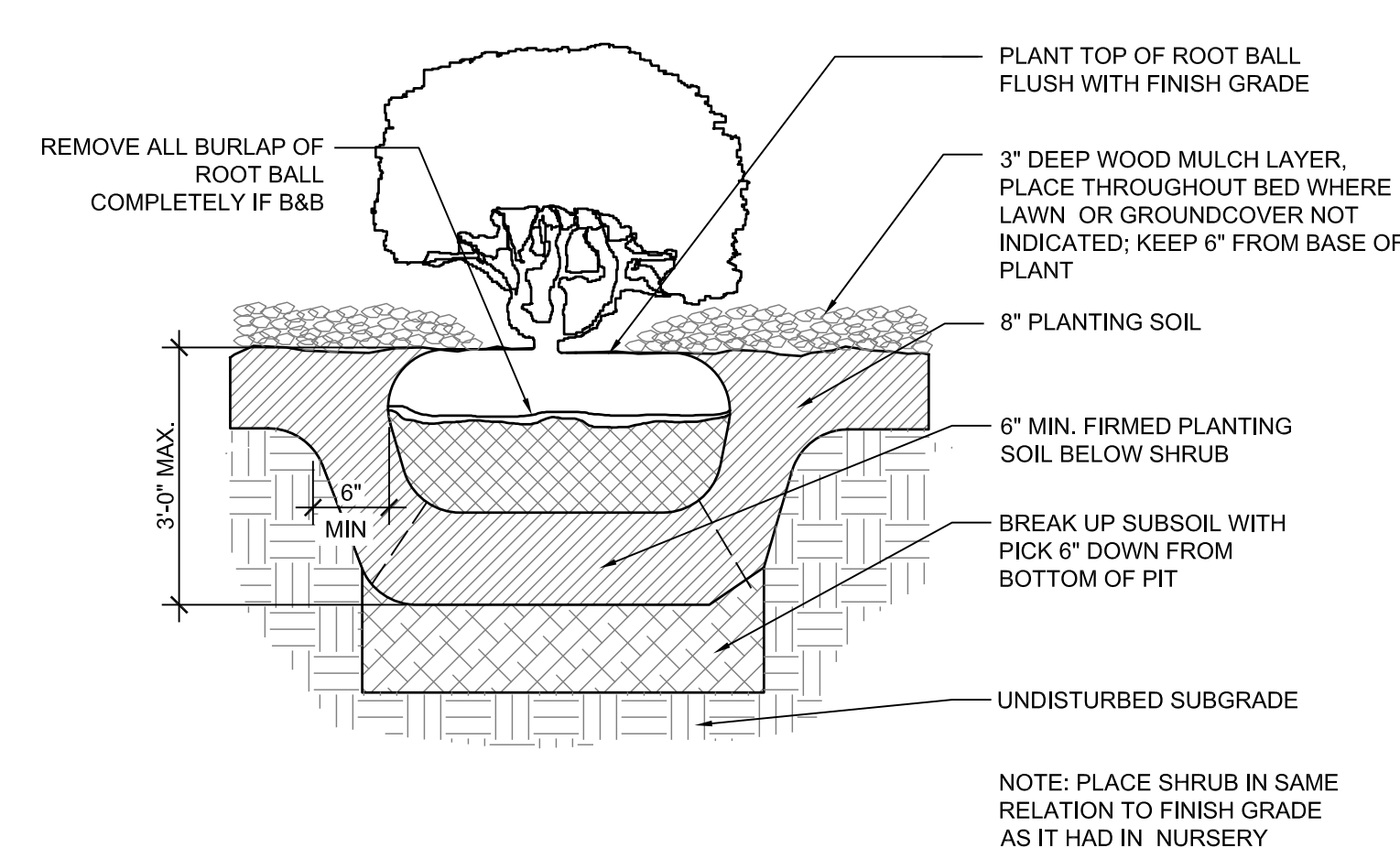
1 PLANT / PLUG SPACING - PLAN
N.T.S.



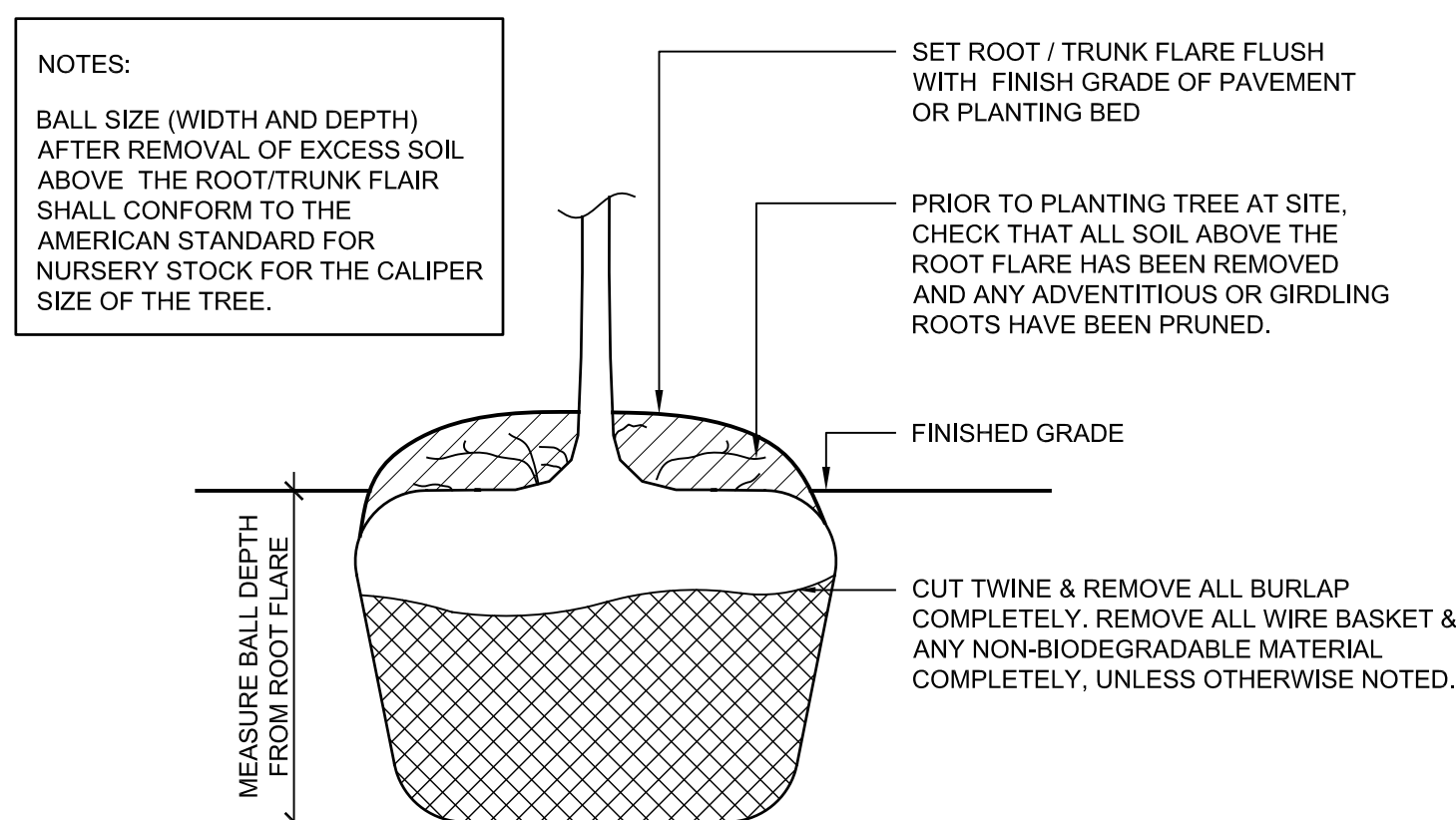
2 GROUNDCOVER PLANTING - SECTION
SCALE: 1" = 1'-0"



3 PERENNIAL / ORNAMENTAL
GRASS PLANTING - SECTION
SCALE: 1" = 1'-0"



4 SHRUB PLANTING - SECTION
SCALE: 1" = 1'-0"



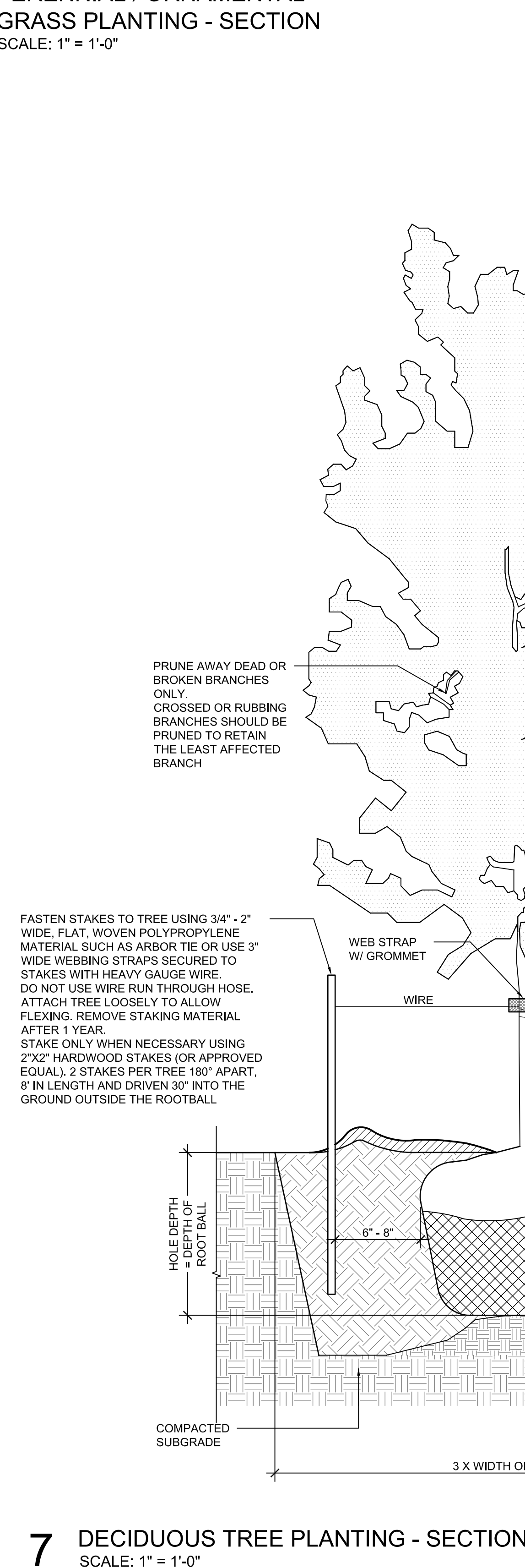
5 ROOT BALL PREPARATION - SECTION
N.T.S.

PLANT SCHEDULE

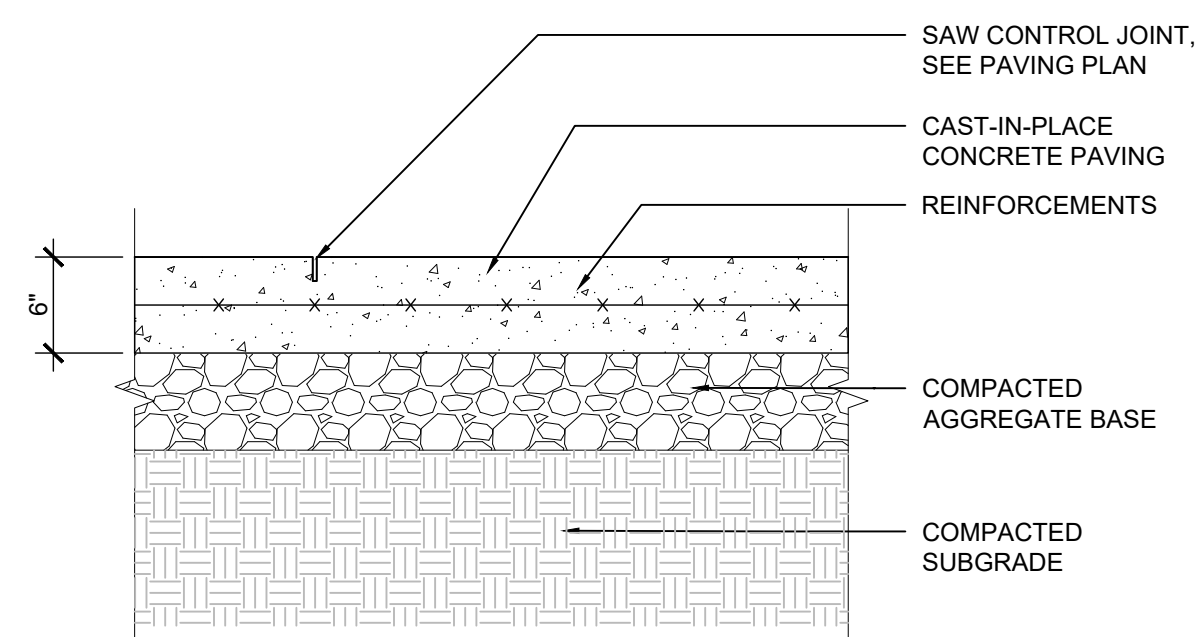
TREES	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER SIZE	REMARKS
AB	2	ACER BUERGERIANUM	TRIDENT MAPLE	1" CAL.	
AR	4	ACER RUBRUM	RED MAPLE	3" CAL.	
AS	2	ACER SACCHARUM	SUGAR MAPLE	3" CAL.	
AH	2	AESCLUSUS HIPPOCASTUM	HORSE CHESTNUT	3" CAL.	
CS	4	CATALPA SPECIOSA	NORTHERN CATALPA	3" CAL.	
CD	3	CEDRUS DEODARA	DEODAR CEDAR	8'-10' TALL	
CJ	1	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	3" CAL.	
CC	7	CERCIS CANADENSIS	EASTERN REDBUD	1" CAL.	
CF	6	CORNUS FLORIDA	FLOWERING DOGWOOD	1" CAL.	
FSA	3	FAGUS SYLVATICA 'ASPLENIFOLIA'	FERN LEAF BEECH	3" CAL.	
FSP	1	FAGUS SYLVATICA 'PURPUREA'	PURPLE BEECH	3" CAL.	
GD	2	GYMNOCLADUS DIOICA 'ESPRESSO'	KENTUCKY COFFEE TREE	3" CAL.	
GT	4	GLEDITSIA TRIACANTHOS	THORNLESS HONEY LOCUST TREE	3" CAL.	
LT	4	LIRIODENDRON TULIPIFERA	TULIP TREE	3" CAL.	
MG	3	METASEQUOIA GLYPTOSTROBODES	DAWN REDWOOD	3" CAL.	
MA	1	MAGNOLIA ACUMINATA	CUCUMBER MAGNOLIA	3" CAL.	
MGG	2	MAGNOLIA 'GOLDEN GIFT'	GOLDEN GIFT MAGNOLIA	1" CAL.	
MM	5	MAGNOLIA MACROPHYLLA	BIG LEAF MAGNOLIA	1" CAL.	
OV	2	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	3" CAL.	
PN	3	PINUS NIGRA	AUSTRIAN PINE	8'-10' TALL	
PR	2	PINUS RIGIDA	PITCH PINE	8'-10' TALL	
PS	6	PINUS STROBUS	EASTERN WHITE PINE	8'-10' TALL	
PO	12	PLATANUS OCCIDENTALIS X ORIENTALIS	LONDON PLANE TREE	3" CAL.	
RPL	3	ROBINIA PSEUDOACACIA	BLACK LOCUST	3" CAL.	
RP	26	ROBINIA PSEUDOACACIA 'PURPLE ROBE'	PURPLE ROBE LOCUST TREE	1" CAL.	
TC	6	TSUGA CANADENSIS	CANADIAN HEMLOCK	8'-10' TALL	
TD	4	TAXODIUM DISTICHUM	BALD CYPRESS	8'-10' TALL	
QA	2	QUERCUS ALBA	WHITE OAK	3" CAL.	
QB	2	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL.	
QM	1	QUERCUS MACROCARPA	BURR OAK	3" CAL.	
QP	1	QUERCUS PHELLOS	WILLOW OAK	3" CAL.	
UP	5	ULMUS PARVIFOLIA	LACEBARK ELM	3" CAL.	

ALL PLANTED AREAS TO BE SHRUB MIX WITH 30% 5 GALLON SHRUBS, 30% 3 GALLON SHRUBS, 40% 4" PLUGS

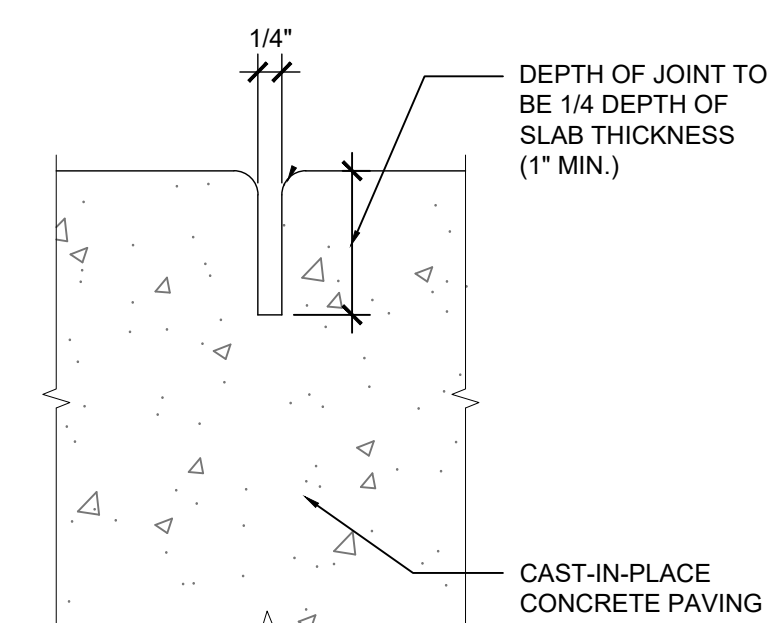
6 TREE SCHEDULE
N.T.S.



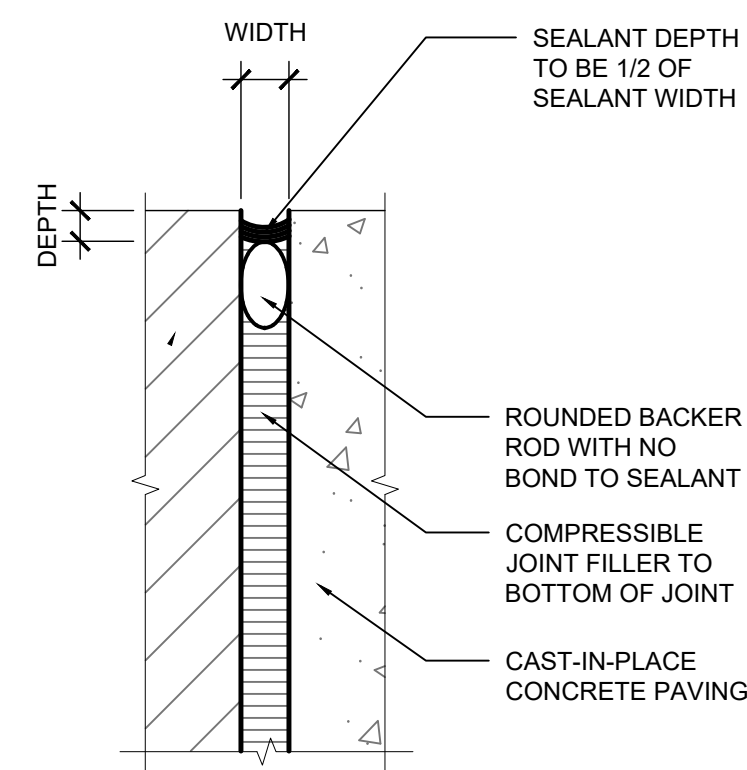
7 DECIDUOUS TREE PLANTING - SECTION
SCALE: 1" = 1'-0"



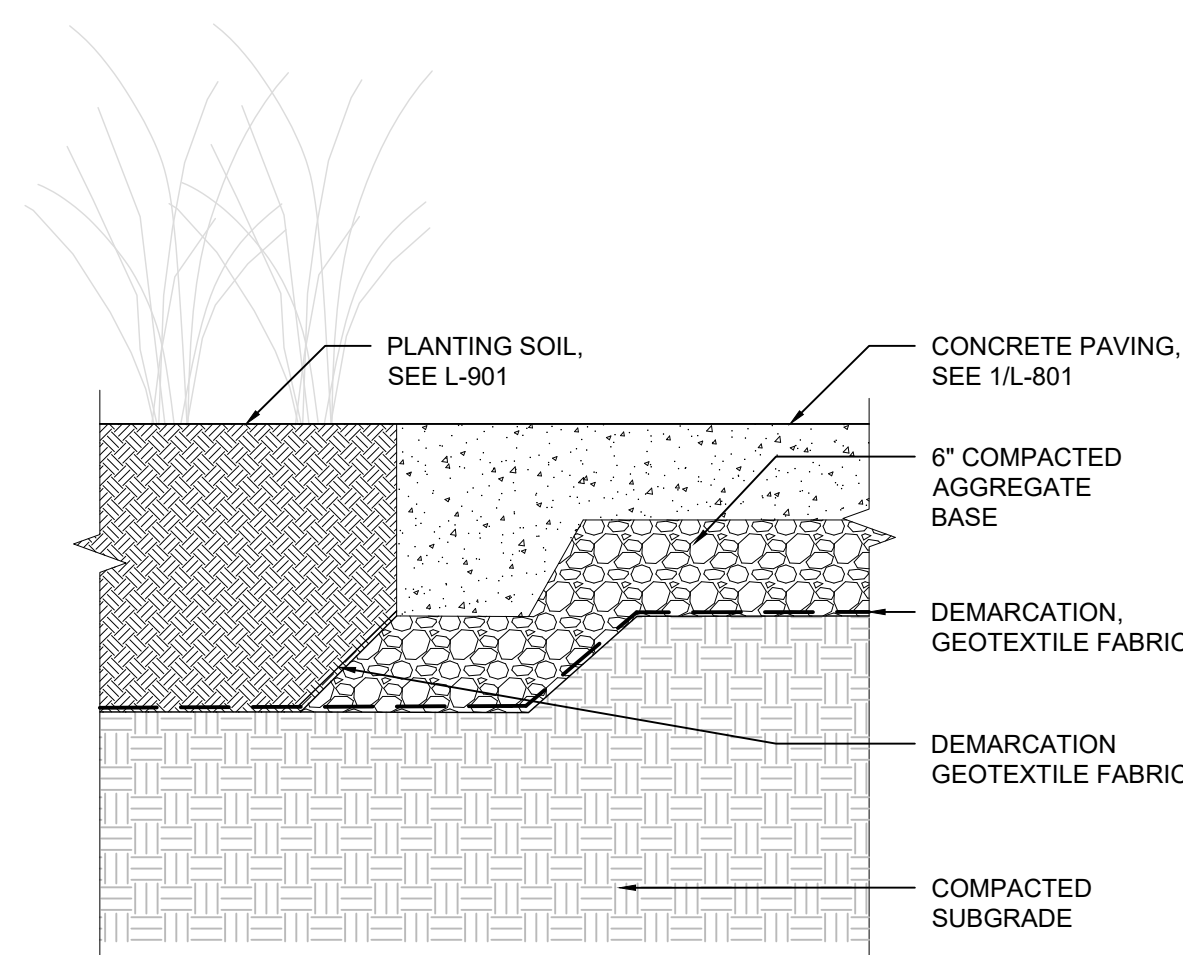
1 CAST-IN-PLACE CONCRETE PAVING
SCALE: 1" = 1'-0"



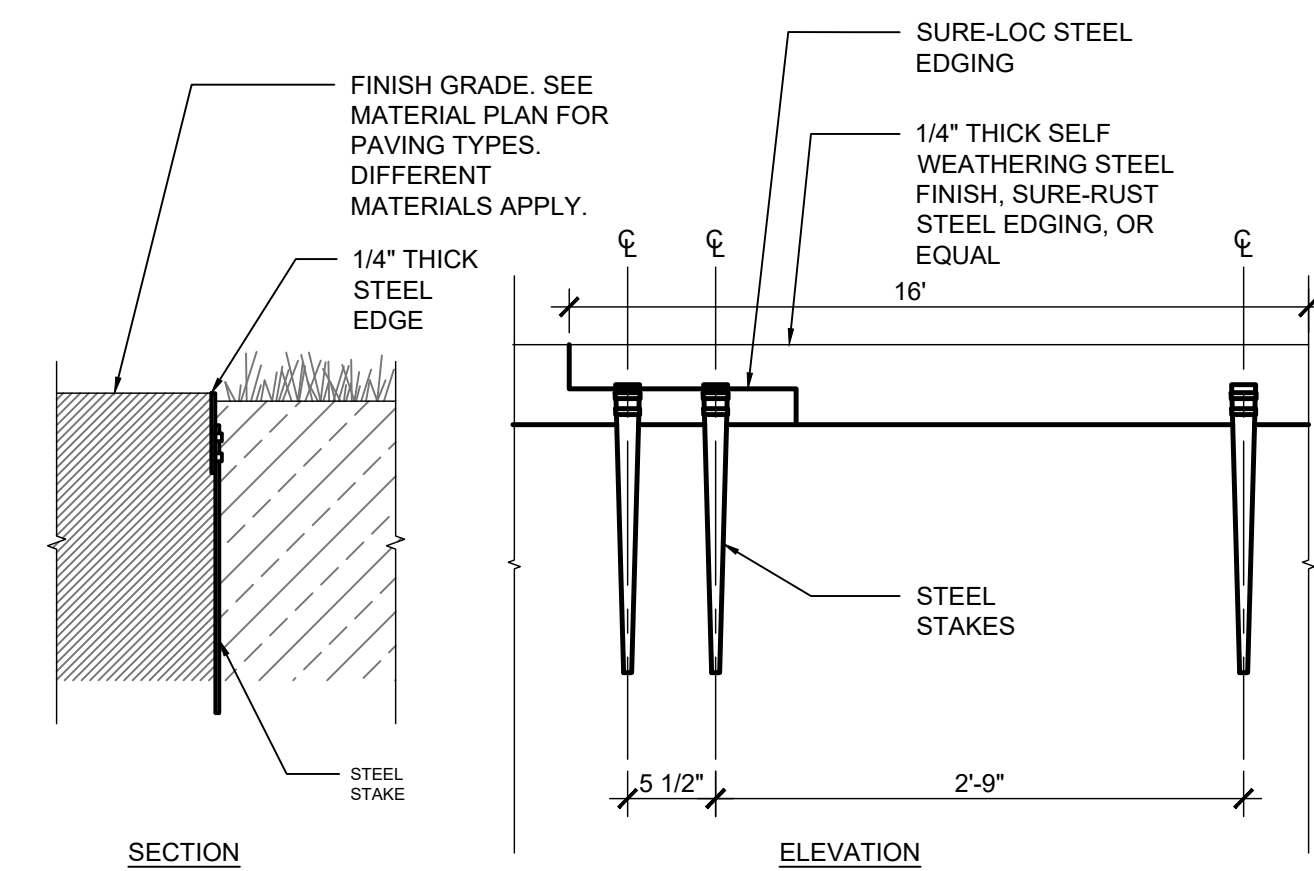
2 CONTROL JOINT
SCALE: 6" = 1'-0"



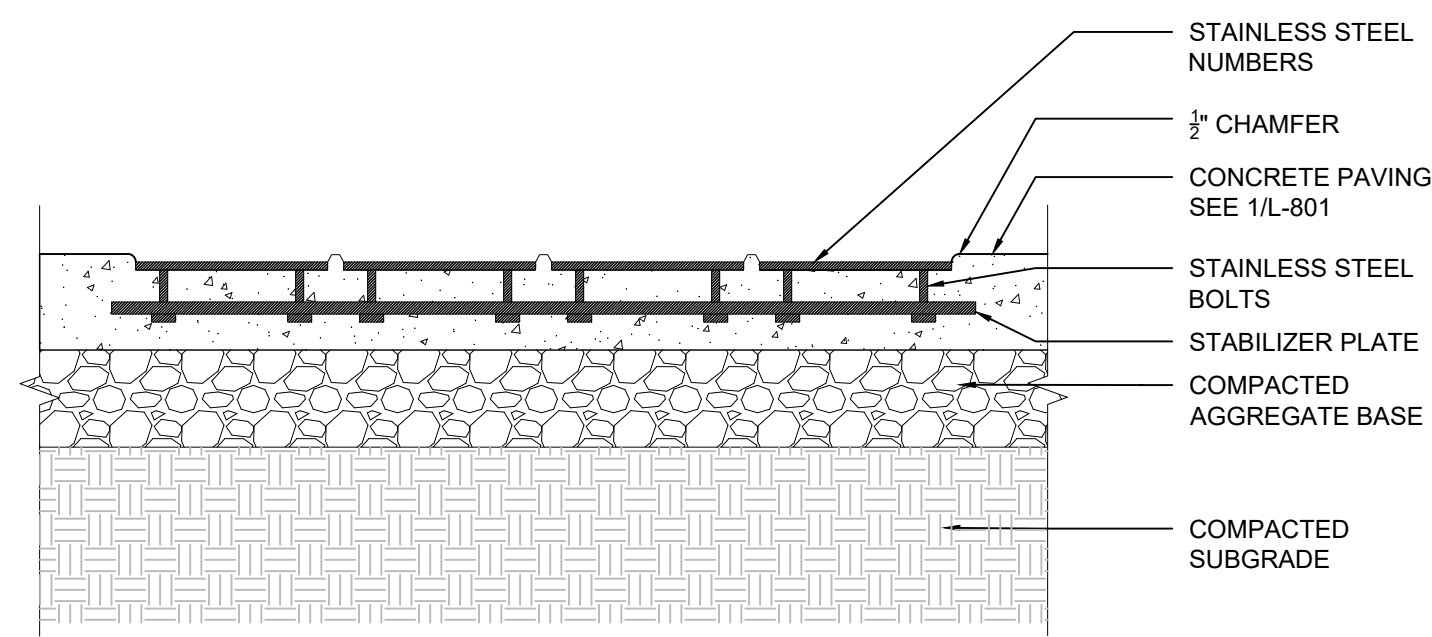
3 EXPANSION JOINT
SCALE: 6" = 1'-0"



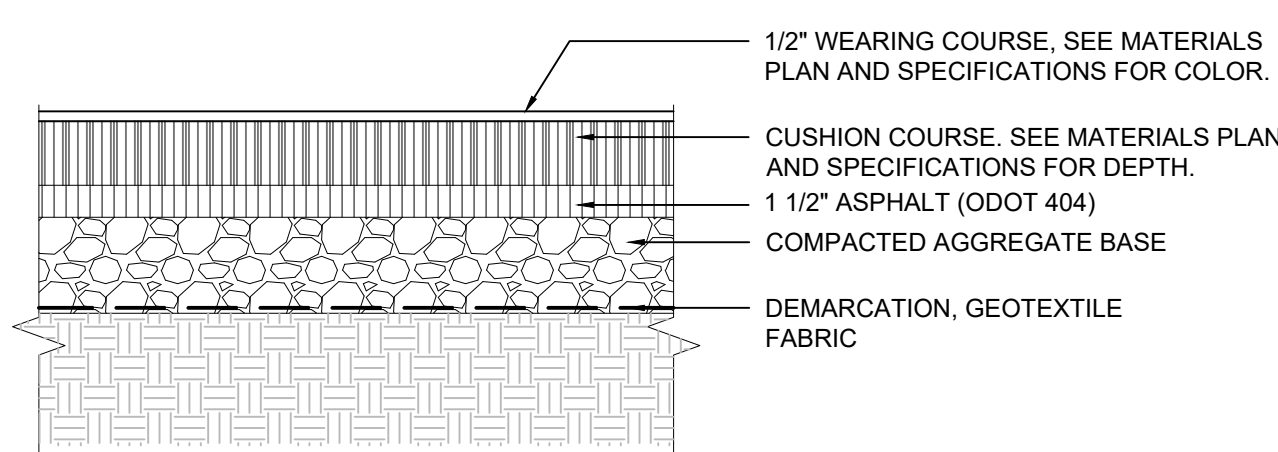
4 CONCRETE PAVING AT PLANTING
SCALE: 1" = 1'-0"



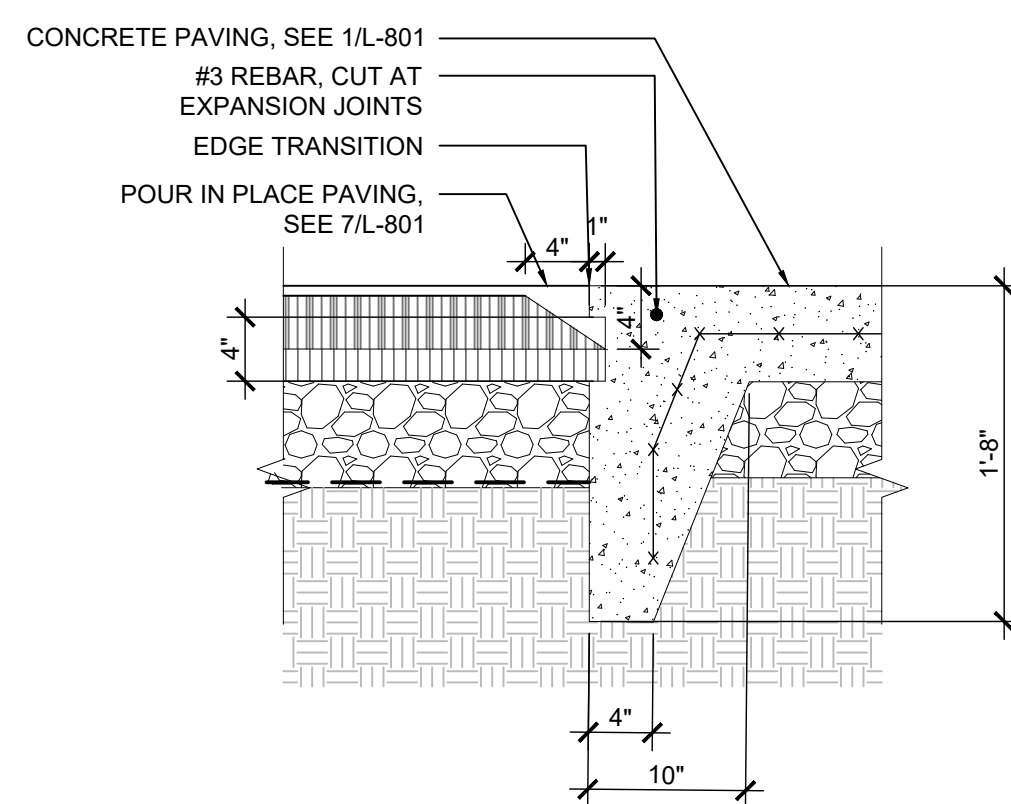
5 STEEL EDGING AT PLANTING
SCALE: 1" = 1'-0"



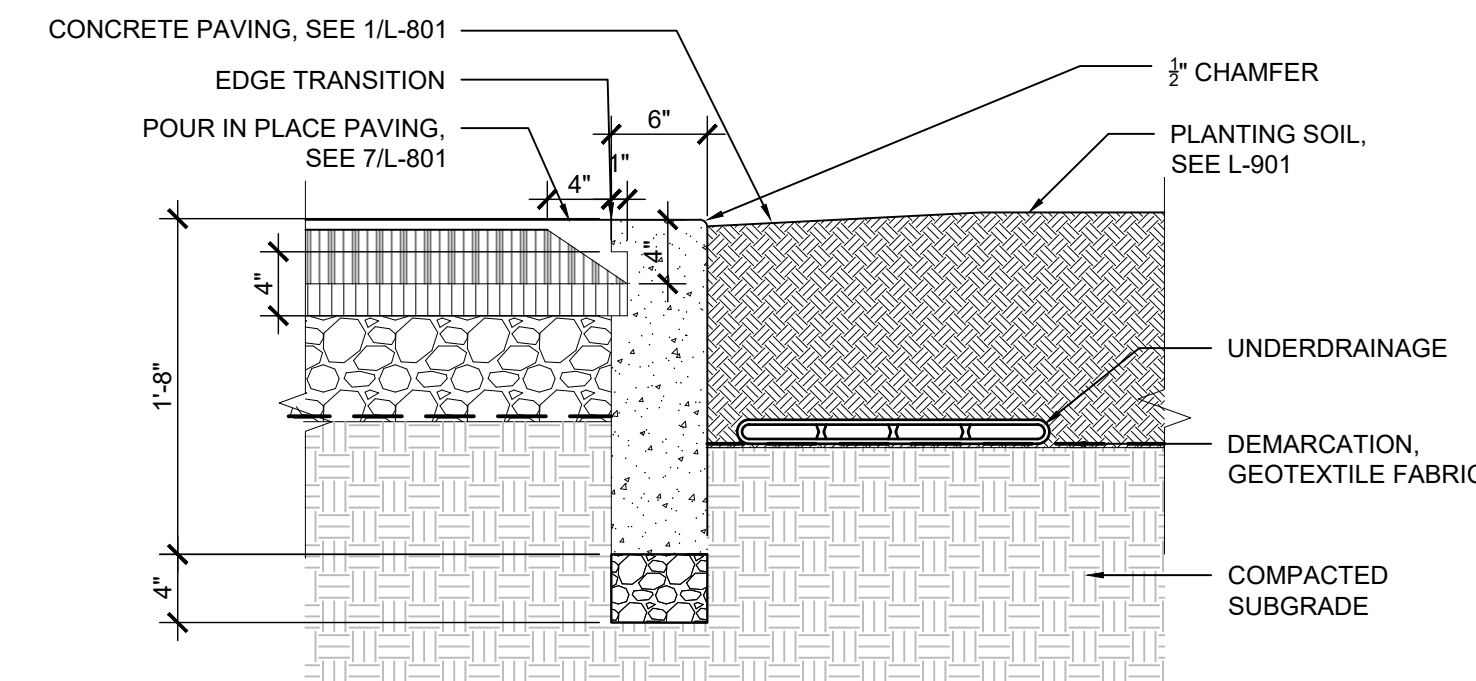
6 METAL INLAY IN CONCRETE FOR TIMELINE
SCALE: 1" = 1'-0"



7 POUR IN PLACE RUBBER SURFACING
SCALE: 1" = 1'-0"



8 PIP PAVING AT CONCRETE PAVING
SCALE: 1" = 1'-0"



9 PIP PAVING AT PLANTING
SCALE: 1" = 1'-0"

REV # DATE DESCRIPTION

SEAL

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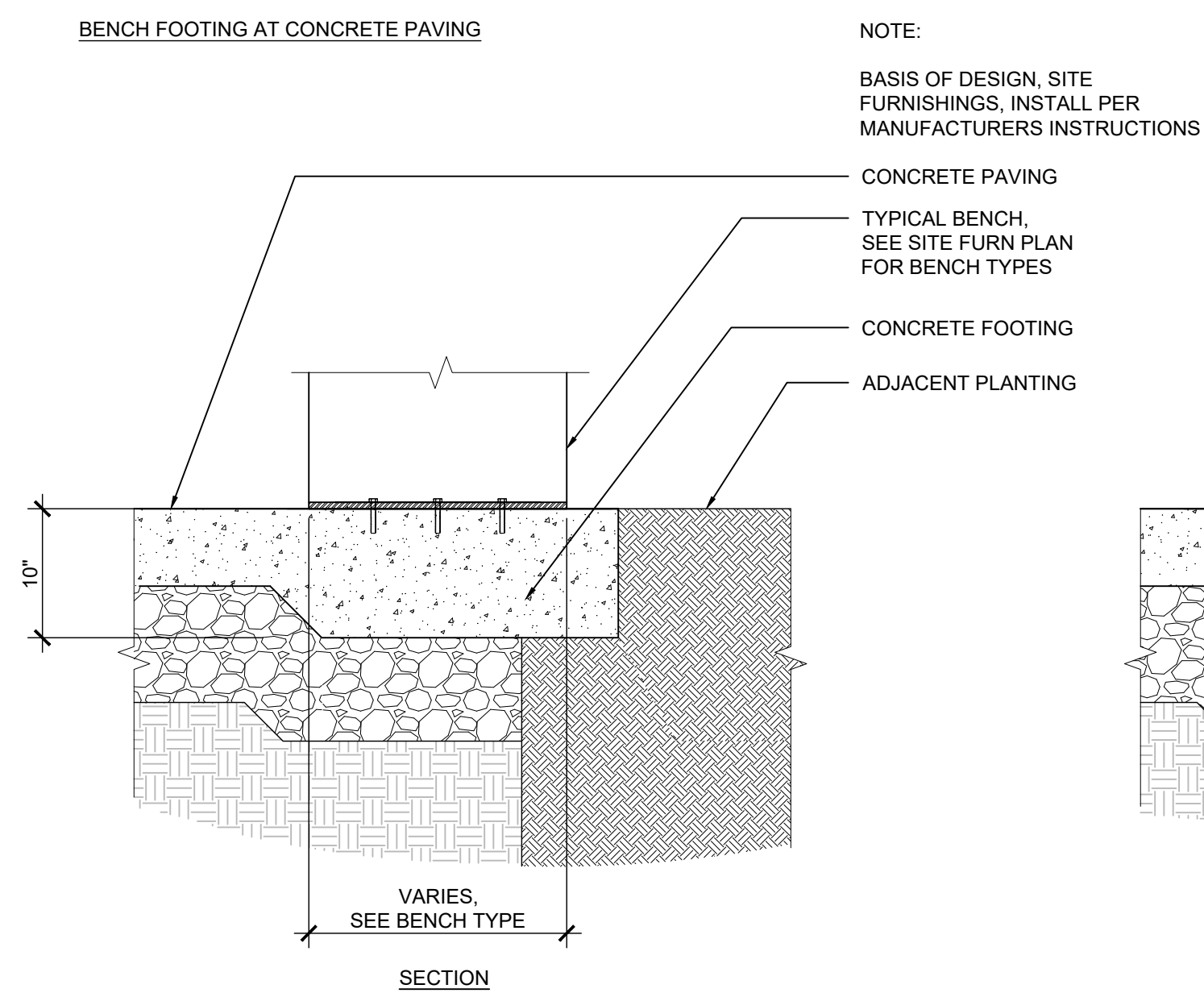
LC PROJECT # 003

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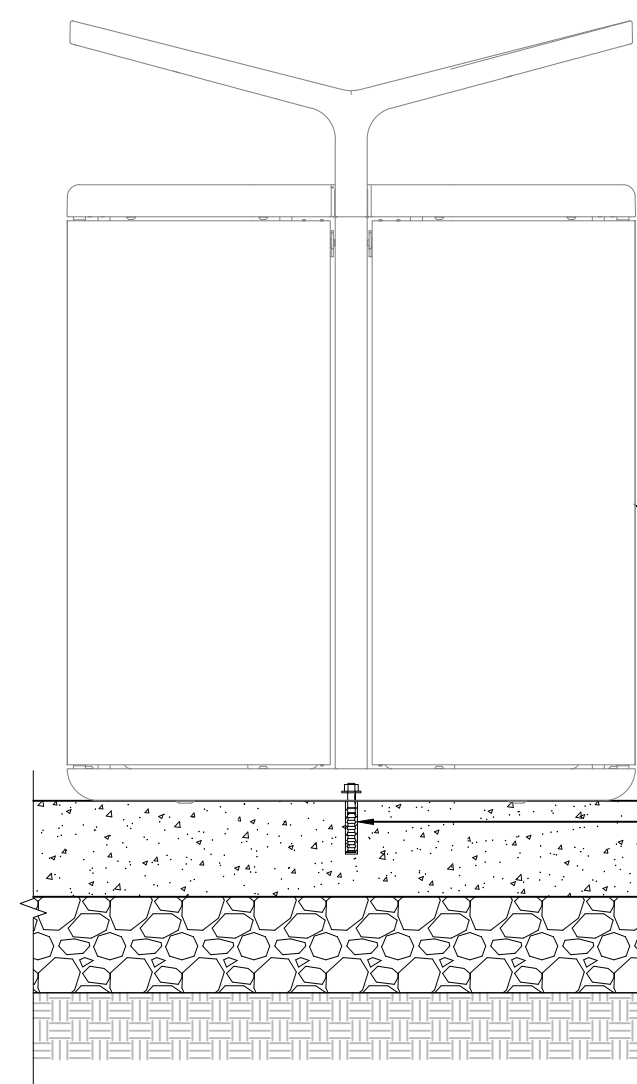
SITE DETAILS
PAVING & INTERFACES

L-801

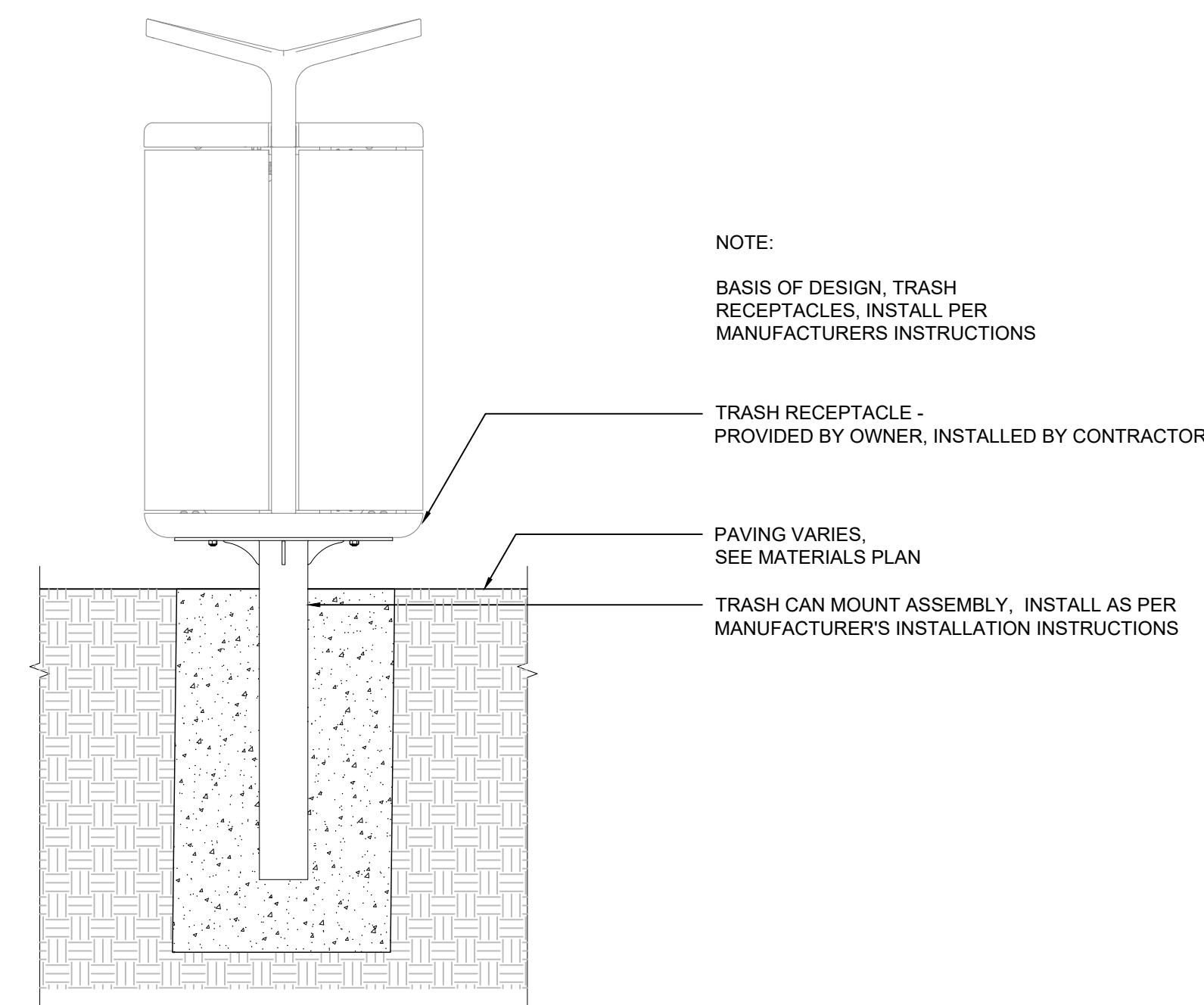
BENCH FOOTING AT CONCRETE PAVING



1 SITE FURNISHING AT CONCRETE
SCALE: 1" = 1'-0"

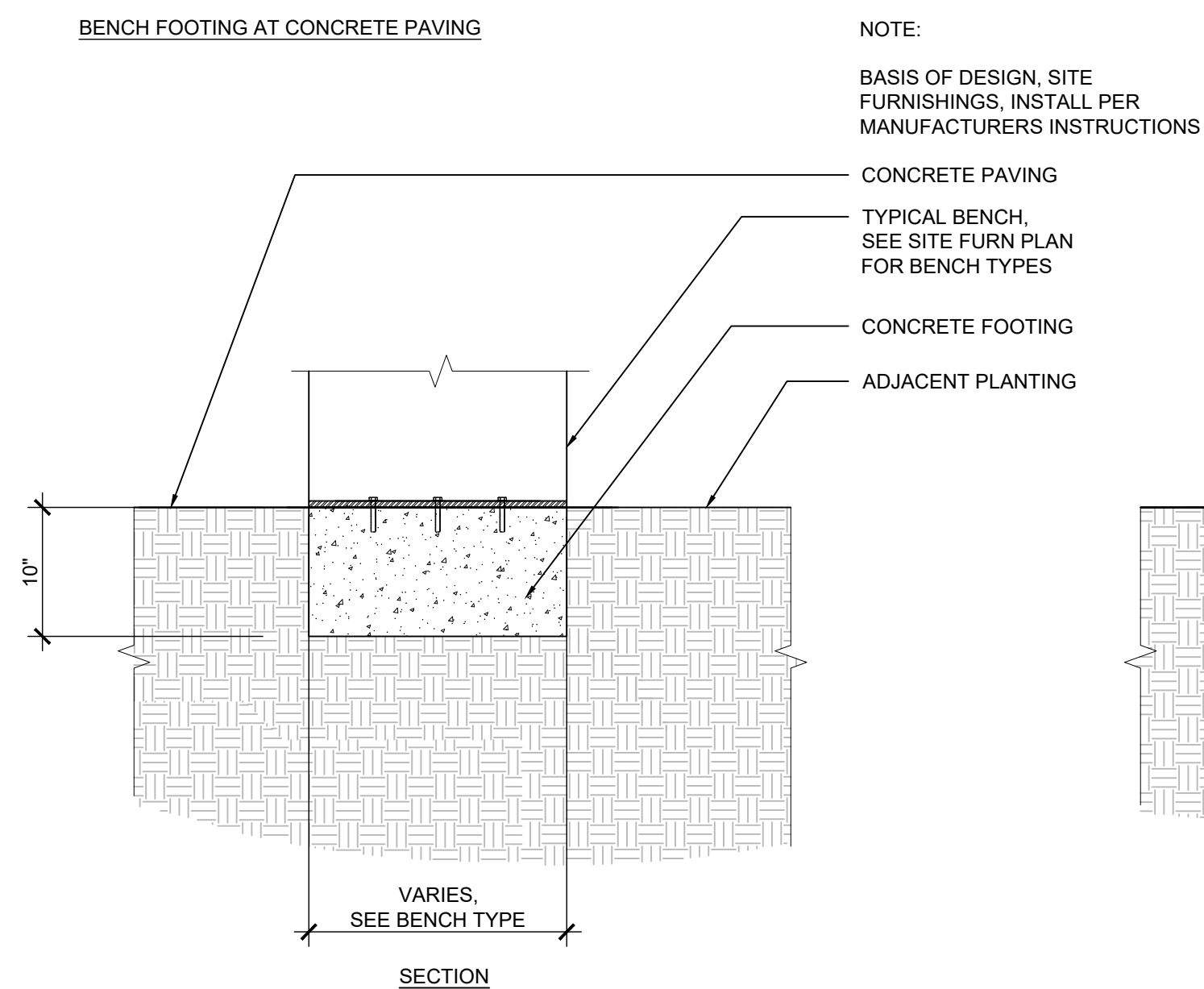


2 TRASH RECEPTACLE AT CONCRETE
SCALE: 1" = 1'-0"

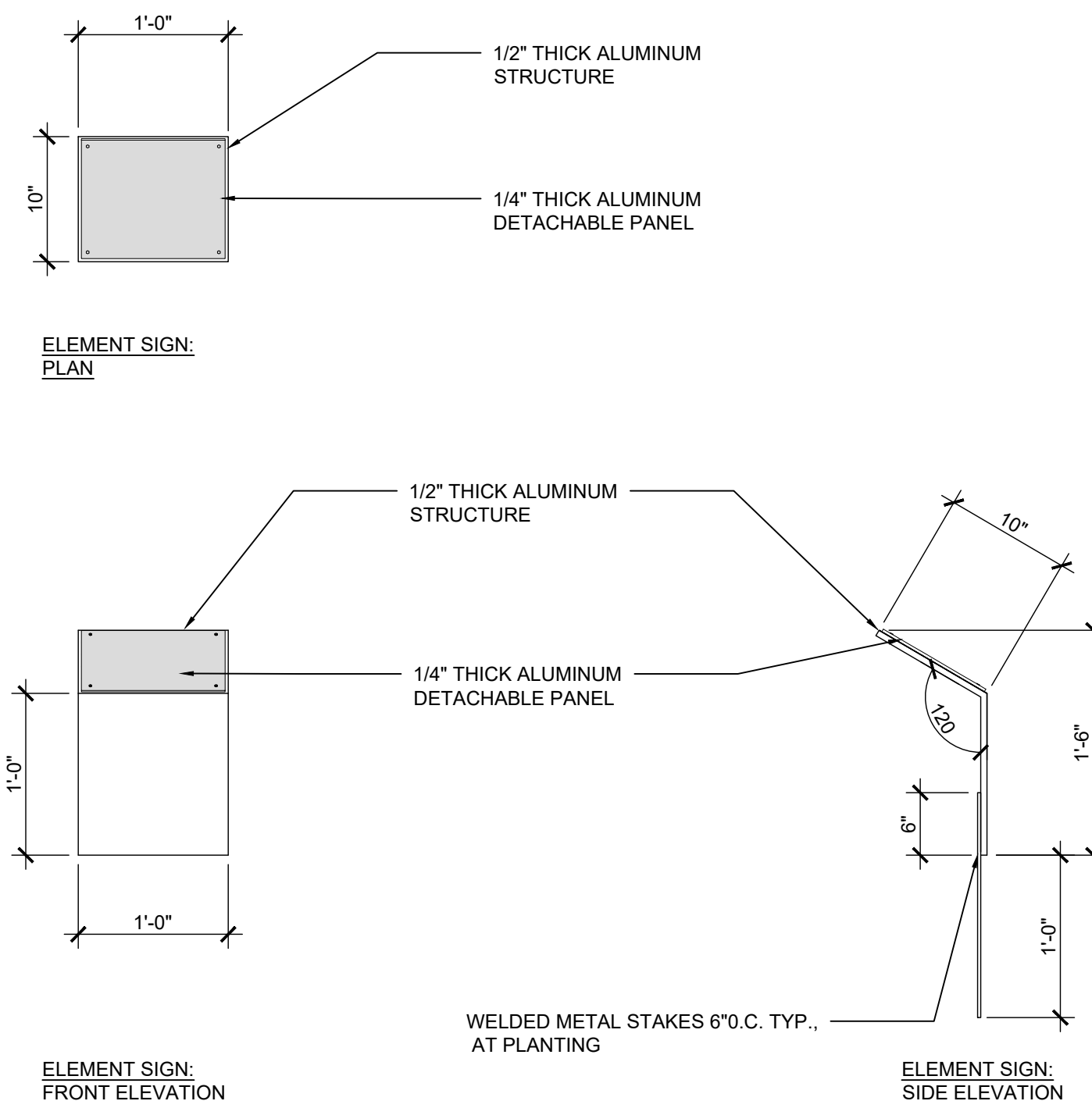


3 TRASH RECEPTACLE AT LAWN
SCALE: 1" = 1'-0"

BENCH FOOTING AT CONCRETE PAVING



4 SITE FURNISHING AT LAWN
SCALE: 1" = 1'-0"



5 ELEMENT SIGN
SCALE: 1" = 1'-0"

REV #	DATE	DESCRIPTION
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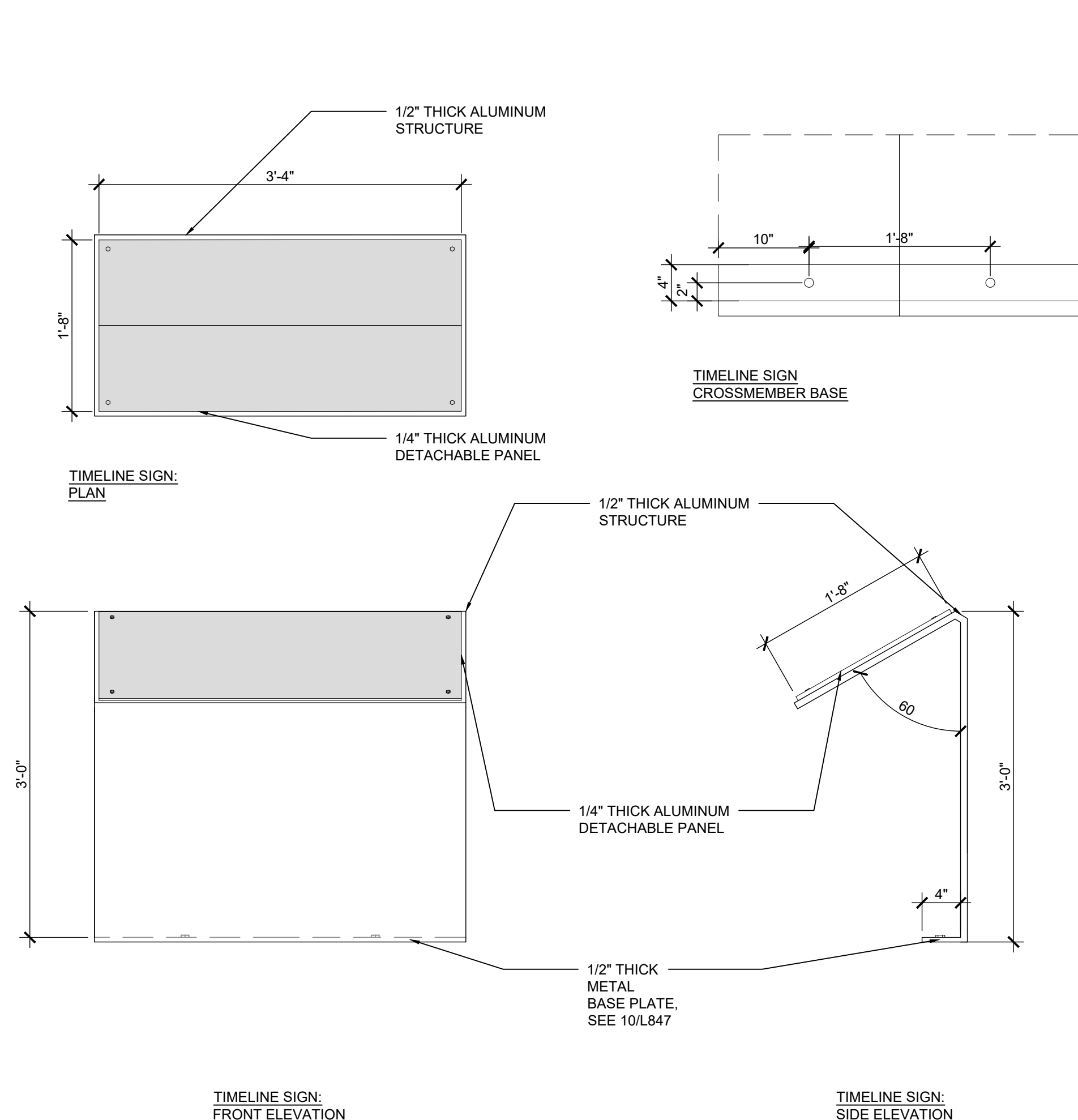
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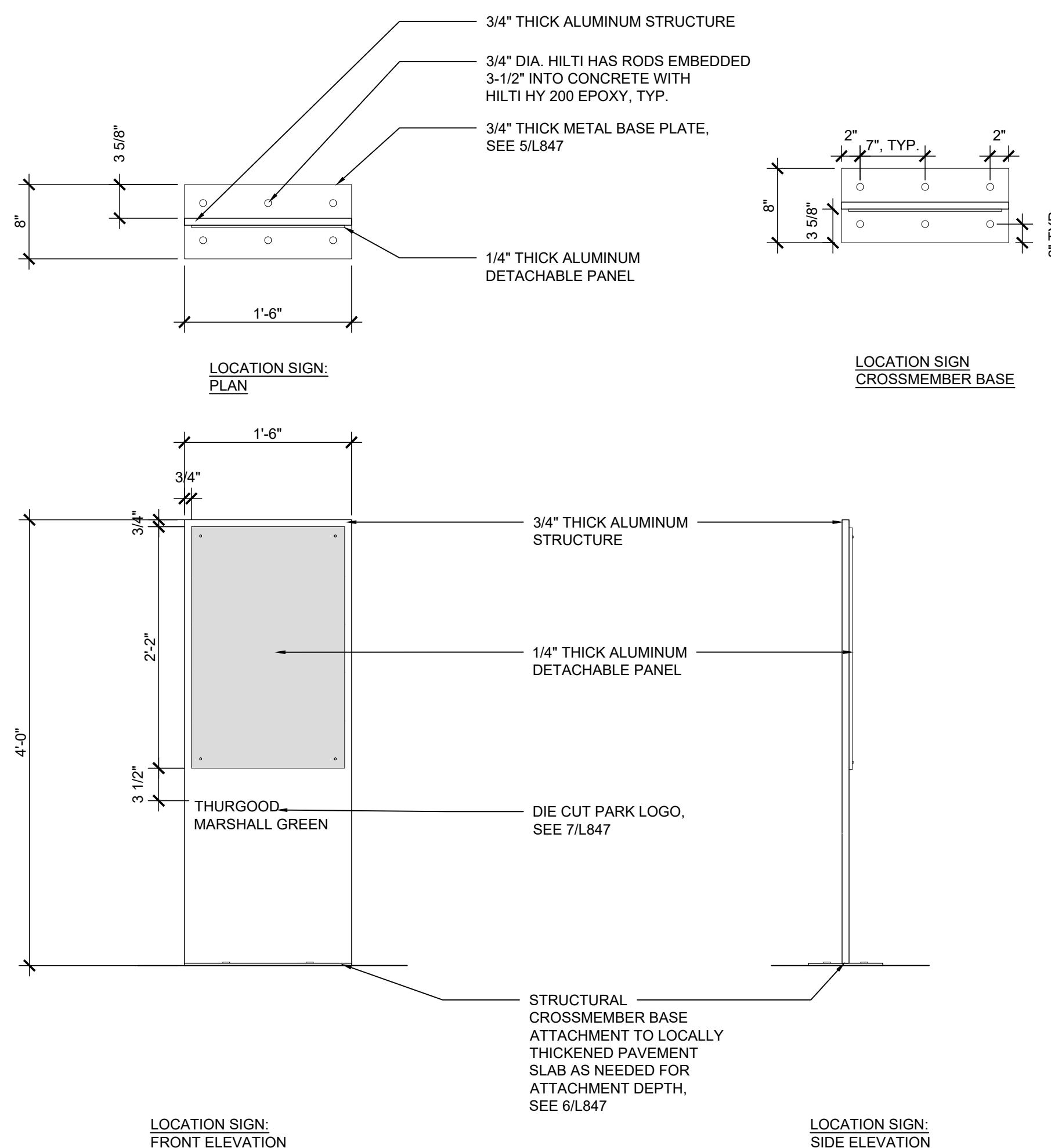
ISSUE DATE 01/23/2024
DRAWN BY AS
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SITE DETAILS
SITE FURNISHINGS

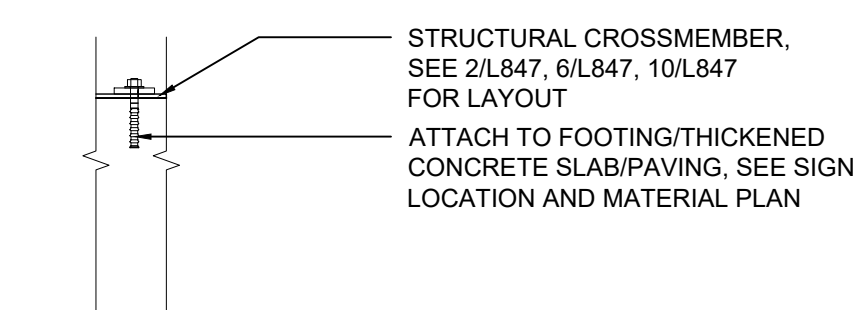
L-802



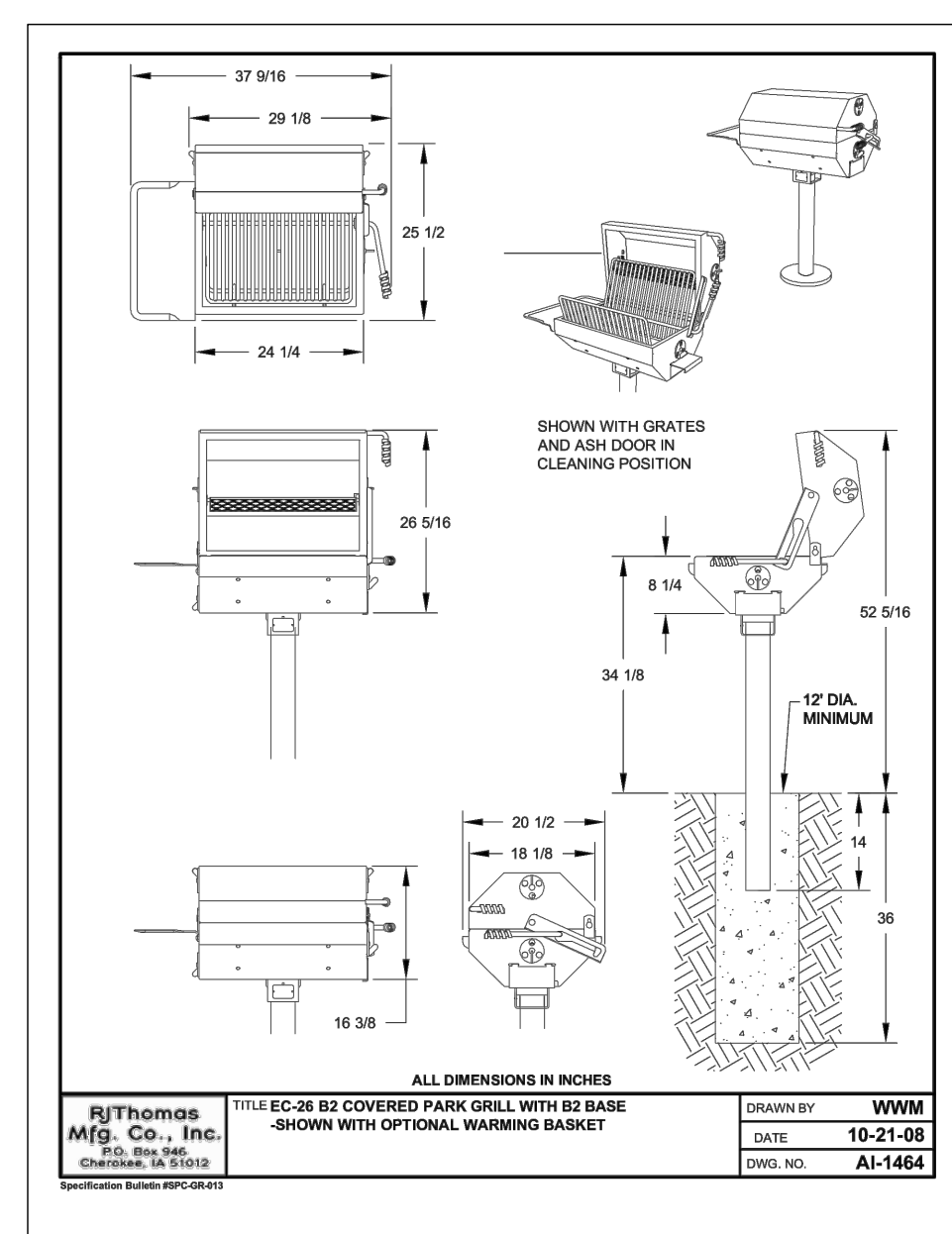
1 TIMELINE INFORMATION SIGN
SCALE: 1" = 1'-0"



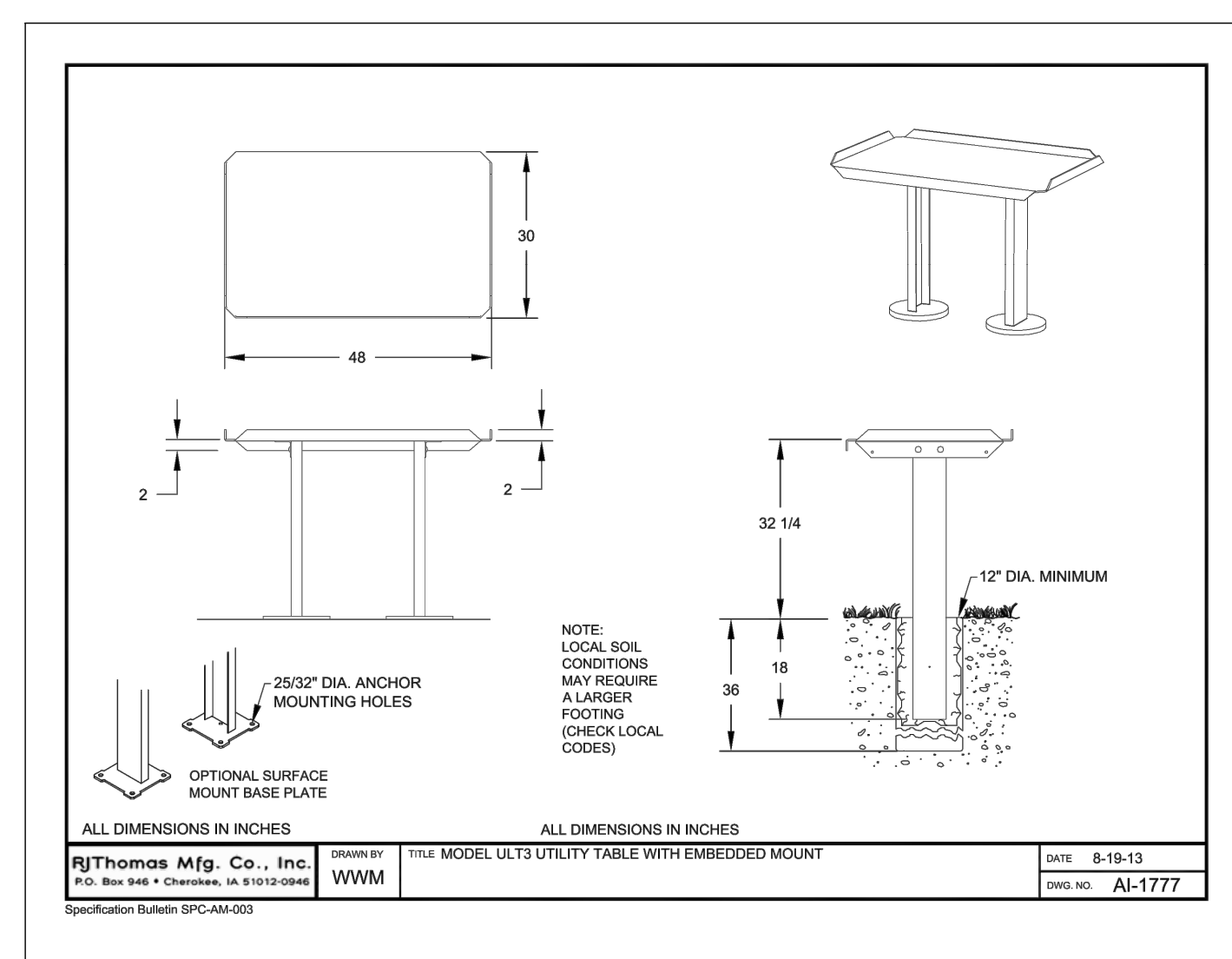
2 LOCATION SIGN
SCALE: 1" = 1'-0"



3 TYPICAL STRUCTURAL
CROSSMEMBER BASE ATTACHMENT
SCALE: 1 1/2" = 1'-0"



4 BBQ GRILL
SCALE: 1" = 1'-0"



5 GRILL UTILITY TABLE
SCALE: 1" = 1'-0"



6 COAL DISPOSAL
SCALE: 1" = 1'-0"

REV #	DATE	DESCRIPTION
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SITE DETAILS
SITE FURNISHINGS

L-803

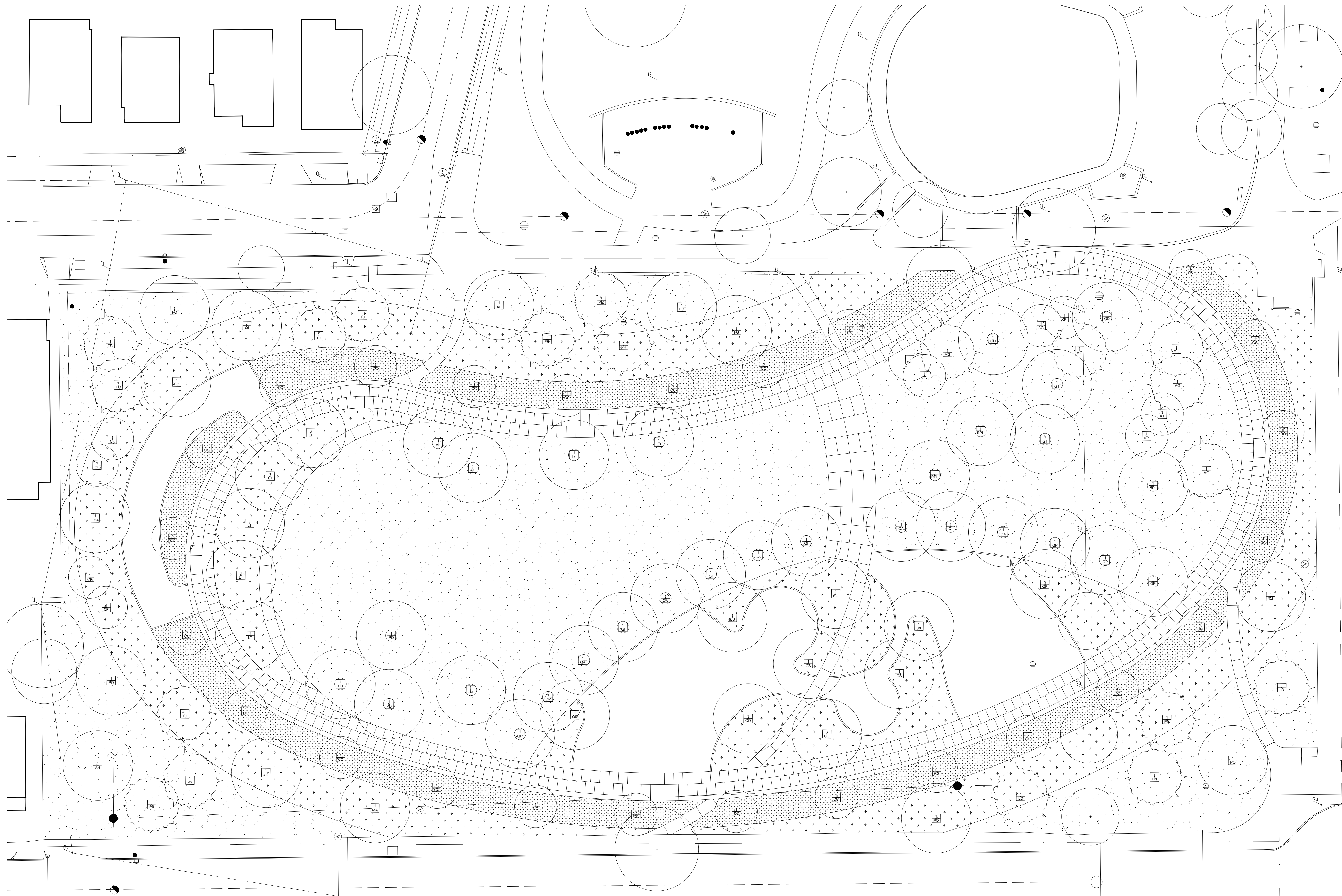
HOUGH
GREENSPACE

East 86th Street
Cleveland, Ohio 44106

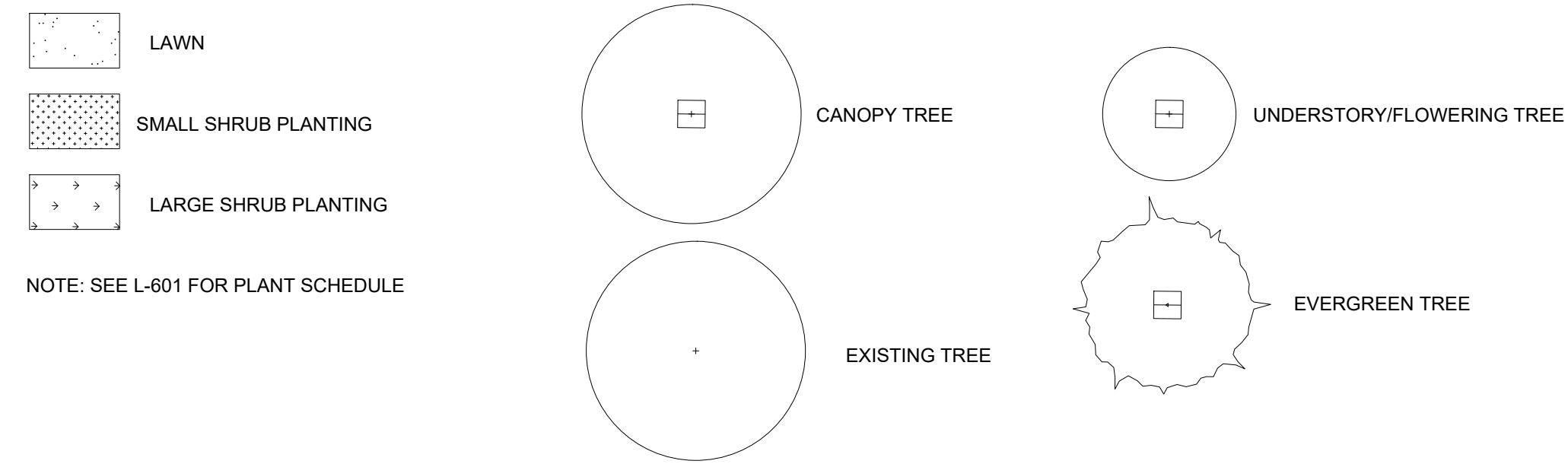
OWNER
WESTERN RESERVE
LAND CONSERVANCY
812 HURON ROAD E SUITE 840
CLEVELAND, OH 44115
440-528-4150

LANDSCAPE ARCHITECT
LAYERCAKE, LLC
7405 DETROIT AVE
CLEVELAND, OH 44102
201.290.2645

CIVIL & STRUCTURAL ENGINEERING
RIVERSTONE
3800 LAKESIDE AVENUE, SUITE 100
CLEVELAND, OH 44114
216.491.9640



LEGEND



NOTE: SEE L-601 FOR PLANT SCHEDULE



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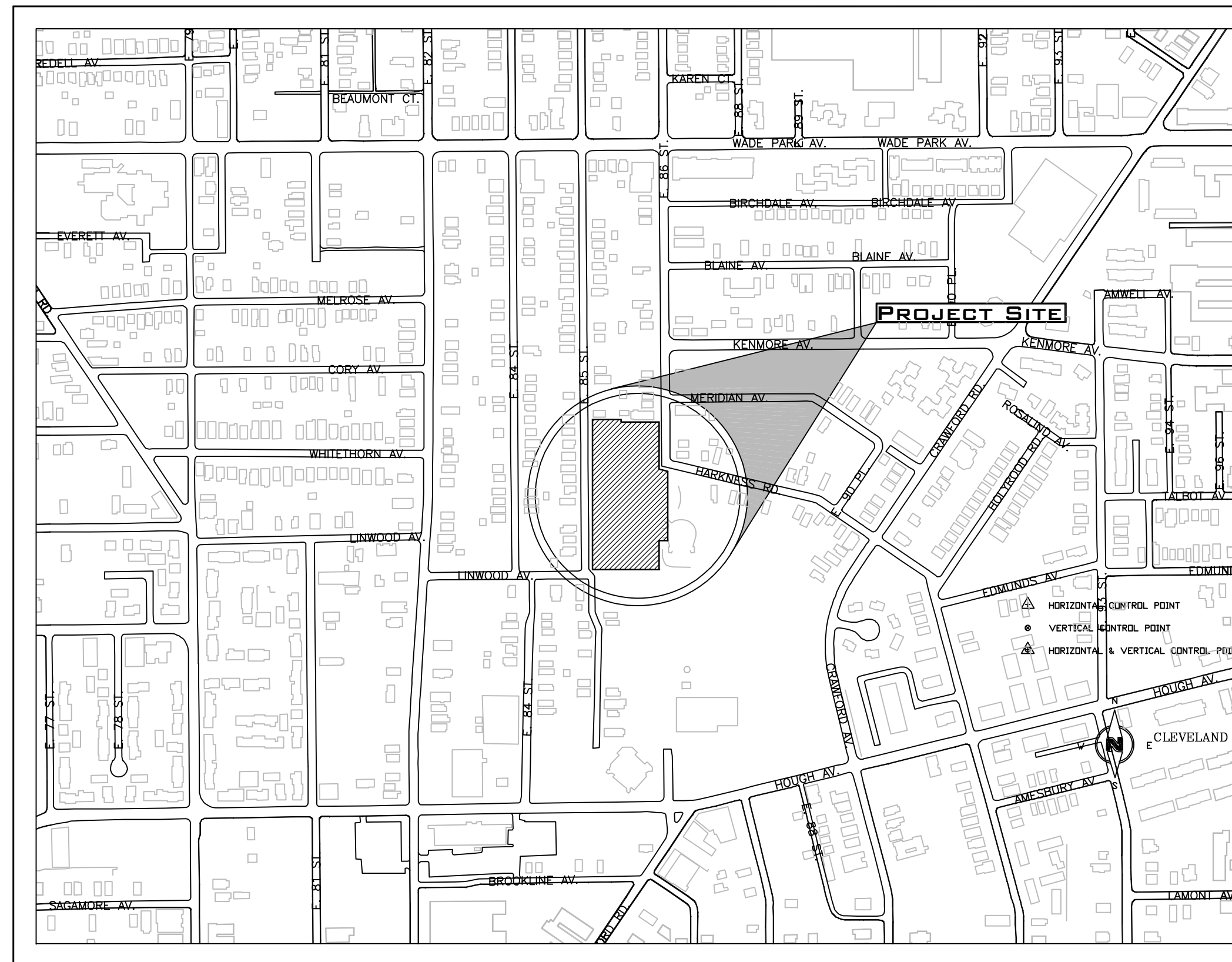
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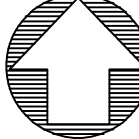
PLANTING PLAN

L-900

IMPROVEMENT PLANS FOR HOUGH GREENSPACE EAST 86TH STREET

THE CITY OF CLEVELAND, COUNTY OF
CUYAHOGA AND STATE OF OHIO




VICINITY MAP
SCALE: 1" = 400'

INDEX TO DRAWINGS

TITLE PAGE	C101
EXISTING CONDITIONS	C201
SITE DEMOLITION PLAN	C202
SITE PLAN	C301
UTILITY PLAN	C401
GRADING PLAN	C501
NOTES & DETAILS	C601-C602
SWPPP	C701-C704


DAVID PIETRANTONE P.E. #61756



1/22/2024
DATE

RIVERSTONE
LAND SURVEYING - ENGINEERING - DESIGN
3800 LAKESIDE AVENUE - SUITE 100
CLEVELAND - OHIO - 44114
PHONE: (216) 491-2000 FAX: (216) 491-9640
WWW.RIVERSTONESURVEY.COM
2023-268

HOUGH
GREENSPACE
East 86th Street
Cleveland, Ohio 44106

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LAND CONSERVANCY
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CLEVELAND, OH 44115
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LAYERCAKE, LLC
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201.290.2645

CIVIL ENGINEERING & SURVEYING
RIVERSTONE
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TITLE PAGE

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SCALE

C101

HOUGH GREENSPACE

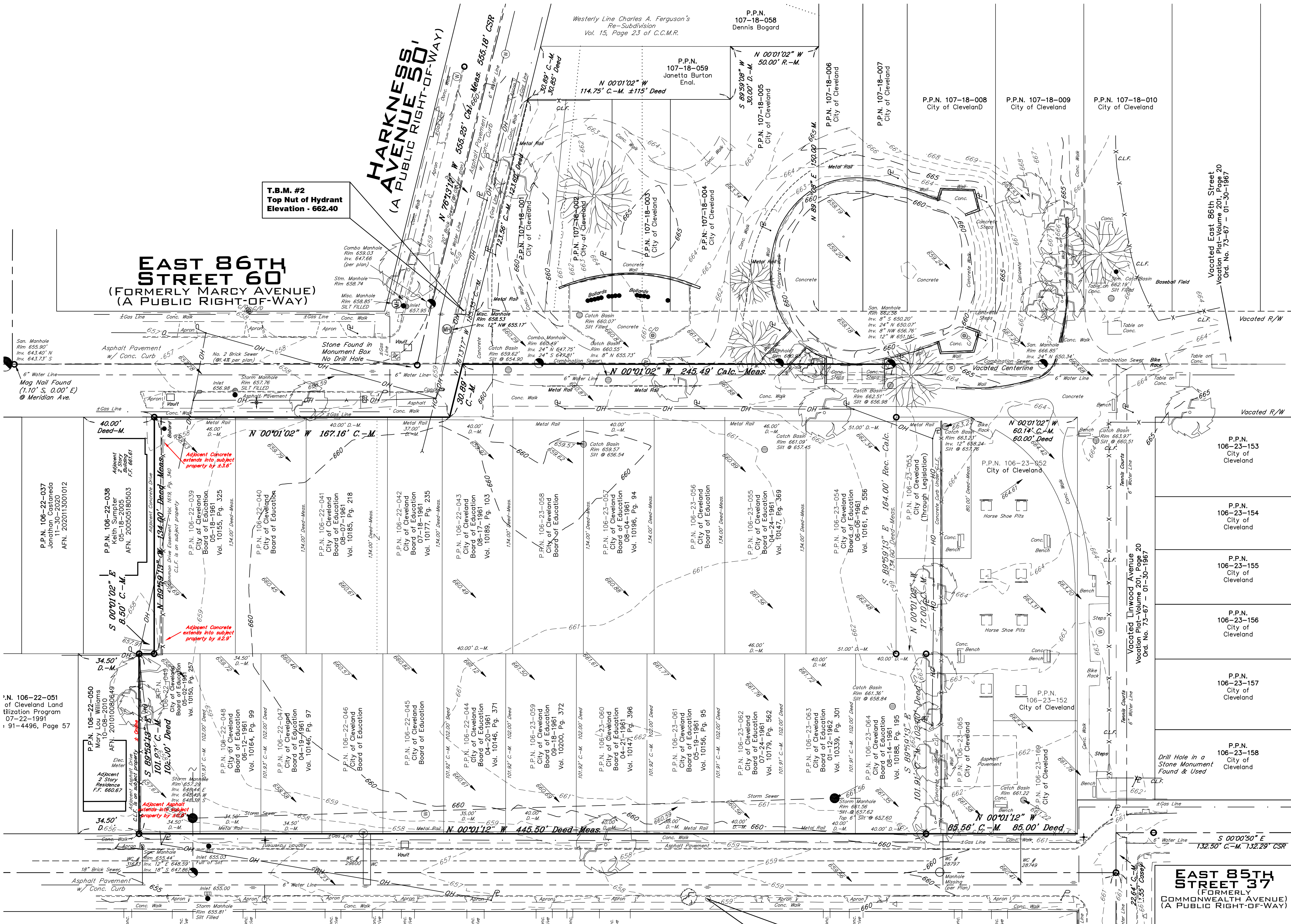
East 86th Street
Cleveland, Ohio 44106

OWNER
WESTERN RESERVE
LAND CONSERVANCY
812 HURON ROAD E SUITE 840
CLEVELAND, OH 44115
440-528-4150

LANDSCAPE ARCHITECT
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7405 DETROIT AVE
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RIVERSTONE
3800 LAKESIDE AVENUE, SUITE 100
CLEVELAND, OH 44114
216.491.2000

EXISTING CONDITIONS



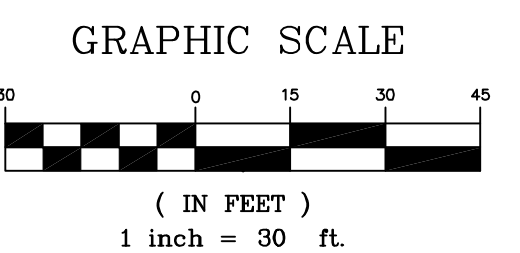
LEGEND

	Monument Box Found		Spot Elevation Tag
	Iron Pin or Pipe Found		Hydrant
	5/8" Iron Pin Set and Capped		Water Service Valve
	P.K. Nail		Water Valve
	Gas Meter		Water Meter
	Utility Pole		Reducer
	Light Pole		Storm Manhole
	Guy Anchor & Line		Sanitary Manhole
	Telephone Box		Curb Inlet
	Electric Box		Catch Basin
	Cable Box		Property Line
	Bollard		Centerline
	Cleanout / Test Tee		

	Ex. Parcel line		Original Sublot Line
	Original Lot Line		Centerline
	Property Line		Right-of-way Line
	Easement Line		Railroad Tracks

	Electric Line		Gas Line
	Sanitary/Combination Sewer		Storm Sewer
	Waterline		Fence Line (Wooden)
	Fence Line (Chain-Link)		Guardrail

Ac.	Acre	L.C.A.	Limited Common Area
Adj.	Adjacent	L.F.	Lineal Feet
A.F.N.	Auditor's File Number	M.E.	Match Existing
Asp.	Asphalt	Meas./M.	Measured
B.F.	Basement Floor	MH	Manhole
B.W.	Bottom of Wall	Obs.	Observed
Calc./C.	Calculated	Pg.	Page
CB	Catch Basin	P.P.N.	Permanent Parcel
C.C.M.R.	Cuyahoga County Map	Prop	Proposed
Records	Records	Rec./R.	Record
C.L.F.	Chain-link Fence	R/W	Right-of-way
Cir.	Clear	Sim.	Sanitary
C.O.	Clean Out	S.F.	Square Feet
Comb.	Combination	S/L	Sublot
Conc.	Concrete	Stm.	Storm
Conn.	Connection	T.B.M.	Temporary Bench Mark
D.H.W.M.	Ductile Iron Water	TBR	To Be Removed
Main	Main	T/C	Top of Curb
Elec	Electric	Tele	Telephone
Elev	Elevation	T.F.	Top of Footer
Encr.	Encroaches	T.T.	Test Tee
Ex.	Existing	TW	Top of Wall
F.F.	Finished Floor	Typ.	Typical
GUT	Gutter	Vol.	Volume
Invt	Invert	Wat	Water



LAND SURVEYING - ENGINEERING - DESIGN
3800 LAKESIDE AVENUE - SUITE 100
CLEVELAND - OHIO - 44114
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2023-268

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LC PROJECT # 8119.04
ISSUE DATE 01/23/2024
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SCALE

C201

GENERAL SITE DEMOLITION NOTES:

CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL PERMITS NECESSARY FOR SITE DEMOLITION AND SHALL BE RESPONSIBLE FOR ALL FEES.

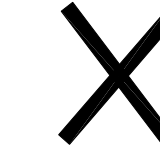
CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE (OUPS) A MINIMUM OF 48 HOURS BEFORE ANY DEMOLITION WORK.

CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL UTILITY DEMOLITION WORK WITH THE APPROPRIATE UTILITIES PRIOR TO DEMOLITION. ALL UTILITY CONNECTIONS SHALL BE REMOVED ACCORDING TO UTILITY COMPANY REQUIREMENTS.

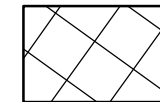
SANITARY AND WATER CONNECTIONS TO REMAIN FOR REUSE SHALL BE LOCATED, INSPECTED AND MARKED IN THE FIELD. CONTRACTOR SHALL NOTIFY ENGINEER OF EXACT LOCATIONS AND ELEVATIONS. ALL OTHER CONNECTIONS NOT PROPOSED TO BE REUSED SHALL BE PLUGGED AND ABANDON PER UTILITY REQUIREMENTS.

ANY INACTIVE WATER CONNECTIONS ALONG PROPERTY FRONTAGE SHALL BE PLUGGED PER CWD STANDARDS. CONTRACTOR IS RESPONSIBLE TO PAY ALL FEES.

SITE DEMOLITION LEGEND:



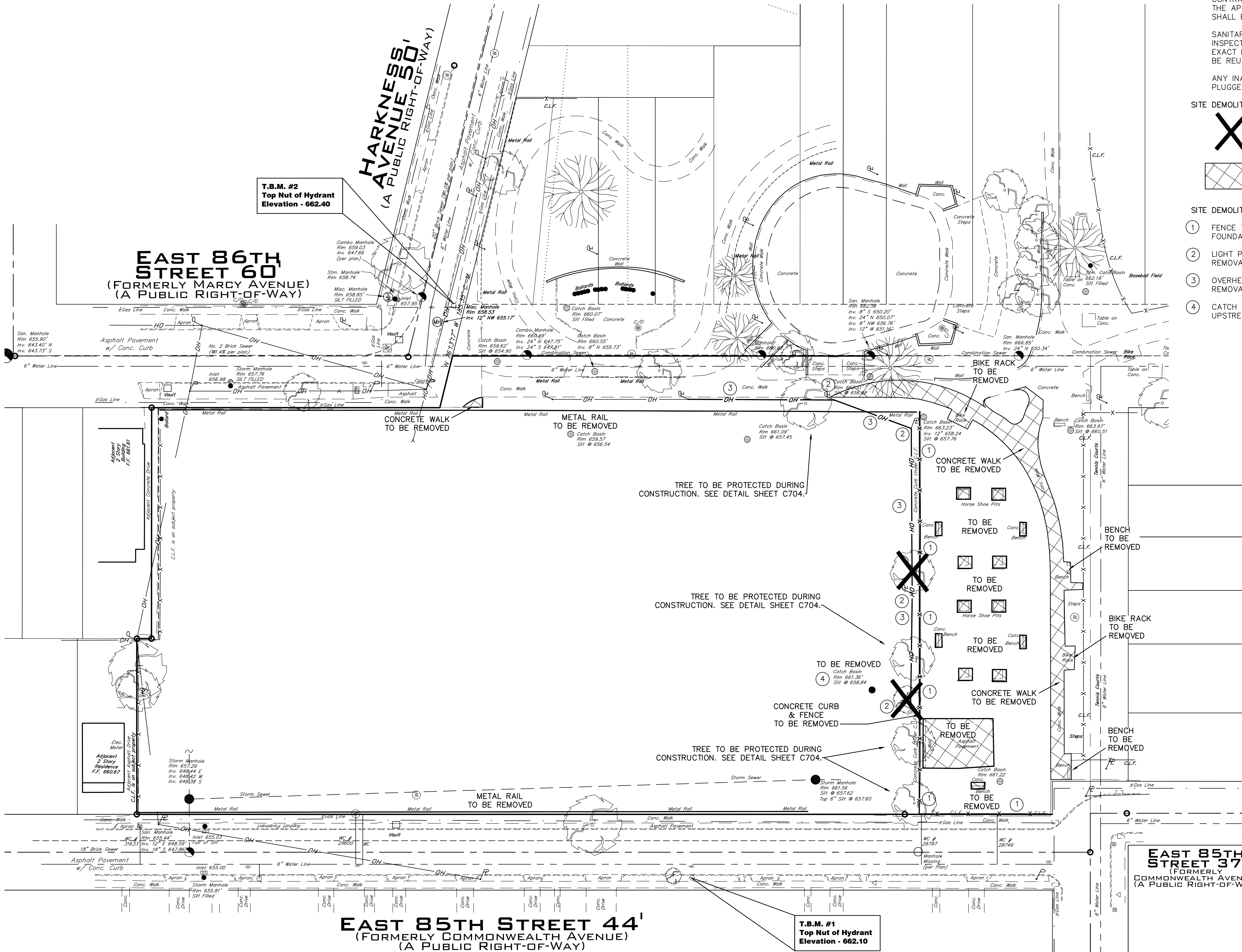
TREE TO BE REMOVED



PAVEMENT (CONCRETE, ASPHALT OR GRAVEL) TO BE REMOVED - SAWCUT ALL PAVEMENTS & SIDEWALKS AT NEAREST CONTROL JOINT WHERE EXISTING PAVEMENT & SIDEWALKS SHALL REMAIN.

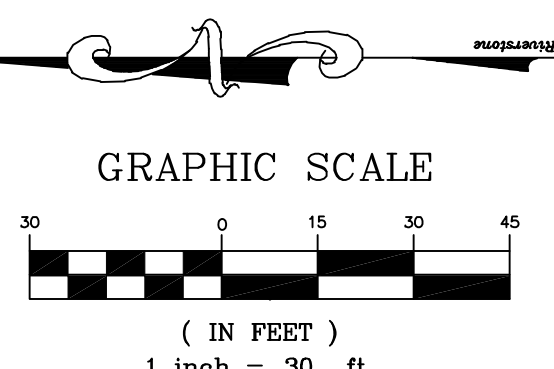
SITE DEMOLITION PLAN KEYNOTES:

- 1 FENCE TO BE REMOVED. CONTRACTOR TO REMOVE FENCE, FENCE POST AND POST FOUNDATIONS.
- 2 LIGHT POLE TO BE REMOVED OR RELOCATED. CONTRACTOR SHALL COORDINATE REMOVAL OF LIGHT POLE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.
- 3 OVERHEAD LINE TO BE REMOVED OR RELOCATED. CONTRACTOR SHALL COORDINATE REMOVAL OF OVERHEAD LINE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.
- 4 CATCH BASIN TO BE REMOVED. CONTRACTOR SHALL ENSURE THAT NO ACTIVE UPSTREAM CONNECTIONS ARE TO REMAIN.



LEGEND

<ul style="list-style-type: none"> Ⓜ = Monument Box Found Ⓞ = Iron Pin or Pipe Found ● = 5/8" Iron Pin Set and Capped Riverstone Company Dudley P55747 ⊕ = P.K. Nail ⊙ = Gas Meter ⊖ = Gas Valve ⊘ = Utility Pole ⊙ = Light Pole ⊙ = Guy Anchor & Line ⊙ = Telephone Box ⊙ = Electric Box ⊙ = Cable Box ⊙ = Bollard ⊙ = Cleanout / Test Tee 	<ul style="list-style-type: none"> ⊙ = Spot Elevation Tag ⊙ = Hydrant ⊙ = Water Service Valve ⊙ = Water Valve ⊙ = Water Meter ⊙ = Reducer ⊙ = Storm Manhole ⊙ = Sanitary Manhole ⊙ = Curb Inlet ⊙ = Catch Basin ⊙ = Property Line ⊙ = Centerline
<ul style="list-style-type: none"> Ex. Parcel line Original Sublot Line Centerline Property Line Right-of-way Line Easement Line Railroad Tracks 	<ul style="list-style-type: none"> Existing PROPOSED
<ul style="list-style-type: none"> Electric Line Gas Line Sanitary/Combination Sewer Storm Sewer Waterline Fence Line (Wooden) Fence Line (Chain-Link) Guardrail 	<ul style="list-style-type: none"> L.C.A. Limited Common Area L.F. Lineal Feet M.E. Match Existing Mess./M. Measures MH Manhole Obs. Observed Pg. Page P.P.N. Permanent Parcel Number Prop. Proposed Rec./R. Record R/W Right-of-way San. Sanitary S.F. Square Feet S/L Sublot Stm. Storm T.B.M. Temporary Bench Mark To Be Removed T/C Top of Curb Tele. Top of Footer T.F. Top of Footing T.T. Test Tee TW Top of Wall Typ. Typical Vol. Volume Wat. Water
<ul style="list-style-type: none"> Ac. Acres Adj. Adjacent A.F.N. Auditor's File Number Asp. Asphalt B.F. Basement Floor BW Bottom of Wall Calc./C. Calculated CB Catch Basin C.C.M.R. Cuyahoga County Map Records C.L.F. Chain-link Fence Clr. Clears C.O. Clean Out Comb. Combination Conc. Concrete Conn. Connection D.H. Drill Hole D.I.W.M. Ductile Iron Water Main Elec. Electric Elev. Elevation Encr. Encroaches Ex. Existing F.F. Finished Floor GUT Gutter Inv. Invert 	



RIVERSTONE
LAND SURVEYING - ENGINEERING - DESIGN
3800 LAKESIDE AVENUE - SUITE 100
CLEVELAND - OHIO - 44114
PHONE: (216) 491-2000 FAX: (216) 491-9640
WWW.RIVERSTONE.SURVEY.COM
2023-268

SITE DEMOLITION PLAN

REV # DATE DESCRIPTION

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ISSUE DATE 01/23/2024

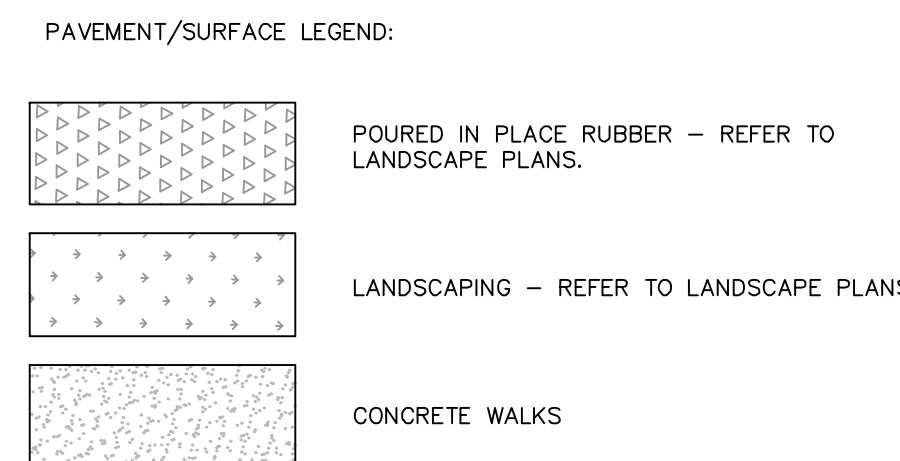
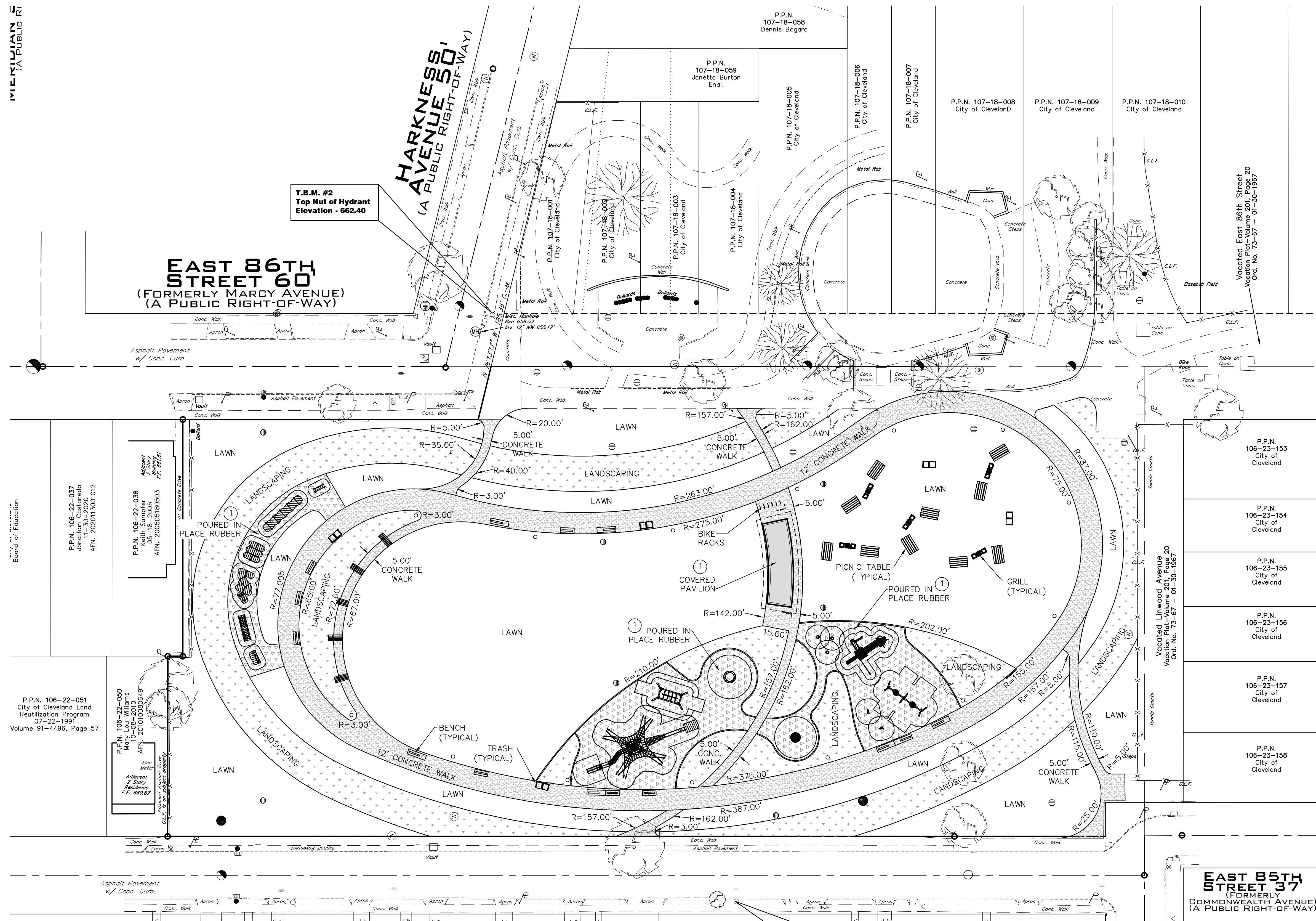
DRAWN BY

CHECKED BY

SCALE

C202

WICKLIFFIAN (A PUBLIC RIGHT-OF-WAY)



KEYNOTES:
① SEE LANDSCAPE PLANS FOR DETAILS.

GENERAL NOTE:
REFER TO LANDSCAPE PLANS FOR PLAY EQUIPMENT AND SITE FURNISHINGS.

LEGEND

Monument Box Found	Spot Elevation Tag
Iron Pin or Pipe Found	
P.K. Nail	Hydrant
Gas Meter	Water Service Valve
Gas Valve	Water Valve
Utility Pole	Water Meter
Light Pole	Reducer
Guy Anchor & Line	Storm Manhole
Telephone Box	Sanitary Manhole
Electric Box	Curb Inlet
Cable Box	Catch Basin
Bollard	Property Line
Cleanout / Test Tee	Centerline

Ex. Parcel Line	Original Sublot Line
Centerline	Original Lot Line
Property Line	Right-of-way Line
Easement Line	Railroad Tracks

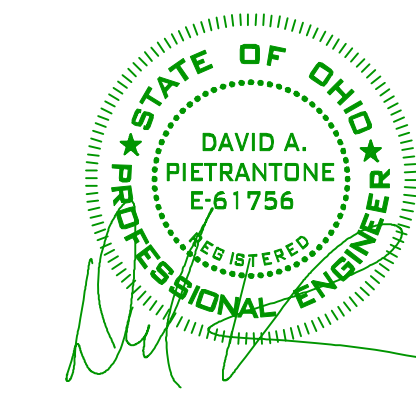
Electric Line	Gas Line	Sanitary/Combination Sewer	Storm Sewer
Waterline	Fence Line (Wooden)	Fence Line (Chain-Link)	Guardrail

Ac.	Acres	L.C.A.	Limited Common Area
Adj.	Adjacent	L.F.	Lineal Feet
A.F.N.	Auditor's File Number	M.E.	Match Existing
Asp.	Asphalt	Mes./M.	Measured
B.F.	Basement Floor	MH	Manhole
BW	Bottom of Wall	Obs.	Observed
Calc./C.	Calculated	Pg.	Page
CB	Catch Basin	P.P.N.	Permanent Parcel Number
C.C.M.R.	Cuyahoga County Map Records	Prop.	Proposed
C.L.F.	Chain-link Fence	Rec./R.	Record
Clr.	Cleare	R/W	Right-of-way
C.O.	Clean Out	San.	Sanitary
Comb.	Combination	S.F.	Square Feet
Conc.	Concrete	S/L	Sublot
Conn.	Connection	Strm.	Storm
D.H.	Drill Hole	T.B.M.	Temporary Bench Mark
D.I.W.M.	Ductile Iron Water Main	TBR	To Be Removed
Elev	Elevation	T/C	Top of Curb
Encr.	Encroaches	Tele	Telephone
Ex.	Existing	T.F.	Top Of Footer
F.F.	Finished Floor	T.T.	Test Tee
GUT	Gutter	TW	Top of Wall
Inv	Invert	Typ.	Typical
		Vol.	Volume
		Wat	Water

SITE PLAN

REV #	DATE	DESCRIPTION

SEAL



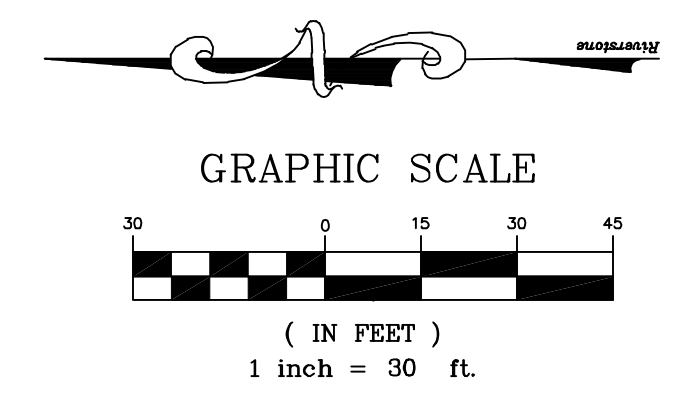
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WWW.RIVERSTONESURVEY.COM

2023-268

EAST 85TH STREET 44'
(FORMERLY COMMONWEALTH AVENUE)
(A PUBLIC RIGHT-OF-WAY)

T.B.M. #1
Top Nut of Hydrant
Elevation - 662.10

T.B.M. #2
Top Nut of Hydrant
Elevation - 662.40

EAST 86TH STREET 60
(FORMERLY MARCY AVENUE)
(A PUBLIC RIGHT-OF-WAY)

EAST 85TH STREET 37
(FORMERLY COMMONWEALTH AVENUE)
(A PUBLIC RIGHT-OF-WAY)

SEWER NOTES:

SEWER INFORMATION WAS OBTAINED FROM THE CITY OF CLEVELAND WATER POLLUTION CONTROL PLAN DRAWING FILE NO. (E 86th) 447 & FILE NO. 1096 & DRAWING FILE NO. (E 85th) 2670. ALL SEWER INVERTS WERE TAKEN FROM FIELD OBSERVATIONS.

THE CONTRACTOR IS REQUIRED TO OBTAIN A SEWER PERMIT FROM THE DIVISION OF WATER POLLUTION CONTROL PRIOR TO ANY SEWER WORK.

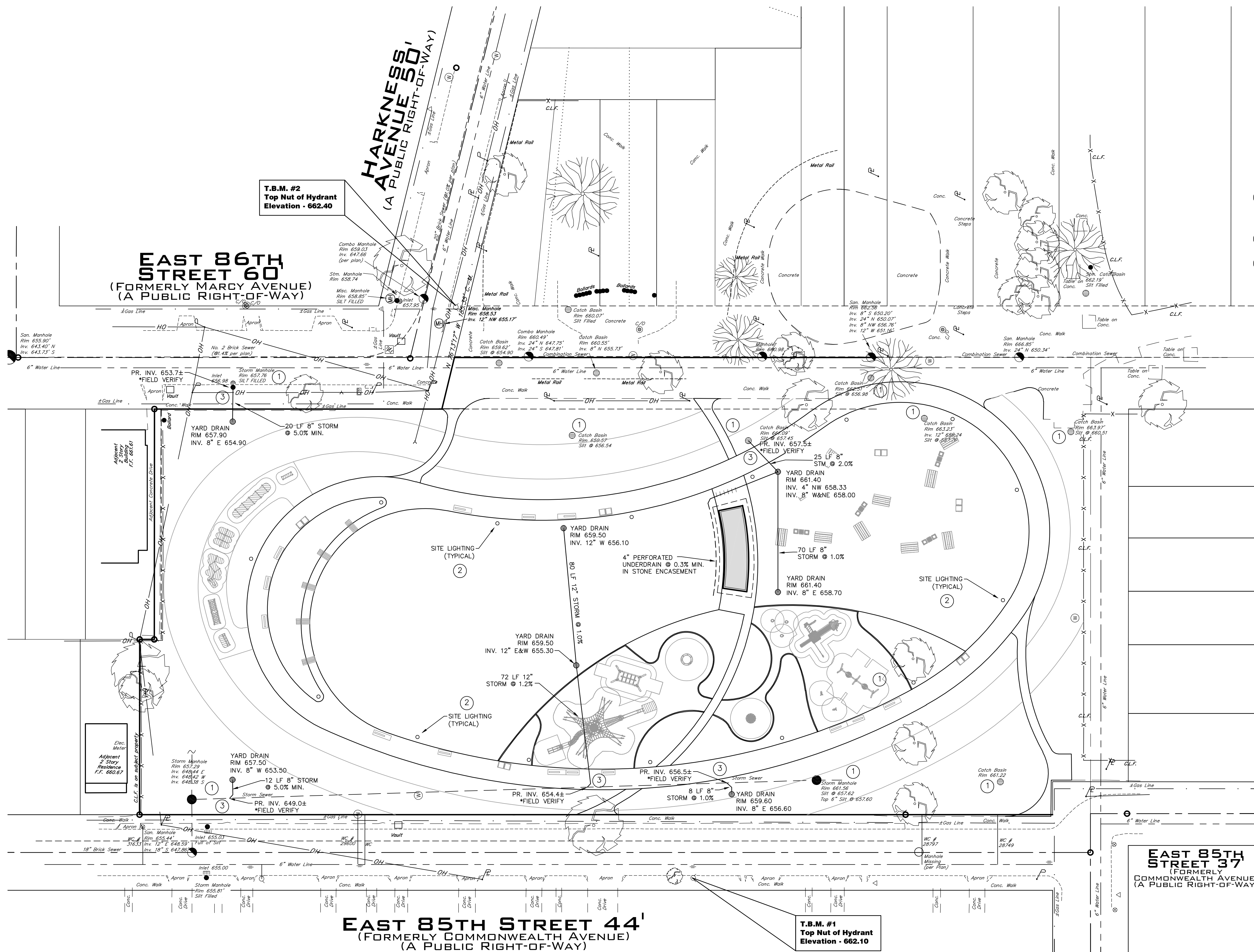
SEWER CONNECTION DATA:
CITY OF CLEVELAND WPC PLANS

EAST 86TH STREET SEWER PLANS - FILE NO. 447
EAST 86TH STREET SEWER PLANS - FILE NO. 1096

EAST 85TH STREET SEWER PLANS - L-2670

NOTES:

- 1 PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CLEAN AND FLUSH EXISTING SEWER TO ENSURE POSITIVE DRAINAGE. CONTRACTOR SHALL INSPECT EXISTING SEWER AND SHALL NOTIFY ENGINEER OF ALL FINDINGS.
- 2 REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING INFORMATION.
- 3 CONTRACTOR SHALL FIELD VERIFY INVERT OF EXISTING SEWER AT CONNECTION POINT PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ALL FINDINGS.



LEGEND

M	= Monument Box Found	○	= Spot Elevation Tag
○	= Iron Pin or Pipe Found	○	= 5/8" Iron Pin Set and Capped Riverstone Company Dudley PS6747
+	= P.K. Nail	⊗	= Hydrant
⊗	= Gas Meter	⊗	= Water Service Valve
△	= Gas Valve	⊗	= Water Valve
⊗	= Utility Pole	⊗	= Water Meter
⊗	= Light Pole	⊗	= Reducer
⊗	= Guy Anchor & Line	⊗	= Storm Manhole
⊗	= Telephone Box	⊗	= Sanitary Manhole
⊗	= Electric Box	⊗	= Curb Inlet
⊗	= Cable Box	⊗	= Catch Basin
⊗	= Bollard	⊗	= Property Line
⊗	= Cleanout / Test Tee	⊗	= Centerline
---	Ex. Parcel line	---	
---	Original Sublot Line	---	
---	Original Lot Line	---	
---	Centerline	---	
---	Property Line	---	
---	Right-of-way Line	---	
---	Easement Line	---	
---	Railroad Tracks	---	
---	Electric Line	---	
---	Gas Line	---	
---	Sanitary/Combination Sewer	---	
---	Storm Sewer	---	
---	Waterline	---	
---	Fence Line (Wooden)	---	
---	Fence Line (Chain-Link)	---	
---	Guardrail	---	

UTILITY PLAN

REV # DATE DESCRIPTION

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3800 LAKESIDE AVENUE - SUITE 100
CLEVELAND - OHIO - 44114
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WWW.RIVERSTONESURVEY.COM
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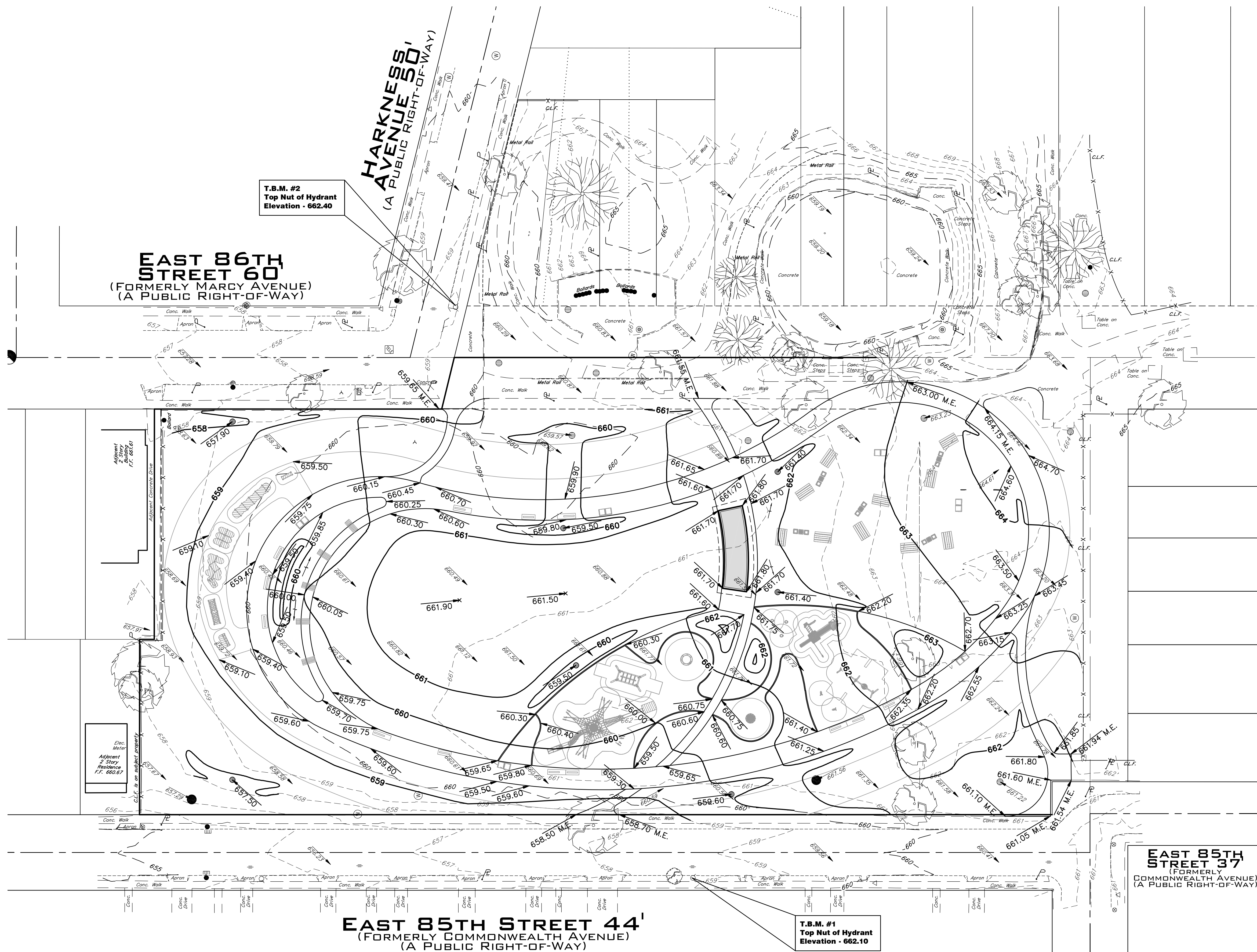
HOUGH GREENSPACE

East 86th Street
Cleveland, Ohio 44106

OWNER
WESTERN RESERVE
LAND CONSERVANCY
812 HURON ROAD E SUITE 840
CLEVELAND, OH 44115
440-528-4150

LANDSCAPE ARCHITECT
LAYERCAKE, LLC
7405 DETROIT AVE
CLEVELAND, OH 44102
201.290.2645

CIVIL ENGINEERING & SURVEYING
RIVERSTONE
3800 LAKESIDE AVENUE, SUITE 100
CLEVELAND, OH 44114
216.491.2000



LEGEND

<ul style="list-style-type: none"> M = Monument Box Found ○ = Iron Pin or Pipe Found ● = 5/8" Iron Pin Set and Capped Riverstone Company Dudley PS6747 + = P.K. Nail △ = Gas Valve ⊕ = Utility Pole ⊘ = Light Pole ⊙ = Telephone Box ⊚ = Electric Box ⊛ = Cable Box ⊜ = Bollard ⊝ = Cleanout / Test Tee 	<ul style="list-style-type: none"> ○ = Spot Elevation Tag ⊕ = Hydrant ⊙ = Water Service Valve ⊚ = Water Valve ⊛ = Water Meter ⊜ = Reducer ⊝ = Storm Manhole ⊞ = Sanitary Manhole ⊟ = Curb Inlet ⊠ = Catch Basin ⊡ = Property Line ⊢ = Centerline
<ul style="list-style-type: none"> Ex. Parcel line Original Sublot Line Original Lot Line Centerline Property Line Right-of-way Line Easement Line Railroad Tracks 	<ul style="list-style-type: none"> Electric Line Gas Line Sanitary/Combination Sewer Storm Sewer Waterline Fence Line (Wooden) Fence Line (Chain-Link) Guardrail
<ul style="list-style-type: none"> Ac. Acres Adj. Adjacent A.F.N. Auditor's File Number Asp. Asphalt B.F. Basement Floor B.W. Bottom of Wall Calc./C. Calculated CB Catch Basin C.C.M.R. Cuyahoga County Map Records C.L.F. Chain-link Fence Clr. Clears C.O. Clean Out Comb. Combination Conc. Concrete Conn. Connection D.H. Drill Hole D.I.W.M. Ductile Iron Water Main Elev. Elevation Encr. Encroaches Ex. Existing F.F. Finished Floor GUT Gutter Inv. Invert 	<ul style="list-style-type: none"> L.C.A. Limited Common Area L.F. Lineal Feet M.E. Match Existing Meas./M. Measured MH Manhole Obs. Observed Page Page P.P.N. Permanent Parcel Number Prop. Proposed Rec./R. Record R/W Right-of-way San. Sanitary S.F. Square Feet S/L Sublot Stm. Storm T.B.M. Temporary Bench Mark TBR To Be Removed T/C Top of Curb Tele. Telephone T.F. Top of Footer T.T. Test Tee TW Top of Wall Typ. Typical Vol. Volume Wat. Water

GRADING PLAN

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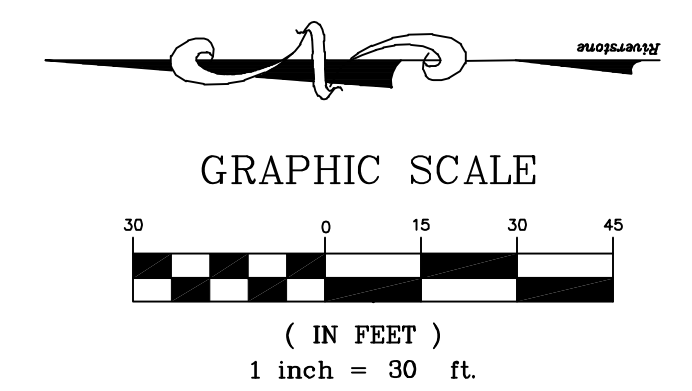
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WWW.RIVERSTONESURVEY.COM
2023-268

OWNER

WESTERN RESERVE
LAND CONSERVANCY

812 HURON ROAD E SUITE 840
CLEVELAND, OH 44115
440-528-4150

LANDSCAPE ARCHITECT

LAYERCAKE, LLC

7405 DETROIT AVE
CLEVELAND, OH 44102
201.290.2645

CIVIL ENGINEERING & SURVEYING

RIVERSTONE

3800 LAKESIDE AVENUE, SUITE 100
CLEVELAND, OH 44114
216.491.2000

NOTES & DETAILS

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GENERAL NOTES

- 1.) A PRE-CONSTRUCTION CONFERENCE SCHEDULED BY THE CONTRACTOR SHALL BE HELD PRIOR TO START OF ANY WORK. IN ADDITION, THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE TO THE CITY ENGINEER PRIOR TO BEGINNING WORK TO ARRANGE FOR INSPECTION.
- 2.) ANY AND ALL CHANGES IN PLAN QUANTITIES OR MATERIALS SHALL BE APPROVED IN WRITING BY THE DEVELOPER PRIOR TO INCORPORATION IN THE WORK.
- 3.) EARTHWORK QUANTITIES:
 - A) ALL STUMPS, TREES AND OTHER CONSTRUCTION DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR OFF-SITE.
 - B) THE CONTRACTOR SHALL PLACE AND COMPACT ALL SUITABLE FILL MATERIAL EXCAVATED DURING HIS CONSTRUCTION OPERATIONS WITHIN THE FILL AREAS DESIGNATED ON THE GRADING PLAN AND/OR AS DIRECTED BY THE DEVELOPER AND/OR HAULED OFF-SITE AT THE DEVELOPER'S DISCRETION.
 - C) NO DISPOSAL SITE WITHIN THE PROJECT LIMITS SHALL BE UTILIZED.
- 4.) SEEDING AND MULCHING: SEDIMENT CONTROL SHALL BE ACCOMPLISHED BY SEEDING AND MULCHING IMMEDIATELY UPON COMPLETION OF EXCAVATION OR FILL AND FINISHED GRADING IN ACCORDANCE WITH ITEM 659 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
- 5.) ALL TRENCHES IN PAVED AREAS SHALL BE BACKFILLED WITH GRANULAR MATERIALS FROM THE TOP OF THE TRENCH BEDDING. BACKFILL TO BE MECHANICALLY COMPACTED. SLAG NOT ALLOWED.
- 6.) ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM PROHIBITED.
- 7.) PRIOR TO CONNECTION CONSTRUCTION, CONTRACTOR TO VERIFY LOCATIONS, SIZE AND DEPTH OF EXISTING SEWER & WATER TIE-INS.
- 8.) THE UTILITY OWNERSHIPS ARE AS FOLLOWS:

OHIO UTILITIES
PROTECTION SERVICE
106 WEST RYEN - ROOM 427
YOUNGSTOWN, OHIO 44051
PH: (800) 362-2764

SPECTRUM/TIME WARNER
1100 EAST 222ND STREET
EUCLID, OHIO 44117
PH: (800) 993-2225

NORTH EAST REGIONAL
SEWER DISTRICT
DIVISION OF ENGINEERING
3900 EUCLID AVENUE
CLEVELAND, OH 44114-2504
PH: (216) 881-6600

CITY OF CLEVELAND
DIVISION OF WATER
1201 LAKESIDE AVENUE
PH: (216) 664-2444

DOMINION ENERGY
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OHIO 44333
PH: (877) 542-2630

AT&T
13630 LORAIN AVENUE, ROOM 200
CLEVELAND, OHIO 44111
PH: (216) 882-6291

THE ILLUMINATING COMPANY
6896 MILLER ROAD, SUITE 101
BRECKSVILLE, OHIO 44141
PH: (216) 622-9800

CLEVELAND PUBLIC POWER
1300 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
PH: (216) 664-4277

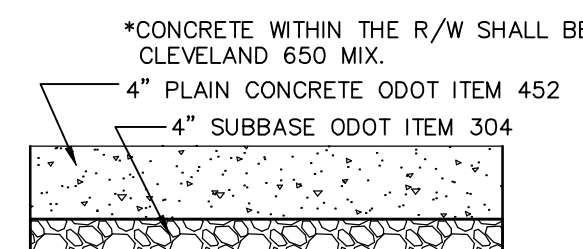
CITY OF CLEVELAND DIVISION OF
WATER POLLUTION CONTROL
12302 KIRBY AVENUE
CLEVELAND, OHIO 44108
PH: (216) 664-3785

THE LOCATION OF UNDERGROUND UTILITIES ARE PLOTTED ACCORDING TO THE INFORMATION FURNISHED BY THE UTILITIES CONCERNED AND THE ENGINEER DOES NOT GUARANTEE THE ACCURACY THEREOF.

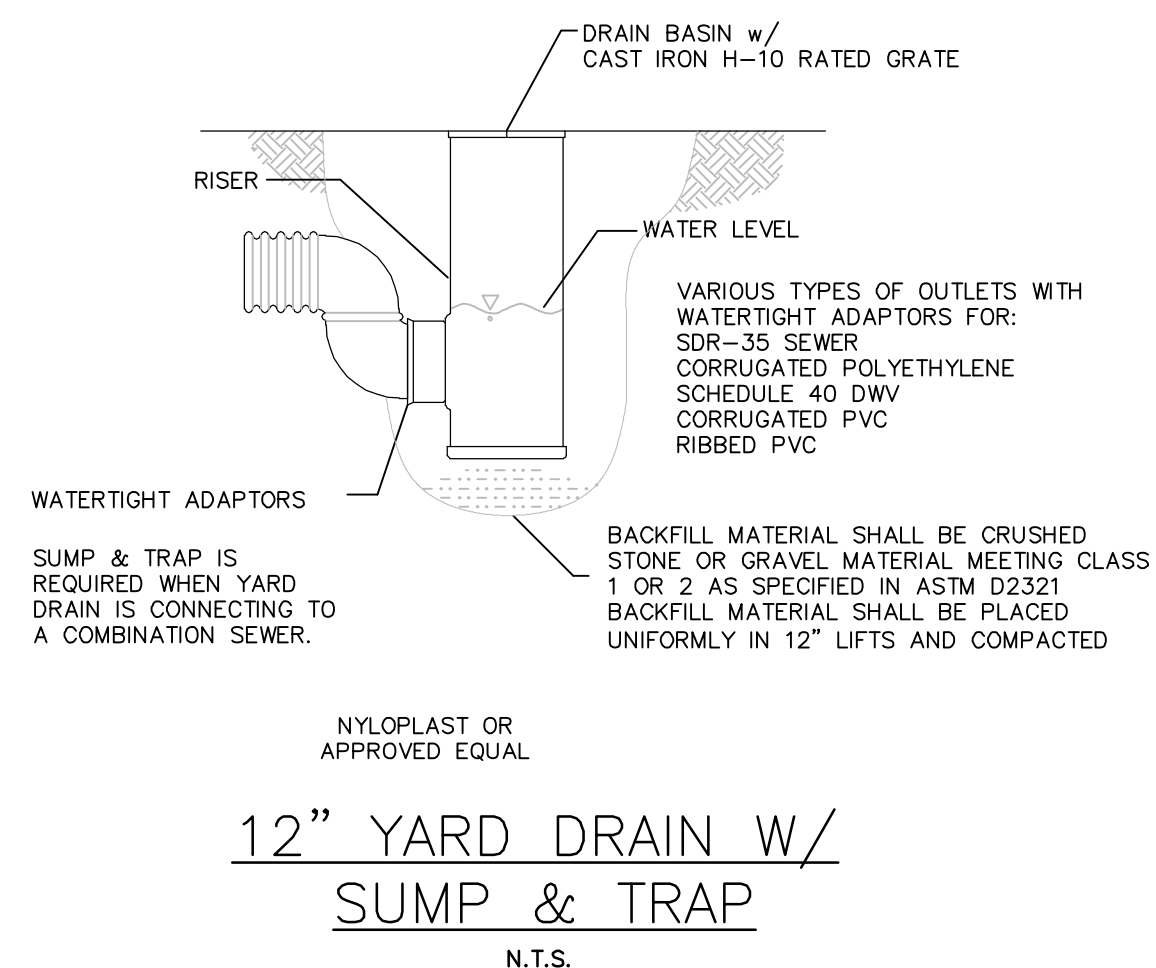
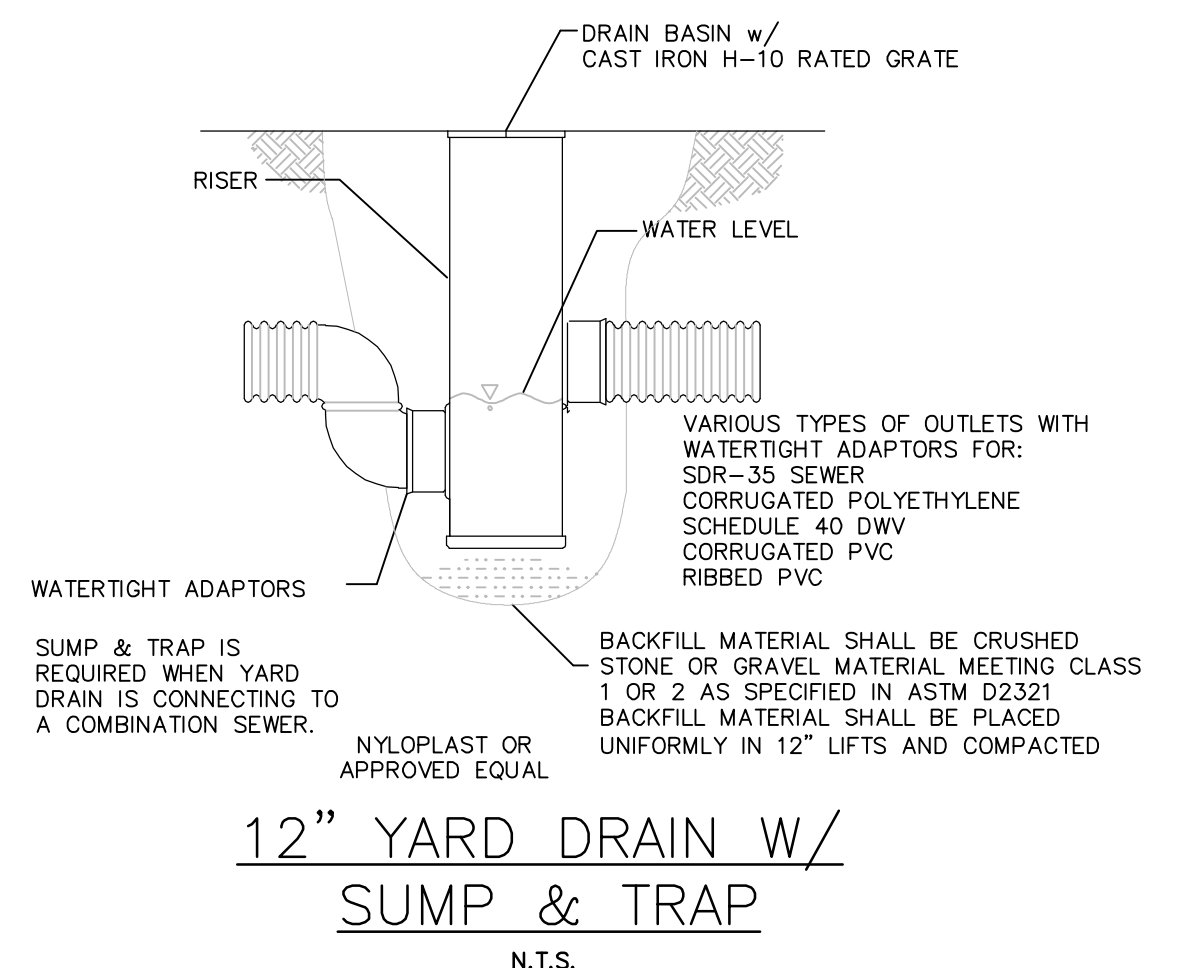
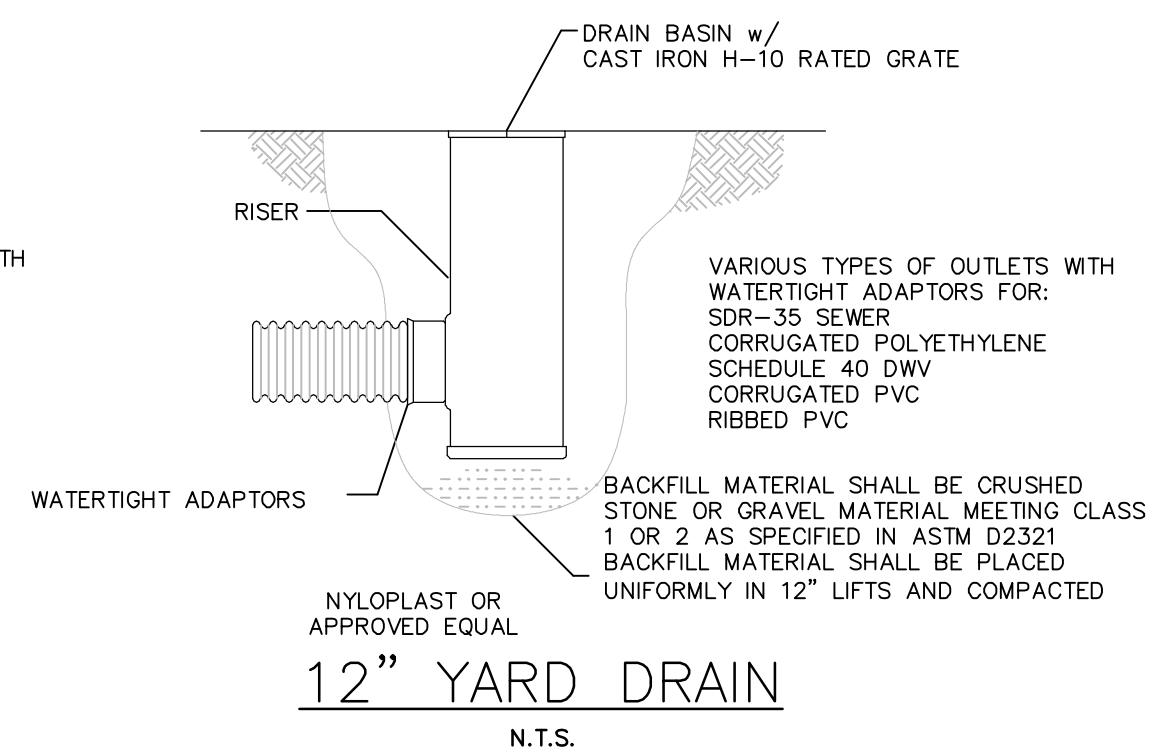
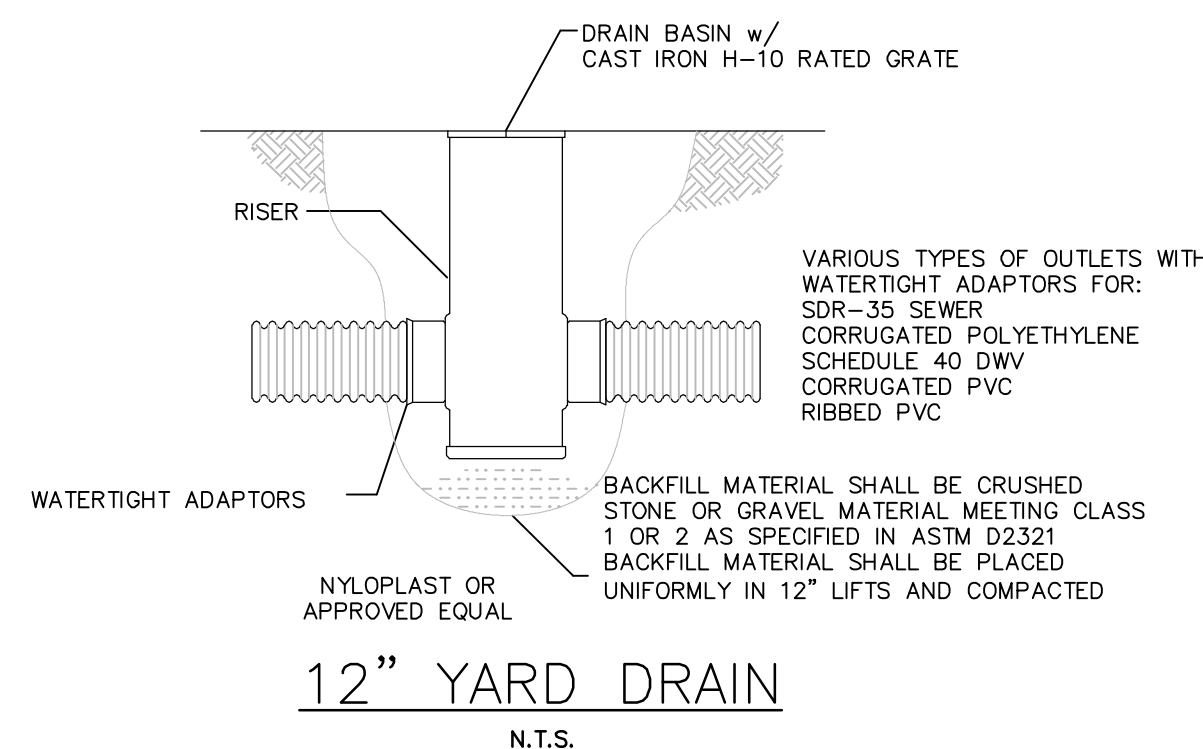
- 9.) ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL COMPLY WITH U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT, THE STANDARD SPECIFICATIONS OF THE CITY OF CLEVELAND AND THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS LATEST EDITION, EXCEPT WHERE SPECIFICALLY SPECIFIED IN THESE PLANS.
- 10.) IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKE HIS OWN INVESTIGATION OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL.
- 11.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIAL TESTING AND ALL PERMITS REQUIRED FOR THIS PROJECT.
- 12.) THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY FACILITIES ARE SHOWN ON THE PLANS FROM DATA AVAILABLE AT THE TIME OF THE FIELD SURVEY IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF THE EXISTING UTILITY OWNERS AND UTILITY PROTECTION SERVICE LISTED ABOVE IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE AND AS OUTLINED IN PROJECT SPECIFICATIONS.
- 13.) ALL WORK CONTEMPLATED SHALL BE GOVERNED BY THE RULES, REGULATIONS AND SPECIFICATIONS OF THE CITY OF CLEVELAND ENGINEER AND AT ALL TIMES BE SUBJECT TO THEIR DIRECT SUPERVISION AND INSPECTION.
- 14.) ALL SANITARY SEWER CONNECTIONS SHALL BE 6" DIAMETER V.C.P. C-700 E.S. w/PREMIUM JOINTS (OR THERMOPLASTIC AS SPECIFIED) @ 1.0% MIN. (INCLUDING TEST TEE LOCATED AT R/W - SEE DETAIL).
- 15.) ALL EXISTING CONNECTIONS SHALL BE TESTED WITH DYE AND CAMERA BEFORE TYING IN FOR USE WITH PROPOSED LOTS.
- 16.) COLOR DVD VIDEO OF THE SANITARY AND STORM SEWERS (8" AND GREATER) SHALL BE GIVEN TO THE CITY OF CLEVELAND DIVISION OF WATER POLLUTION CONTROL.
- 17.) COST OF REMOVAL, FILLING, ABANDONING AND DISPOSAL OF EXISTING SEWERS & CONNECTIONS TO BE INCLUDED IN PRICES BID UNDER OTHER ITEMS (OF SPECIFICATIONS) AND NO ADDITIONAL COMPENSATION WILL BE MADE.
- 18.) TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION BY THE CONTRACTOR.
- 19.) ALL SANITARY AND STORM MAIN LINE SEWERS & HOUSE CONNECTIONS SHALL HAVE PREMIUM JOINTS.
- 20.) FLEXIBLE GASKETS SHALL BE PROVIDED AT ALL SANITARY AND STORM MANHOLES.
- 21.) FOR CURB INLET MANHOLE, BRICK MAY BE USED TO FIT CASTING.

ENVIRON. IMPACT NOTES

- 1.) IF, DURING THE COURSE OF CONSTRUCTION, EVIDENCE OF ANY DEPOSIT OF HISTORICAL AND/OR ARCHAEOLOGICAL INTEREST IS FOUND, CEASE OPERATIONS AFFECTING THE FIND AND NOTIFY THE OHIO HISTORIC PRESERVATION OFFICE AT (614) 297-3470. NO FURTHER DISTURBANCE OF THE DEPOSITS SHALL OCCUR UNTIL THE CONTRACTOR HAS BEEN NOTIFIED BY THE OWNER THAT HE OR SHE MAY PROCEED. THE OWNER WILL ISSUE THE NOTICE TO PROCEED ONLY AFTER THE STATE OHIO OFFICIAL HAS SURVEYED THE FIND AND MADE SUCH A DETERMINATION.
- 2.) ACCESS FOR EMERGENCY VEHICLES MUST BE PROVIDED AT ALL TIMES.
- 3.) THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING LOCAL ACCESS TO ALL RESIDENCES AND BUSINESSES, AND TO PROVIDE WHATEVER TEMPORARY MATERIALS ARE NECESSARY TO PROVIDE A SAFE, ADEQUATE DRIVE SURFACE.
- 4.) NO MANHOLE OR SEWER EXCAVATION WILL BE LEFT OPEN AWAITING CONNECTION OR REMOVAL AT A LATER DATE BY THE CONTRACTOR'S FORCES, OR OTHERS, BUT SHALL BE TEMPORARILY BACKFILLED AND RESURFACED, IF APPLICABLE, WITH A TEMPORARY PAVEMENT PASSABLE TO TRAFFIC.
- 5.) NO MORE THAN 200 TO 300 FEET OF SEWER TRENCH SHALL REMAIN OPEN AT ONE TIME. MATERIALS EXCAVATED DURING TRENCHING SHALL BE PILED ON THE UPHILL SIDE OF THE TRENCH.
- 6.) STOCKPILED TOPSOIL AND FILL MATERIALS SHALL BE PROTECTED WITH EROSION CONTROL BARRIERS OR TEMPORARY SEEDING. EXCESS SOIL THAT IS STOCKPILED MUST BE EITHER REMOVED OR REGRADED WITHIN 15 DAYS OF THE COMPLETION OF CONSTRUCTION.
- 7.) IF TREE REMOVAL IS NECESSARY, TREES SHALL BE FELLED IN A MANNER THAT AVOIDS DAMAGE TO ADJACENT REMAINING TREES. WHERE ROOT DAMAGE CANNOT BE AVOIDED, PRUNING AND PAINTING AS APPROPRIATE TO COMPENSATE FOR DAMAGE WILL BE DONE BY AN AUTHORIZED ARBORIST.



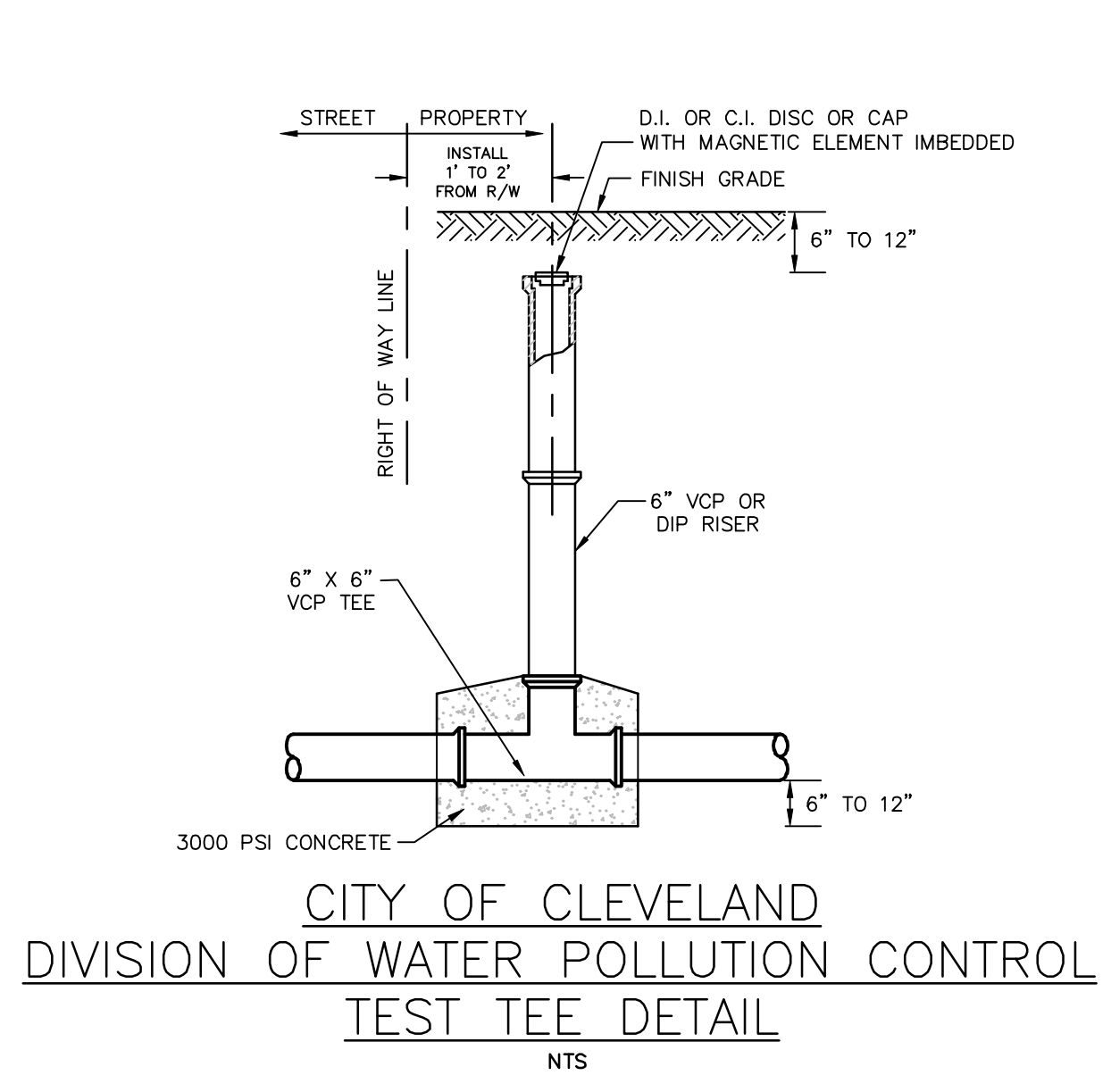
CONCRETE SIDEWALK
REPLACEMENT/NEW
N.T.S.



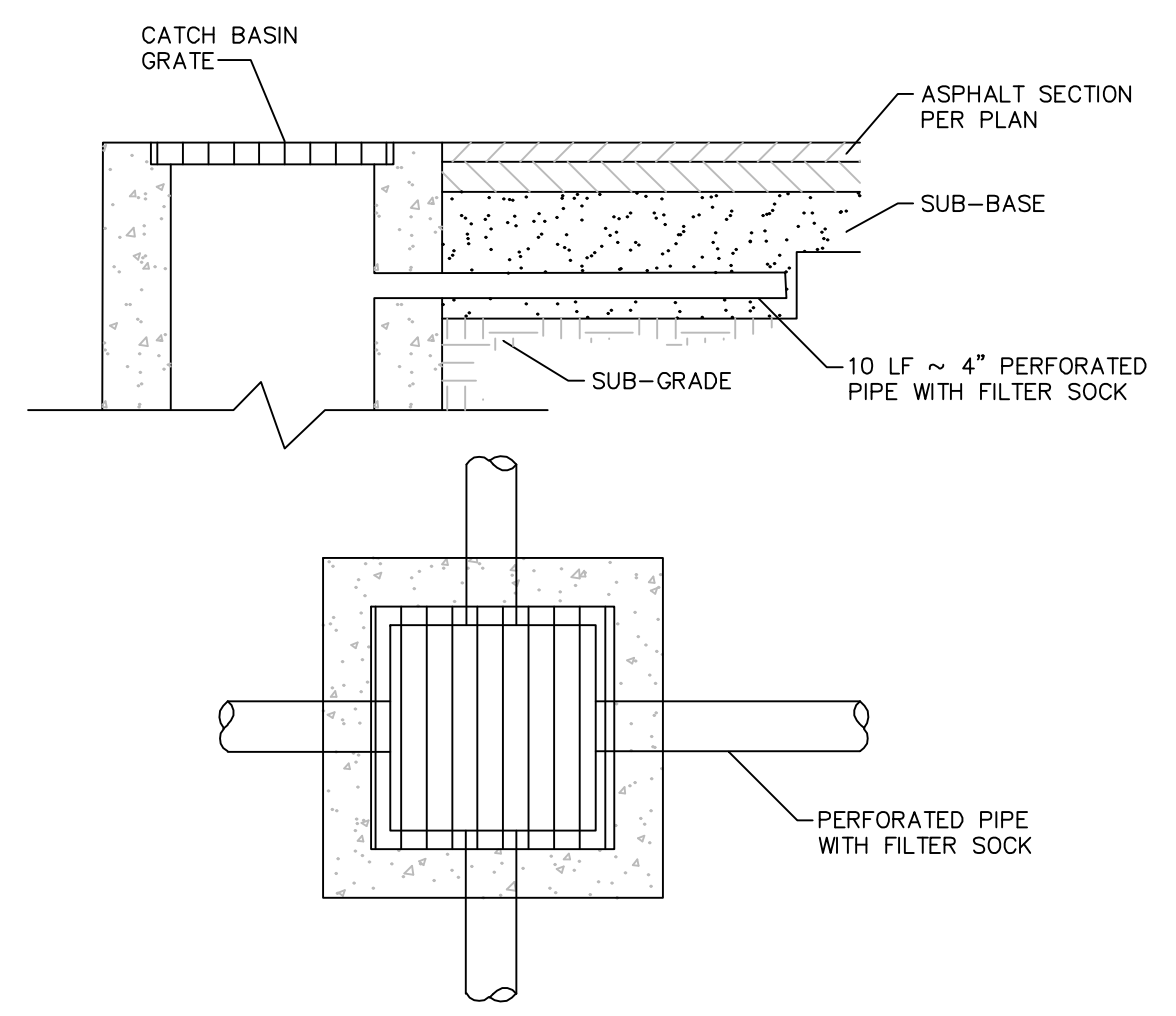
RIVERSTONE

LAND SURVEYING - ENGINEERING - DESIGN
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CITY OF CLEVELAND
DIVISION OF WATER POLLUTION CONTROL
TEST TEE DETAIL
N.T.S.



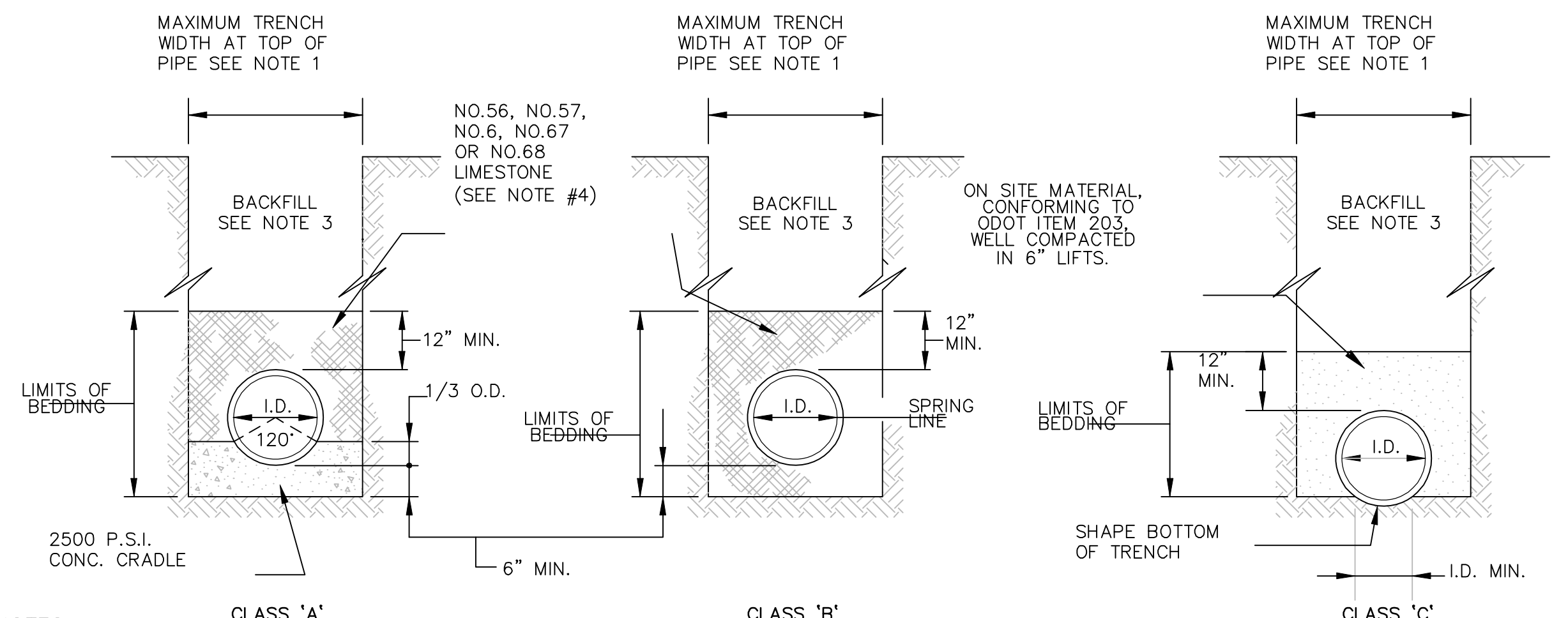
FINGER DRAIN DETAIL
N.T.S.

NOTES FOR STORM SEWERS

- THE FOLLOWING PIPES ARE APPROVED FOR THIS PROJECT:
 - WITHIN EXISTING OR PROPOSED R/W
 - A) 18" & UNDER - V.C.P. C-700 ES w/PREM. JTS. (ASTM C425)
 - B) 21" & OVER - R.C.P. CL. III w/PREM. JTS. (ASTM C443)
 - OUTSIDE R/W
 - A) 18" & UNDER - V.C.P. C-700 ES w/PREM. JTS. (ASTM C425)
 - B) 21" & OVER - R.C.P. CL. III w/PREM. JTS. (ASTM C443)
 - C) PVC SDR 35 (SEWER DEPTH LESS THAN 13') w/ASTM D3212 JOINTS
 - D) PVC SDR 26 (SEWER DEPTH 13' OR MORE) w/ ASTM D3212 JOINTS
 - E) PVC SCHEDULE 40 (WITH APPROVAL BY ENGINEER)
 - F) ALUMINIZED SPIRAL RIBBED PIPE WITH WATERTIGHT JOINTS.
 - G) HDPE w/ ASTM D3212 JOINTS
- ALL DOWNSPOUT COLLECTORS SHALL USE PUSH ON JOINTS.
- PIPE REQUIRES #57 LIMESTONE BACKFILL 12" OVER TOP OF PIPE
- CONTRACTOR SHALL INCLUDE COST OF GRANULAR BACKFILL MATERIAL UNDER ALL EXISTING AND PROPOSED PAVEMENTS IN BIDS.
- PRIOR TO THE ACCEPTANCE OF THE COMPLETED SEWER LINE, A MANDREL OF NOT LESS THAN NINETY-FIVE PERCENT (95% OF THE AVERAGE CALCULATED REFERENCE INTERNAL DIAMETER OF THE PIPE SHALL BE PULLED BY HAND FREELY THROUGH EACH SECTION OF SEWER PIPE NOT LESS THAN THIRTY (30) DAYS AFTER INSTALLATION AND FINAL BACKFILL.

PROOF ROLL

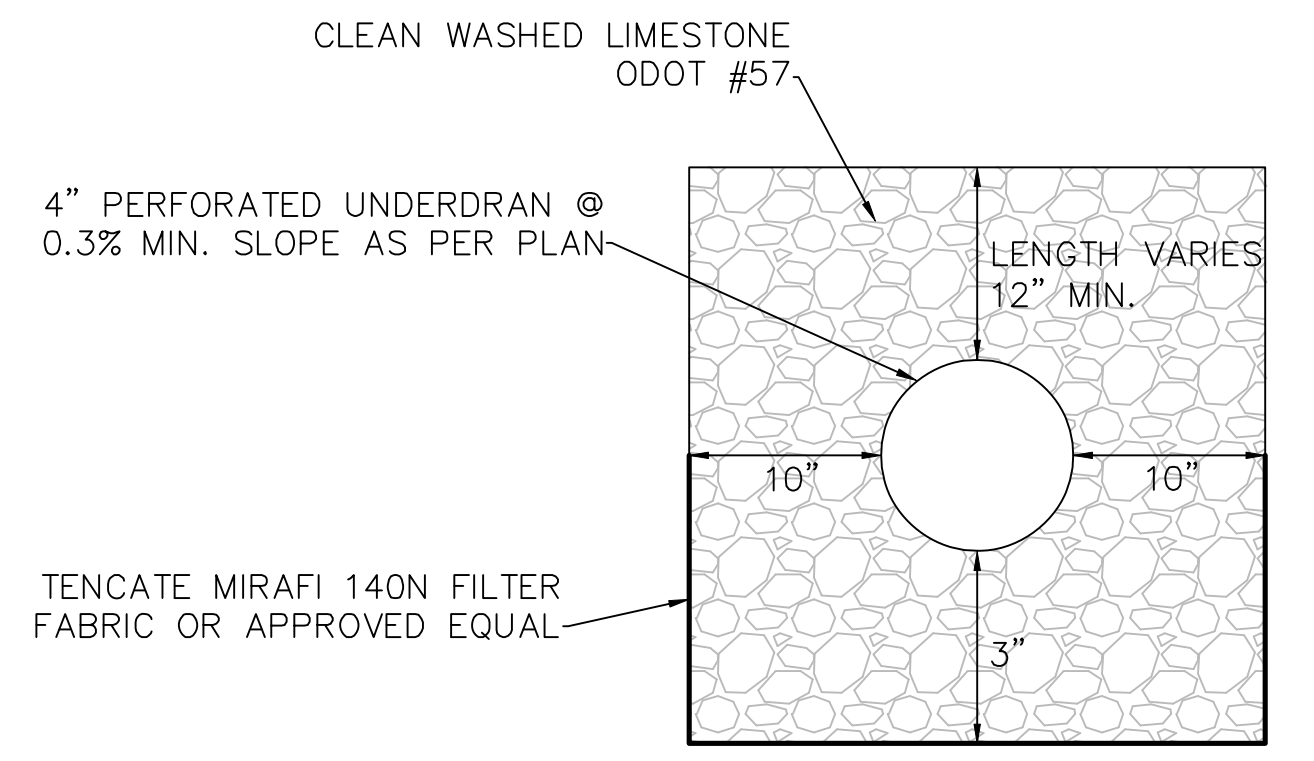
A MINIMUM OF TWO (2) PROOF ROLLINGS WILL BE REQUIRED AS DIRECTED BY THE ENGINEER BEFORE PAVING. THE FIRST PROOF ROLLING SHALL BE PERFORMED AFTER THE INSTALLATION OF ALL UNDERGROUND IMPROVEMENTS AND ROUGH GRADING HAS BEEN COMPLETED. AFTER FINE GRADING, JUST PRIOR TO PAVING, THE SUBGRADE SHALL BE PROOF ROLLED AGAIN. A PROOF ROLLING SHALL CONSIST OF TRAVELING THE ENTIRE AREA OF THE PREPARED SUBGRADE WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PROVIDED BY THE CONTRACTOR. MOISTURE CONTENT ADJUSTMENT METHODS USED AT THE TIME OF PROOF ROLLING SHALL CONFORM TO SECTION 203.11 OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. WHERE THIS OPERATION SHOWS THE SUBGRADE TO BE UNSTABLE OR TO HAVE NON-UNIFORM STABILITY, THE CONTRACTOR SHALL CORRECT THE UNSTABLE AREAS AS DIRECTED BY THE ENGINEER. THE MINIMUM EQUIPMENT SHALL CONSIST OF A SINGLE UNIT, TANDEM AXLE DUMP TRUCK CAPABLE OF BEING LOADED TO 30,000 POUND AXLE LOAD, 60,000 POUND GVW. TIRE PRESSURE SHALL BE MAINTAINED AT 90 PSI OR AS SPECIFIED UNDER SECTION 203.14 OF ODOT SPECIFICATIONS. ANY AREA PERMITTING TIRES TO LEAVE A GROOVE OF ONE (1) INCH OR MORE SHALL BE UNACCEPTABLE FOR PAVING. ANY AREA PERMITTING THE TEST VEHICLE TIRES TO LEAVE A GROOVE OF ZERO (0) TO ONE-HALF (1/2) INCH DEEP SHALL BE ACCEPTABLE. ANY AREA PERMITTING THE TEST VEHICLE TIRES TO LEAVE A GROOVE OF ONE-HALF (1/2) INCH TO ONE (1) INCH DEEP SHALL BE AT THE ENGINEER'S DISCRETION.



- NOTES:
- MAXIMUM TRENCH AT TOP OF PIPE SHALL BE O.D.+24" FOR ALL PIPES UP TO AND INCLUDING 24" I.D.; O.D.+30" FOR PIPE LARGER THAN 24" I.D. TO 54" I.D.; AND O.D.+48" FOR PIPE SIZES 60" AND OVER.
 - ALL TRENCH EXCAVATION SHALL CONFORM TO THE RULES AND REGULATIONS OF THE OHIO STATE INDUSTRIAL COMMISSION (OSIC) AND THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
 - ALL BACKFILL MATERIAL USED UNDER ANY PAVEMENTS WITH IN R/W SHALL BE CLEVELAND LSM OUTSIDE OF R/W SHALL BE PREMIUM BACKFILL PLACED FROM THE INITIAL ONE FOOT OVER THE TOP OF UTILITIES, TO PREVENT FLOTATION AND ENTRY OF FLOWABLE FILL INTO ANY OTHER AREAS, TO THE SUBGRADE. ALL OTHER AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND SHALL BE TAMPED WITH MACHINE MOUNTED TAMPING EQUIPMENT. BACKFILL SHALL BE COMPACTED TO 100% OF MAXIMUM LABORATORY DRY DENSITY PER ASTM D 698.
 - ALL BEDDING SHALL BE CLASS 'B' EXCEPT AS STATED IN NOTE 6 OR OTHERWISE NOTED ON THE PLANS. BEDDING LIMITS FOR R.C.P. AND D.I.P. SHALL BE TO THE PIPE SPRINGLINE.
 - SLAG BEDDING SHALL NOT BE USED.
 - BEDDING FOR DUCTILE IRON PIPE USED FOR WATERLINE OR FORCE MAIN SHALL BE CLASS 'C' EXCEPT WHEN INSTALLED IN ROCK AND UNDER PAVEMENT OR STRUCTURES, IN WHICH CASE, BEDDING SHALL BE CLASS 'B' OR AS NOTED ON THE PLANS.

CLEVELAND TRENCH & BEDDING DETAILS

N.T.S.



PERFORATED UNDERDRAIN
STONE ENCASEMENT

N.T.S.

NOTES & DETAILS

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C602



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SITE DATA: THE PROJECT IS LOCATED ON EAST 86TH STREET IN THE CITY OF CLEVELAND. THE SITE IS APPROXIMATELY 2.97 ACRES AND WAS PREVIOUSLY DEVELOPED. THERE ARE NO ISOLATED WETLANDS PRESENT ON SITE, NOR ANY SURFACE WATERS OF THE STATE WITHIN 200' OF THE SITE.

PRIOR LAND USE: THE SITE WAS PREVIOUSLY DEVELOPED WITH A PUBLIC SCHOOL BUILDING AND PARKING LOT. THE BUILDING HAS BEEN PREVIOUSLY DEMOLISHED FOR REDEVELOPMENT.

PRE CONSTRUCTION WEIGHTED C VALUE

Surface	c	Area	CxArea
Bldg. & Pgmt.	0.90	1.57	1.4130
Open (Fair)	0.57	1.40	0.7980
Total		2.97	2.2110

Weighted C = $2.2110 / 2.97 = 0.74$

PRE CONSTRUCTION % IMPERVIOUSNESS
 $1.57 / 2.97 = 52.86\%$

SOILS: THE NATIONAL RESOURCE CONSERVATION SERVICE WEB SOIL SURVEY OF CUYAHOGA COUNTY IDENTIFIES THE SOILS ON SITE AS URBAN LAND (UeA) WHICH IS CLASSIFIED AS A HYDROLOGICAL GROUP D SOIL.

EXISTING STORM WATER: STORMWATER FROM THE EXISTING SITE DISCHARGES OFFSITE BY A COMBINATION OF CATCH BASINS AND OVERLAND FLOW.

CONSTRUCTION ACTIVITY: CONSTRUCTION ACTIVITY WILL INCLUDE THE CLEARING AND GRUBBING OF THE SITE AND THE CONSTRUCTION OF NEW WALKING PATHS, SITE AMENITIES AND LANDSCAPING.

POST CONSTRUCTION WEIGHTED C VALUE

Surface	c	Area	CxArea
Pvmt.	0.90	0.68	0.6120
Open (Fair)	0.57	2.29	1.3053
Total		2.97	1.9173

Weighted C = $1.9173 / 2.97 = 0.65$

POST CONSTRUCTION % IMPERVIOUSNESS
 $0.68 / 2.97 = 0.2290 = 22.90\%$

FUTURE STORM WATER: STORMWATER WILL BE COLLECTED BY YARD DRAINS WITHIN GRASSED AREAS. DISCONNECTED IMPERVIOUS AREAS FROM WALKING PATHS WILL SHEET FLOW THROUGH GRASS AND LANDSCAPED AREAS BEFORE BEING COLLECTED BY THESE YARD DRAINS.

CONSTRUCTION:
START: SPRING 2024 - COMPLETION: FALL 2024

SWPPP CHANGES & AMENDMENTS: ALL CHANGES AND AMENDMENTS TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE APPROVED BY DAVID A. PIETRANTONE P.E., THE RIVERSTONE COMPANY.

THE RIVERSTONE COMPANY
3800 LAKESIDE AVENUE, SUITE 100
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PHONE: (216) 491-2000

PREPARED FOR:
CITY ARCHITECTURE
ATTN: ALEX PESTA
12205 LARCHMERE BOULEVARD
CLEVELAND, OHIO 44120
216-881-2444
ALEX@CITYARCH.COM

CONTRACTOR:

SOILS MAP:



GENERAL SWPPP NOTES:

DISTURBED AREA = 2.97 ACRES

A COPY OF THE SWPPP AND ALL ADDENDUM TO THE SWPPP SHALL BE KEPT ON SITE AT ALL TIMES.

ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED AS PER PLAN. ALL PRACTICES MUST BE MAINTAINED AND FUNCTIONAL DURING CONSTRUCTION ACTIVITIES.

EROSION CONTROL BLANKETS WITH MATTING SHALL BE USED ON SLOPES GREATER THAN 6%.

EXCESS SEDIMENT SHALL BE REMOVED FROM THE TEMPORARY SEDIMENT BASIN WHEN THE SEDIMENT OCCUPIES 40% OF THE SEDIMENT STORAGE ZONE.

ONCE THE SITE HAS BEEN STABILIZED AND PROPER AUTHORIZATION HAS BEEN OBTAINED, CONSTRUCTION BMPs MAY BE REMOVED.

CONSTRUCTION SCHEDULE

1. INSTALL TEMPORARY STONE CONSTRUCTION ENTRANCE.
2. INSTALL PERIMETER CONTROL.
3. INSTALL OUTLET STRUCTURE, STORM SEWER, TEMPORARY SEDIMENT BASINS AND DEWATERING SKIMMERS.
4. CLEAR AND GRUB WITHIN CONSTRUCTION LIMITS.
5. STRIP TOPSOIL.
6. MASS GRADE AND APPLY SOIL STABILIZATION AS REQUIRED.
7. INSTALL CEMENT TRUCK WASHOUT AREA.
8. INSTALL UTILITIES.
9. INSTALL INLET PROTECTION ON NEW CATCH BASINS.
10. PAVE.
11. REMOVE TEMPORARY SEDIMENT BASIN AND FINAL GRADING AS PER PLAN.
12. APPLY PERMANENT STABILIZATION AS NECESSARY.
13. AFTER PROPER AUTHORIZATION HAS BEEN OBTAINED BY THE GOVERNING AGENCY, REMOVE EROSION AND/OR SEDIMENT BMP'S.

MINIMUM POST CONSTRUCTION STORM WATER QUALITY VOLUME (REDEVELOPMENT)

$$WQ_v = P * A * [(Rv1*0.2) + (Rv2-Rv1)] / 12$$

WHERE
 $Rv1 = 0.05 + 0.9i$ (Pre Development)
 $Rv2 = 0.05 + 0.9i$ (Post Development)
i = fraction of post construction impervious surface
 $P = 0.90$ inches
 $A = 2.97$ ACRES

PRE DEVELOPMENT
 $i = \text{Impervious area} / \text{Total area} = 1.57/2.97 = 0.53$
 $Rv1 = 0.05 + (0.9 * 0.53) = 0.53$

POST DEVELOPMENT
 $i = \text{Impervious area} / \text{Total area} = 0.68/2.97 = 0.23$
 $Rv2 = 0.05 + (0.9 * 0.23) = 0.26$

$$WQ_v = P * A * [(Rv1*0.2) + (Rv2-Rv1)] / 12$$

$$WQ_v = 0.9 * 2.97 * [(0.53*0.2) + (0.26-0.53)] / 12$$

$$WQ_v = -0.0365 \text{ ACRE*FT} \Rightarrow 0 \text{ CF}$$

TEMPORARY SEDIMENT BASIN

DEWATERING VOLUME	SEDIMENT STORAGE VOLUME
DWv = 67cy/ac * A = DWv (cy)	SSv = 1,000 cf/Ac * A
A = Drainage Area = 2.97 ac	A = Disturbed Area = 2.97 ac
DWv = 67cy/ac * 2.97 ac	SSv = 1,000 cf/ac * 2.97 ac
DWv = 198.99 cy = 5,373 cf	SSv = 2,970 cf

TOTAL VOLUME NEEDED
 $Tv = DWv + SSv$
 $Tv = 5,373 \text{ cf} + 2,970 \text{ cf}$
 $Tv = 8,343 \text{ cf}$

SEDIMENT STORAGE ZONE IS FROM 655.00 TO 655.80 WHICH PROVIDES 2,980 cf OF SEDIMENT STORAGE. DEWATERING ZONE IS FROM 655.80 TO 657.00 WHICH PROVIDES 5,390 cf OF STORAGE FOR A TOTAL OF 8,370 cf.

48 HOUR DRAWDOWN
 $5,373 \text{ CF} / 48 \text{ HOUR} = 111.94 \text{ CF/HR} = 0.031 \text{ CFS}$

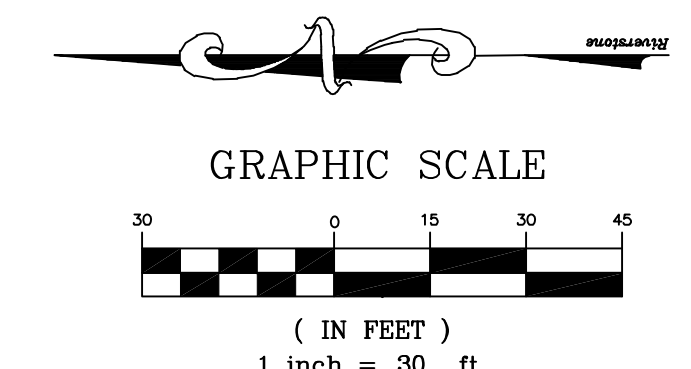
ORIFICE SIZE
 BASED OFF OF TABLE 6.1.2 OF THE OHIO RAINWATER AND LAND DEVELOPMENT USE 1" ORIFICE (MINIMUM SIZE)

ACUTAL DEWATERING TIME = DWv/Q
 $Q = CA(2gh)^{0.5}$
 $C = 0.6, A = 0.0055 \text{ SF}, H = 1.00$
 $Q = 0.6 * 0.0055 * (2 * 32 * 1.00)^{0.5}$
 $Q = 0.027 \text{ CFS}$

$$T = 5,373 \text{ CF} / 0.027 \text{ CFS} = 202,890 \text{ SEC} = 56.36 \text{ HOURS}$$

SWPPP LEGEND

- PERIMETER CONTROL; SILT FENCE OR COMPOST FILLED FILTER SOCK
- CONSTRUCTION LIMITS
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- INLET PROTECTION



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HOUGH GREENSPACE

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SWPPP

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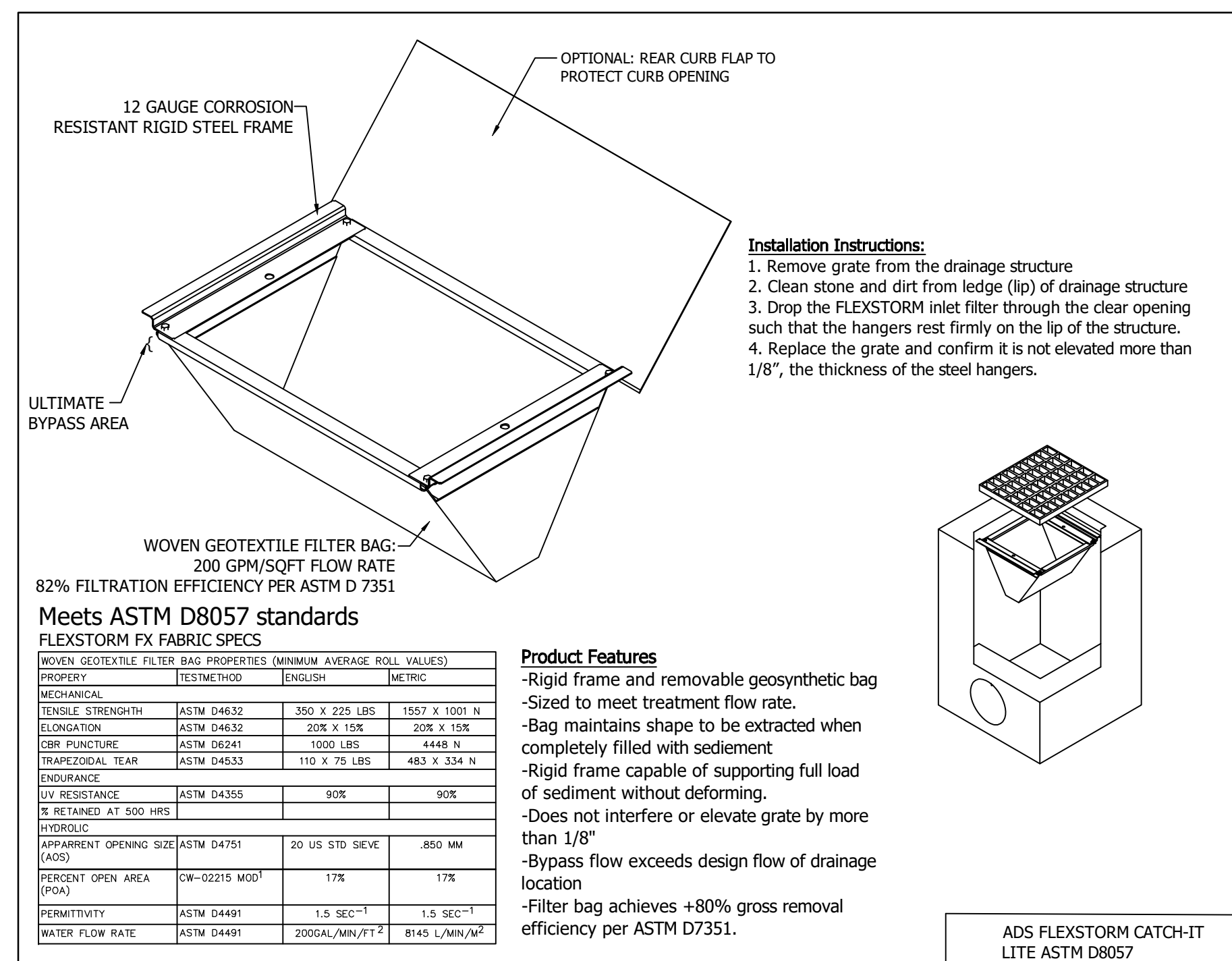
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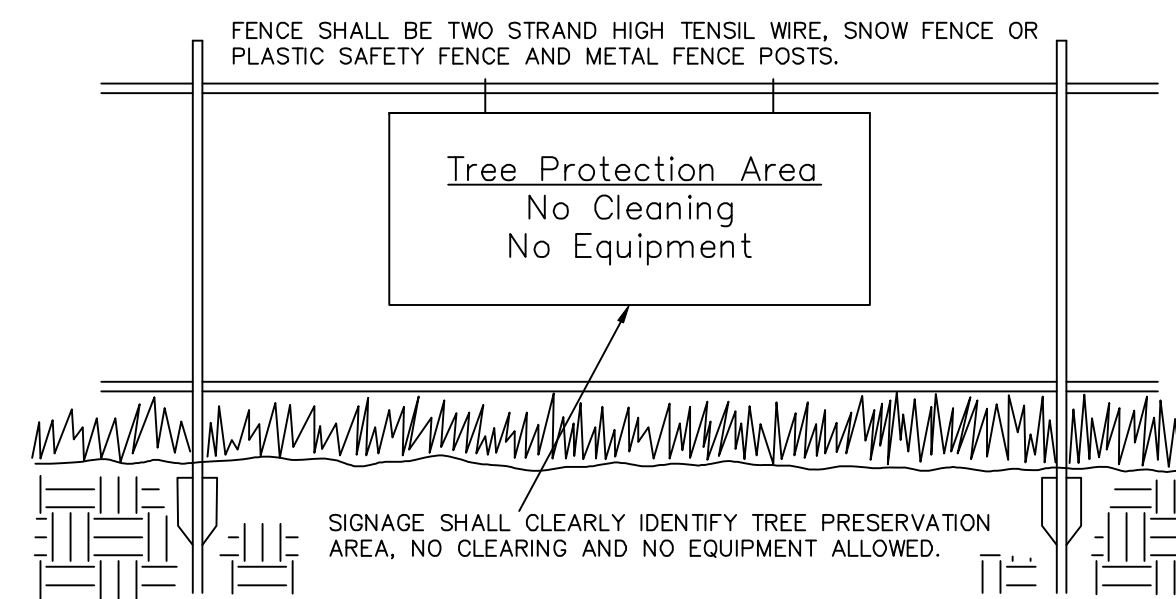
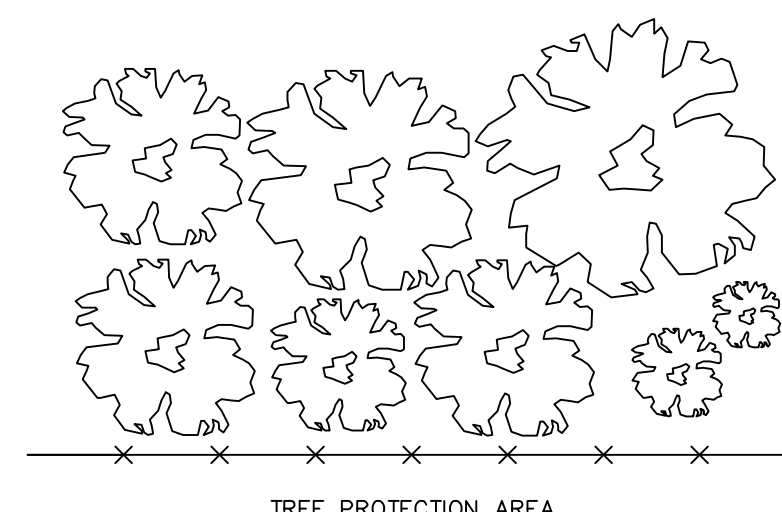
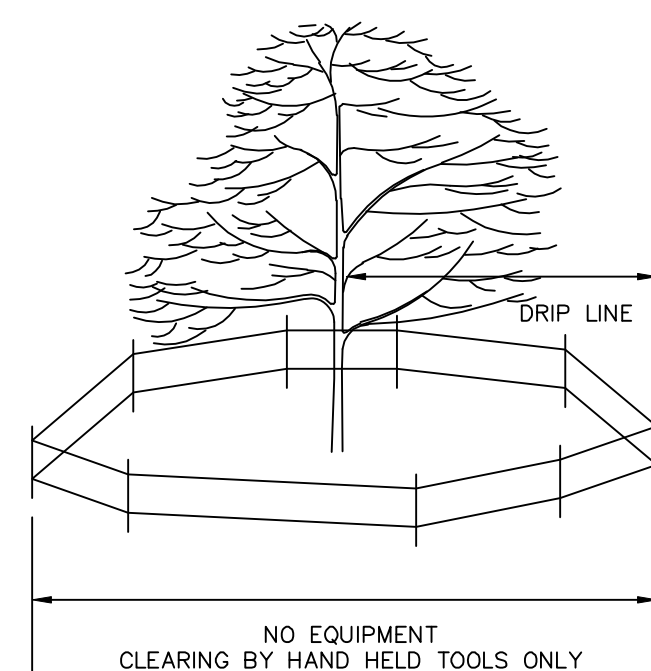
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PRESERVATION OF NATURAL VEGETATION

- AREAS WHERE NATURAL VEGETATION IS TO BE PRESERVED, INCLUDING TREES, SHALL BE FENCED PRIOR TO BEGINNING CLEARING OPERATIONS.
- ACCEPTABLE FENCE MATERIALS INCLUDE PLASTIC FENCE OR SNOW FENCE ANCHORED TO METAL FENCE POSTS.
- SIGNAGE SHALL CLEARLY IDENTIFY THE PROTECTION AREA AND STATE THAT NO CLEARING OR EQUIPMENT IS ALLOWED WITHIN IT.
- FENCE SHALL REMAIN AROUND PROTECTION AREAS UNTIL AFTER FINAL GRADING HAS BEEN COMPLETED.
- FENCE SHALL BE PLACED AS SHOWN ON PLANS AND BEYOND THE DRIP LINE OR CANOPY OF TREES TO BE PROTECTED.
- IF ANY CLEARING IS DONE AROUND SPECIMEN TREES IT SHALL BE DONE BY CUTTING AT GROUND LEVEL WITH HAND TOOLS AND SHALL NOT BE GRUBBED OR PULLED OUT.



SIGNAGE SHALL CLEARLY IDENTIFY TREE PRESERVATION AREA, NO CLEARING AND NO EQUIPMENT ALLOWED.

Concrete Washout Areas

- Installation:**
- Concrete wash water shall not be allowed to flow to streams, ditches, storm drains, or any other water conveyance and washout pits shall be situated a minimum of fifty (50) feet from them.
 - Field tile or other subsurface drainage structures within 10 ft. of the sump shall be out and plugged.
 - Ensure a stable path is provided for concrete trucks to reach the washout area.
 - A highly visible sign that reads "Concrete Washout Area" shall be erected adjacent to the washout pit.
 - Surface runoff generated from upstage areas shall be diverted away from below-grade washout pits so as not to flow into them.
 - A single centralized washout area may be utilized for multiple sublots.

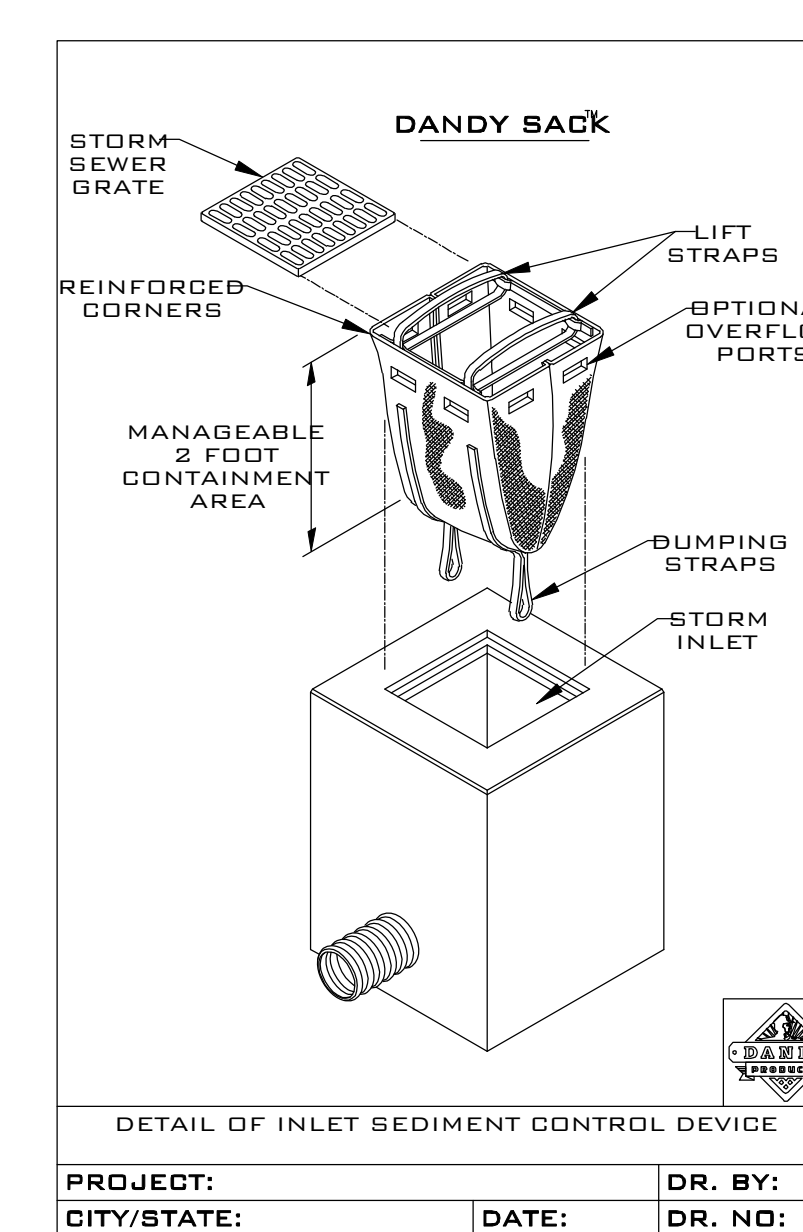
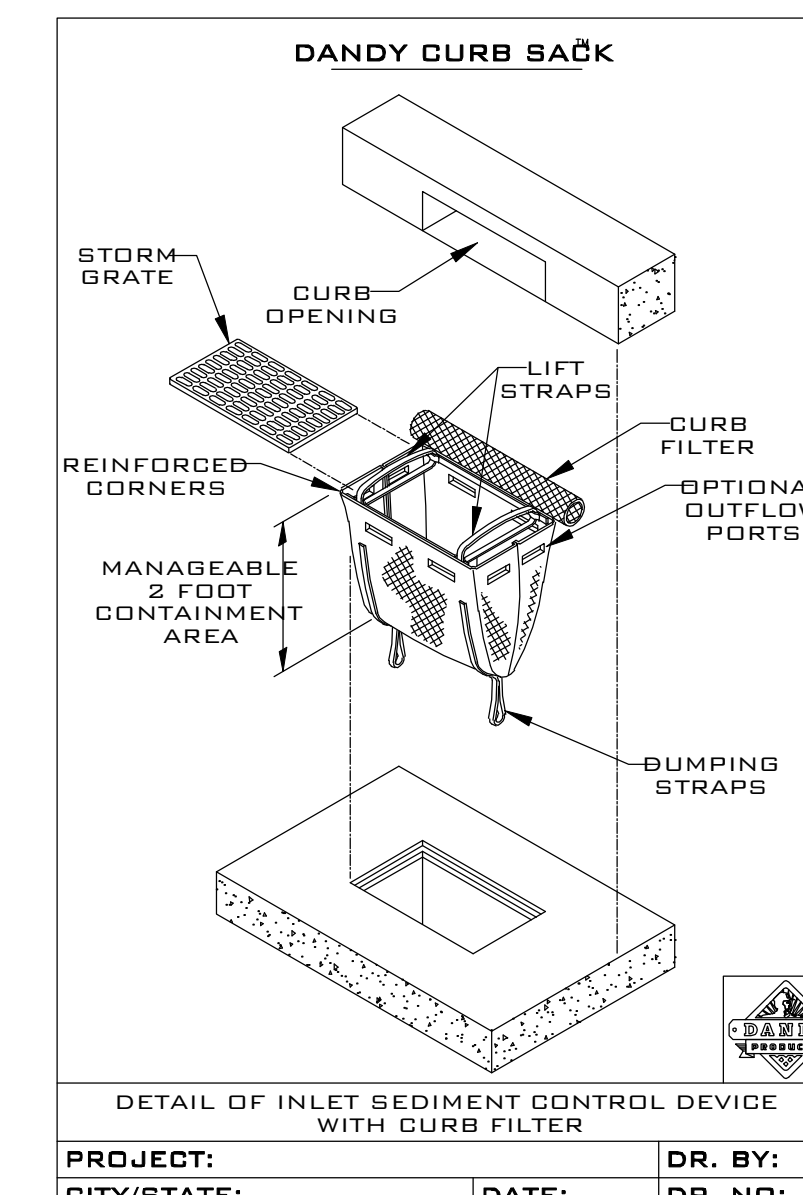
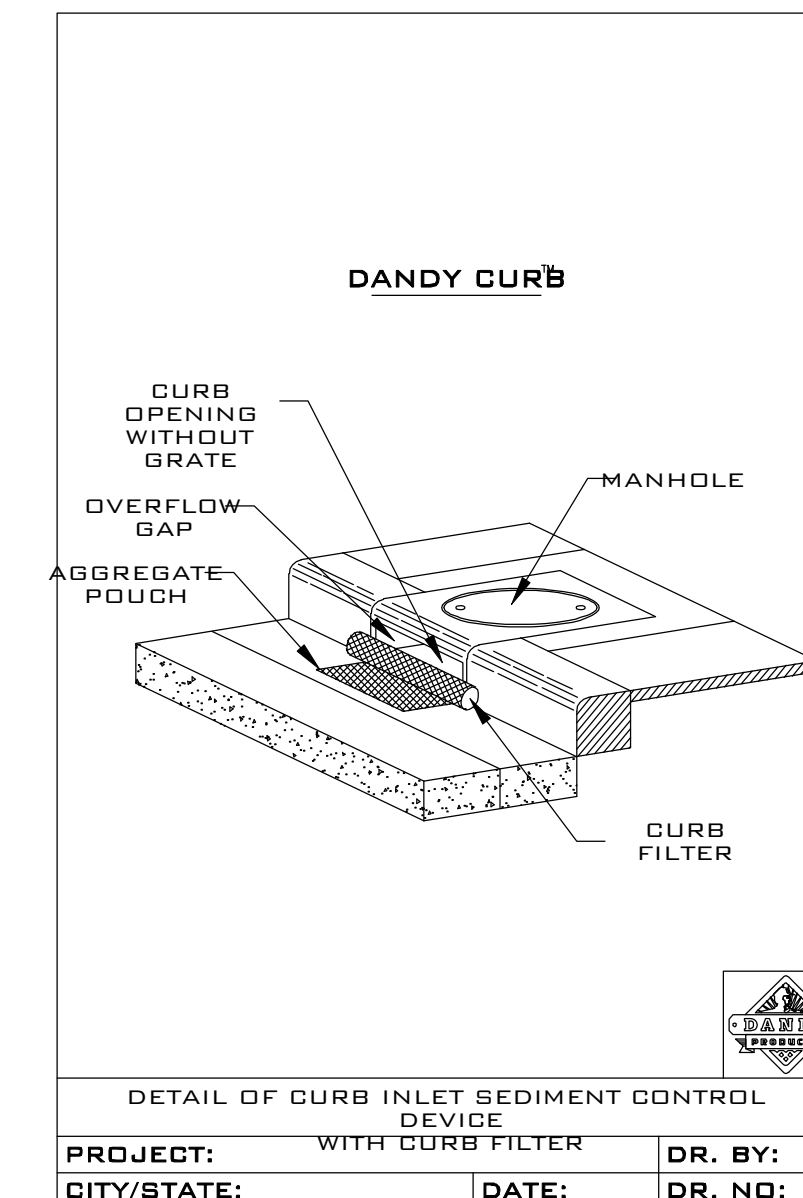
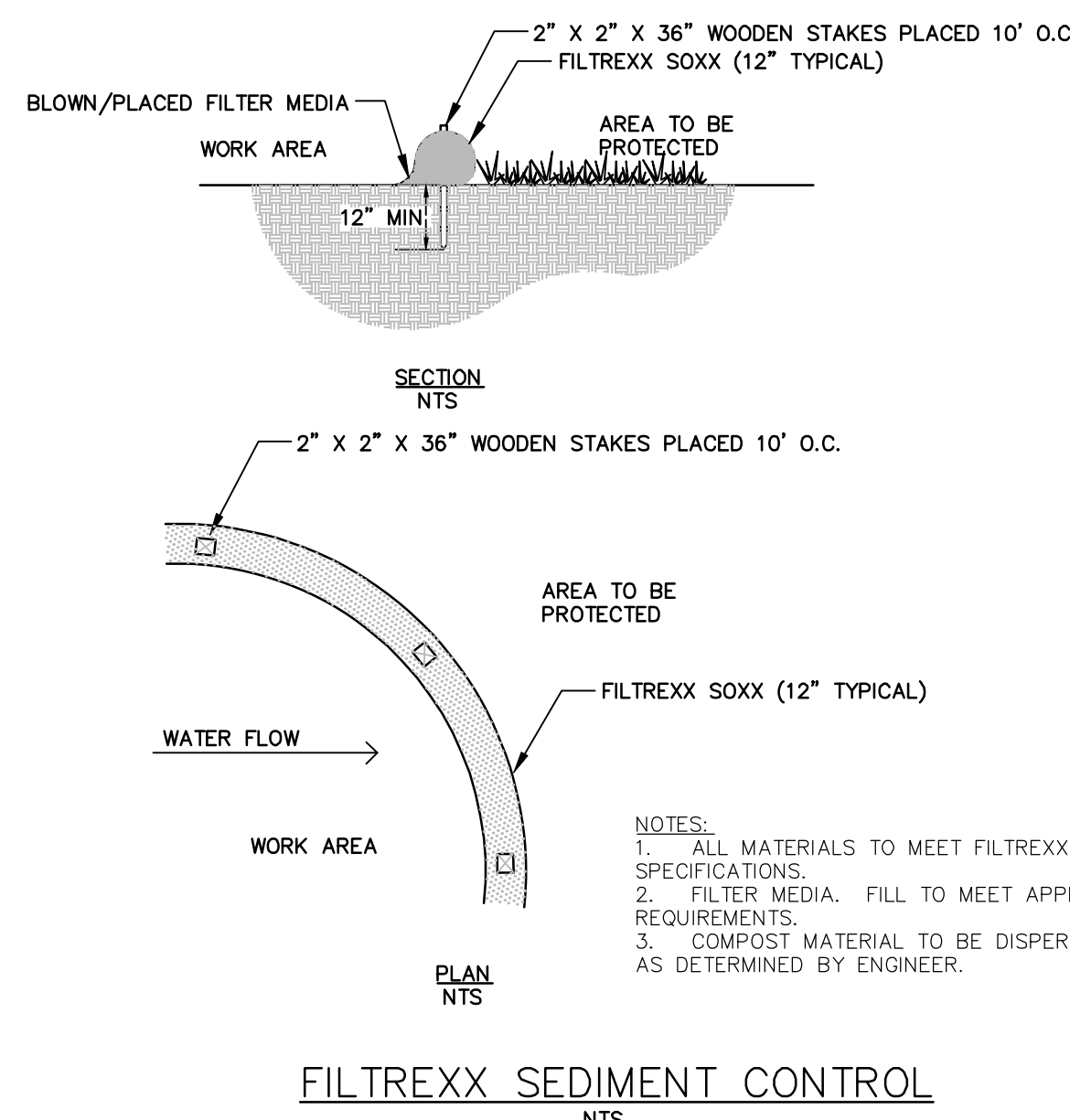
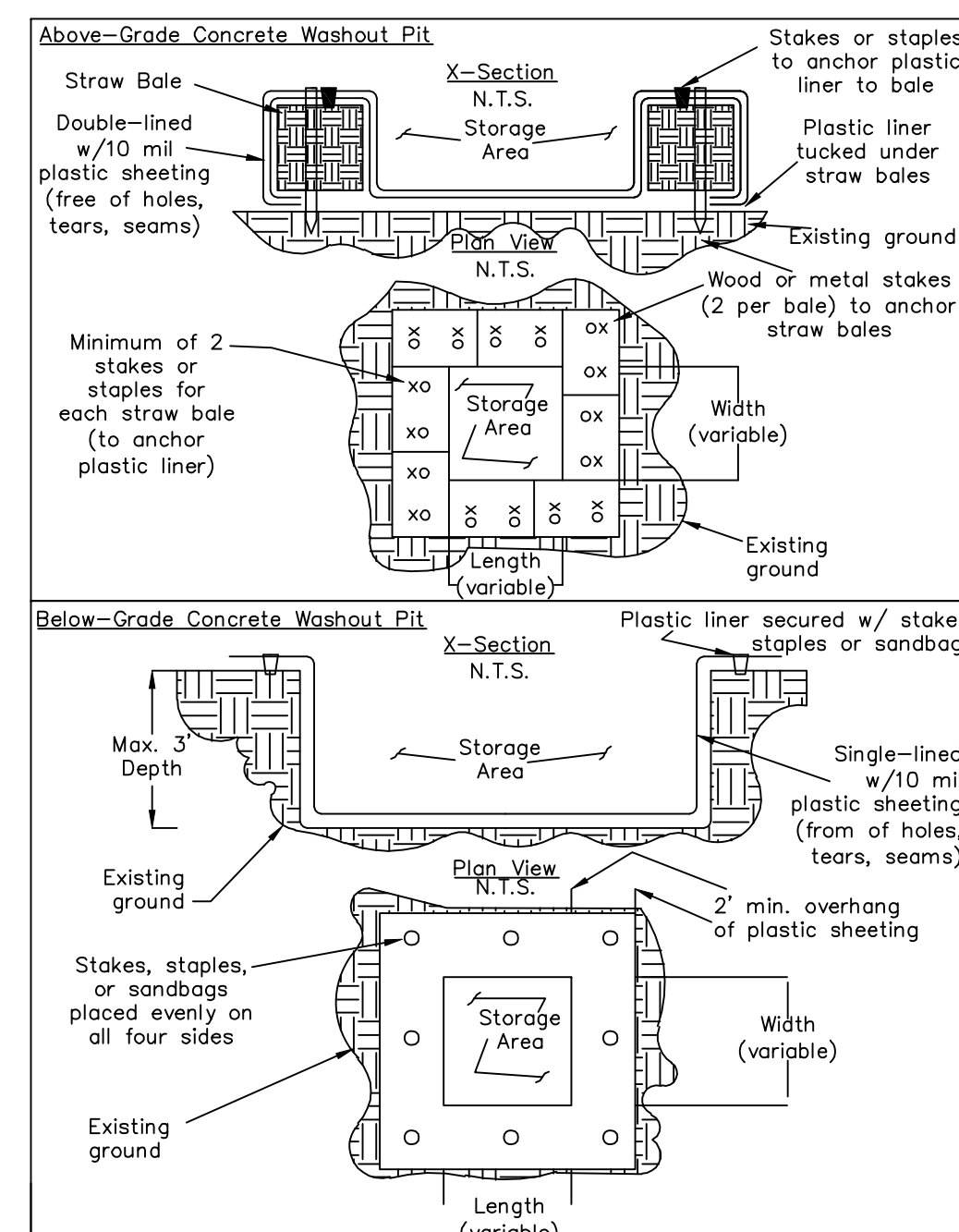
- Maintenance:**
- The washout pit must be inspected frequently to ensure the liner is intact.
 - Once 75% of the original volume of the washout pit is filled or the liner is torn, the material must be removed and properly disposed of once it is completely hardened. Once the hardened concrete is removed, the liner must be replaced (if torn). A new pit must be constructed if the original structure is no longer suitable.

- Removal:**
- Once the washout pit is no longer needed, ensure all washout material has been completely hardened, then remove and properly dispose of all materials. If straw bales were used, they can be spread as mulch.
 - Prefabricated containers specifically designed for concrete washout collection may be used subject to prior approval by the Community Engineer. Follow the manufacturer's suggestions for installation, maintenance and removal procedures.

Sizing of Concrete Washout Pits

Below-grade (3-ft depth)			Above-grade (2-ft depth)		
# of concrete trucks expected to be washed out on site*	Width (ft)	Length (ft)	# of concrete trucks expected to be washed out on site*	Width (ft)	Length (ft)
2-3	3	3	2	3	3
4-5	4	4	3-4	4	4
6-7	5	5	5-6	5	5
8-10	6	6	7-8	6	6
11-14	7	7	9-11	7	7
			12-15	8	8

*For small projects using a maximum of only one truckload of concrete or utilizing on-site mixing, rinsing of equipment may take place on the lot without a pit, provided it can be done on a maximum of fifty (50) feet away from any water conveyances



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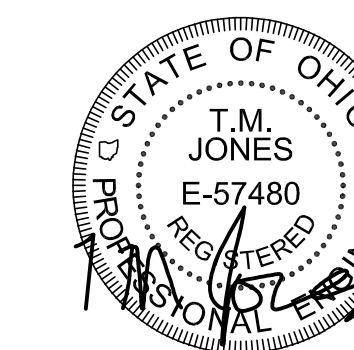
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ELECTRICAL SCHEDULES AND DETAILS

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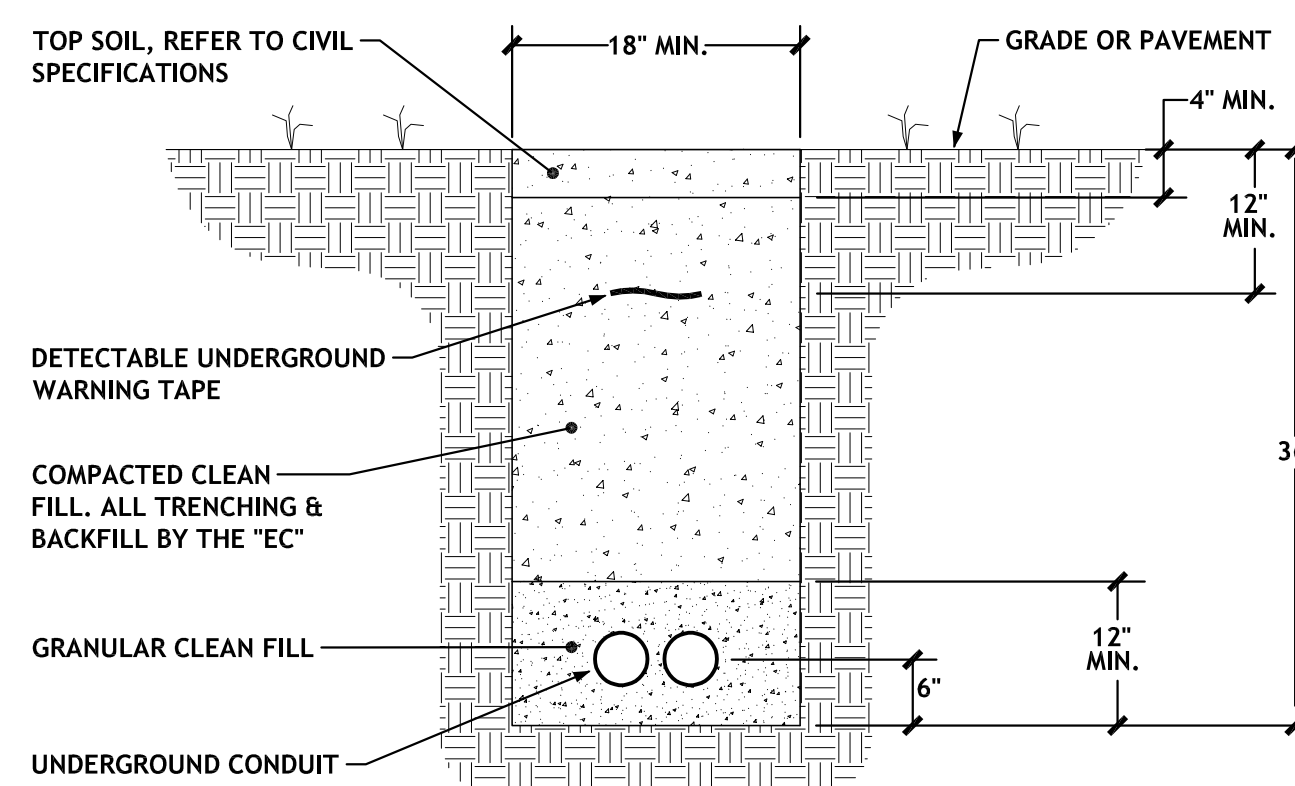
E201

LIGHTING FIXTURE SCHEDULE				
TYPE	MFG.	CAT. NO.	VOLTAGE	DESCRIPTION
SA	GARDCO STRUCTURA	PPT-196L-1150-WW-G2-T-5-240-CC-BOL-S-14-55-55-VERIFY-C-TENON-VERIFY-GFI/WP IN BASE	UNV	SINGLE POST TOP MOUNTED LED FIXTURE MOUNTED ON 14" ROUND LAMINATED POLE, VERIFY FINISH, TYPE 5 OPTICS, 51 WATTS, 5,741 LUMENS, 3000K, TENON MOUNTED, GFI/WP RECEPTACLE IN BASE, RAL#8028 FINISH ON HEAD, VERIFY POLE FINISHES WITH ARCHITECT
SB	GARDCO	PBL-42-14L-350-WW-G2-5-240-F2-CC	UNV	42" HIGH LED BOLLARD, 17.7 WATTS, 1608 LUMENS, 3000K, TYPE 5 OPTICS, TERRA BROWN FINISH, RAL # 8028
SC	BETA CALCO	8308284-30-TERRA BROWN(RAL 8028)	UNV	STEEL COLUMN MOUNTED LED CYLINDER WITH 35 DEGREE UP AND DOWNLIGHT OPTICS, 30WATTS, 1522 LUMENS UP AND DOWN, TERRA BROWN FINISH(RAL 8028)

LIGHTING FIXTURE NOTES:

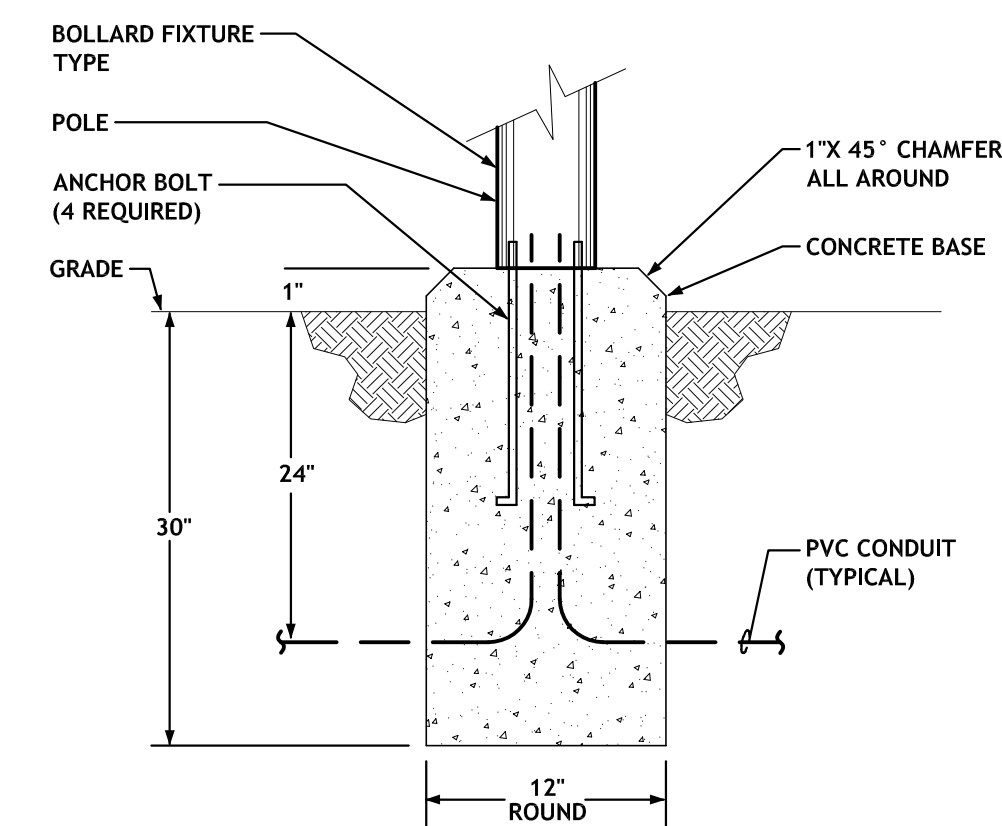
- THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL MOUNTING HARDWARE REQUIRED FOR ALL LIGHTING FIXTURES.
- COLOR TEMPERATURE FOR ALL LED FIXTURES SHALL BE 3000°K, UNLESS NOTED OTHERWISE.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH A LIST OF ALL LED DRIVERS (INCLUDING CATALOG AND MANUFACTURER NUMBERS) USED ON PROJECT. DISTRIBUTOR NAME AND LOCATION WHERE LAMPS CAN BE PURCHASED TO BE GIVEN TO OWNER AT JOB COMPLETION.

- NOTES:**
- CONTRACTOR SHALL LOCATE UNDERGROUND CONDUIT AT MINIMUM OF 10'-0" FROM NEAREST TREE.
 - ALL UNDERGROUND ELECTRICAL CONDUIT SHALL HAVE A DETECTABLE WARNING TAPE INSTALLED 12" BELOW GRADE - DIRECTLY ABOVE THE CONDUIT TO THE INSIDE OF THE "QUAZITE" BOXES WHERE APPLICABLE. WARNING TAPE SHALL BE "TERRA TAPE", 3" WIDE, LABELED WITH "CAUTION ELECTRIC LINE" BURIED BELOW #42-0064. CONTACT: "REEF INDUSTRIES, INC" AT 1-800-231-6074



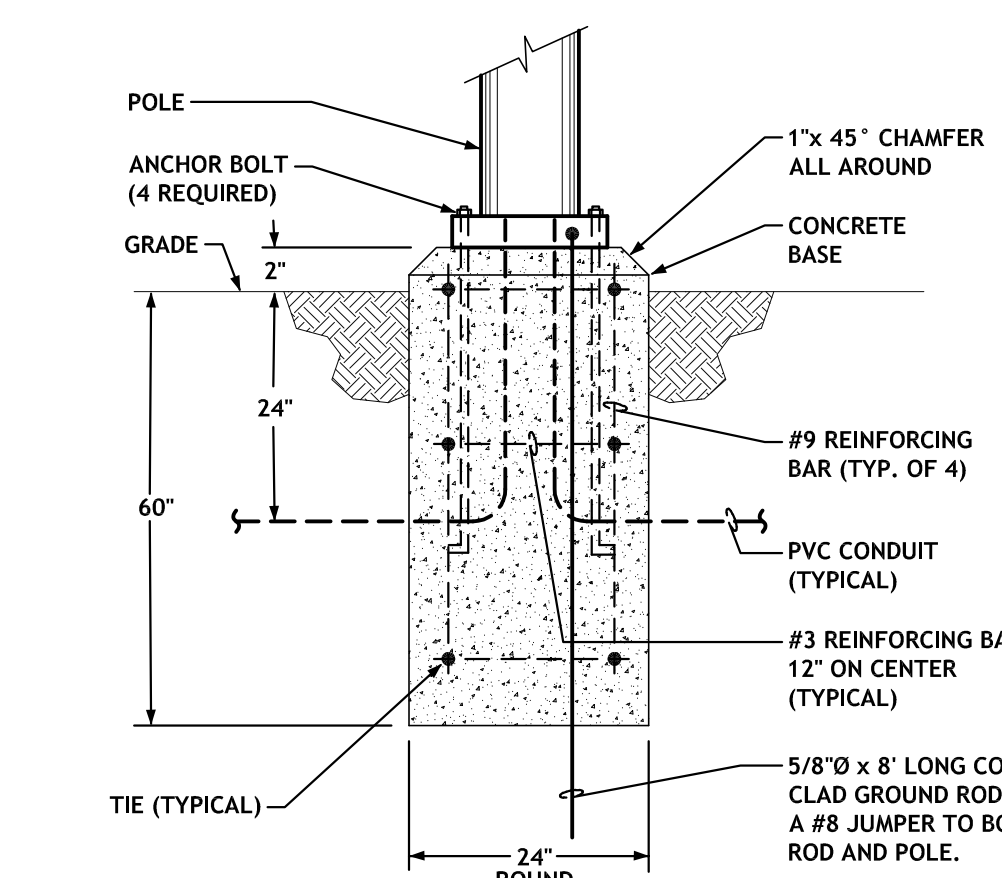
UNDERGROUND POWER CONDUIT INSTALLATION DETAIL

NO SCALE



BOLLARD BASE DETAIL

NO SCALE

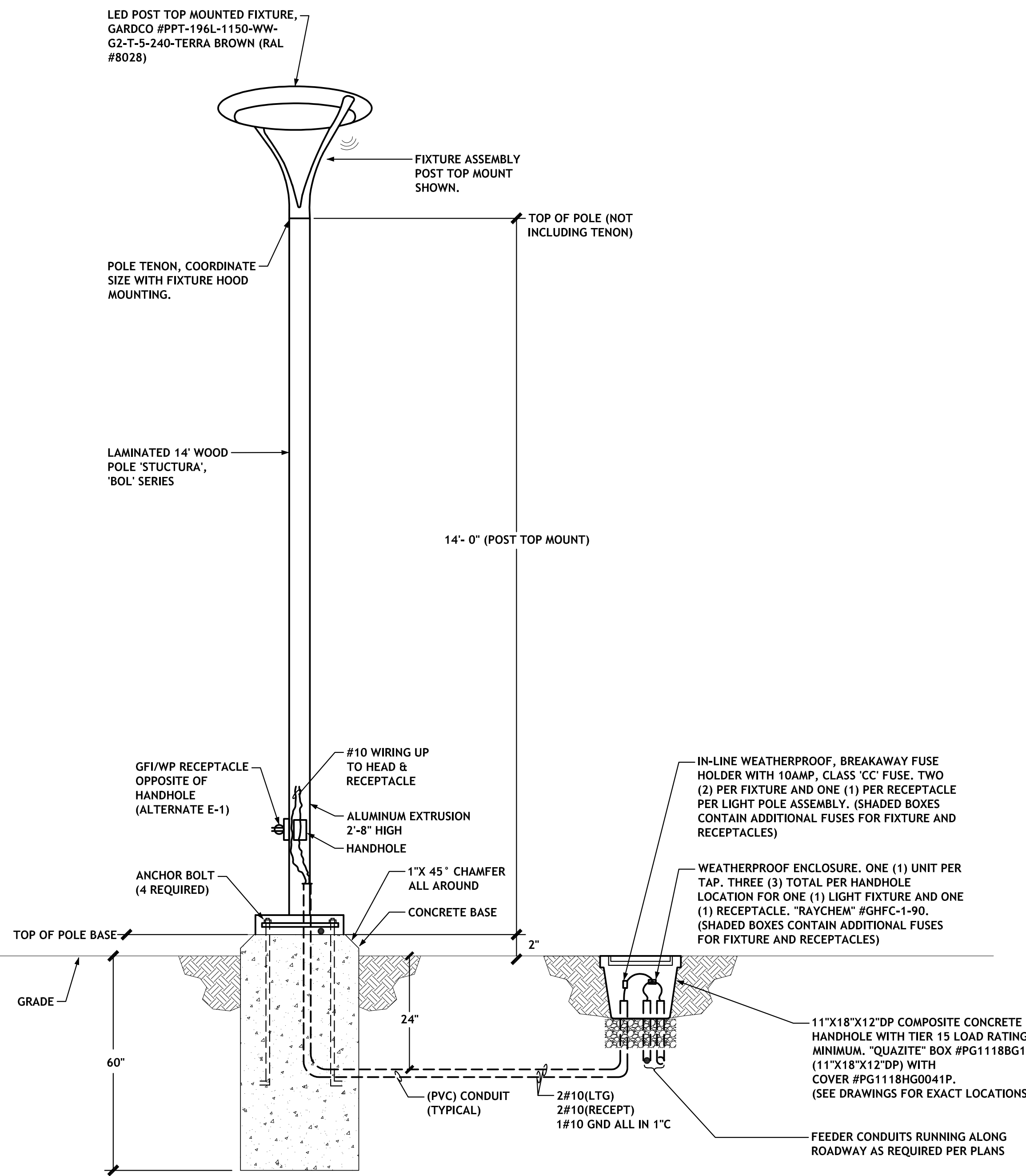


BASE DETAIL

NO SCALE

PANEL: 'SL'										
VOLTAGE: 120/240 VOLT, 1 PHASE, 3 WIRE					REMARKS: 100 AMP MAIN CIRCUIT BREAKER					
VA	USE	P O L E S	A M P S	C K T	N	C K T	A M P S	P O L E S	USE	VA
1440	POLE RECEPTACLES	1	20	1	A	2	20	2	PATHWAY/PAVILLION LTG	758
1260	POLE RECEPTACLES	1	20	3	B	4	20	4		758
1800	SOUTH PLUGGING BOXES	1	20	5		6	20	2	SPARE	
1800	NORTH PLUGGING BOXES	1	20	7		8				
1000	BAND PLUGGING BOX	1	20	9		10	20	1	HOUSING RECEPT	180
1000	BAND PLUGGING BOX	1	20	11		12	20	1	SPARE	
1000	BAND PLUGGING BOX	1	20	13		14	20	1	SPARE	
1000	BAND PLUGGING BOX	1	20	15		16	20	1	SPARE	
	SPACE			17		18			SPACE	
	SPACE			19		20			SPACE	
	SPACE			21		22			SPACE	
	SPACE			23		24			SPACE	
MOUNTING: SURFACE		GROUND BUS								A.I.C. RATING: 10,000

ELECTRICAL LOADS	
LIGHTING	1516 VA
RECEPTACLES	6300 VA
MISC	4000 VA
TOTAL	11816 VA
CONTINUOUS LOAD (125%)	1895 VA
NON-CONTINUOUS LOAD (100%)	10300 VA
SERVICE SIZE (SUM OF CONTINUOUS & NON-CONTINUOUS LOADS)	12195 VA
TOTAL AMPERES	51 AMPS
100 AMPERE SERVICE IS ADEQUATE	



LIGHT POLE DETAIL

NO SCALE

- NOTES:**
- COORDINATE EXACT POLE LOCATIONS WITH OWNER / ARCHITECT.

HOUGH GREENSPACE

East 86th Street
Cleveland, Ohio 44106

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812 HURON ROAD E SUITE 840
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LANDSCAPE ARCHITECT
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CIVIL & STRUCTURAL ENGINEERING

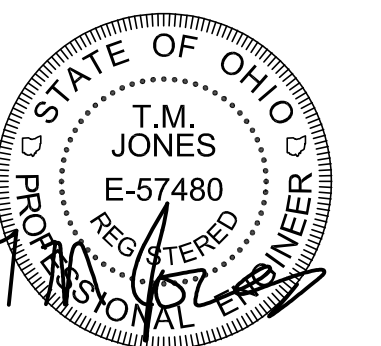
RIVERSTONE

3800 LAKESIDE AVENUE, SUITE 100
CLEVELAND, OH 44114
216.491.9640

ELECTRICAL DETAILS

REV # DATE DESCRIPTION

SEAL



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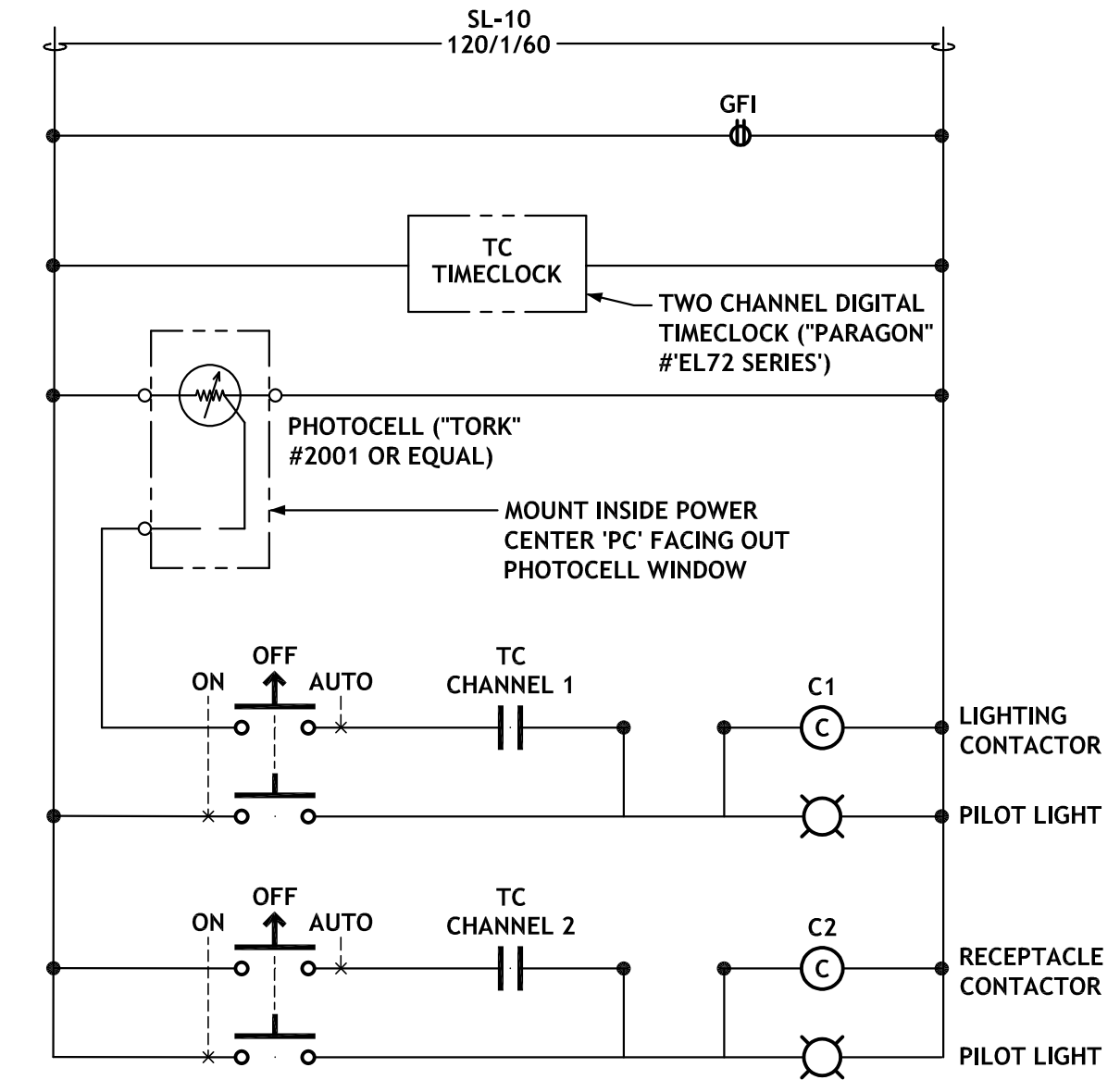
ISSUE DATE 01/23/2023

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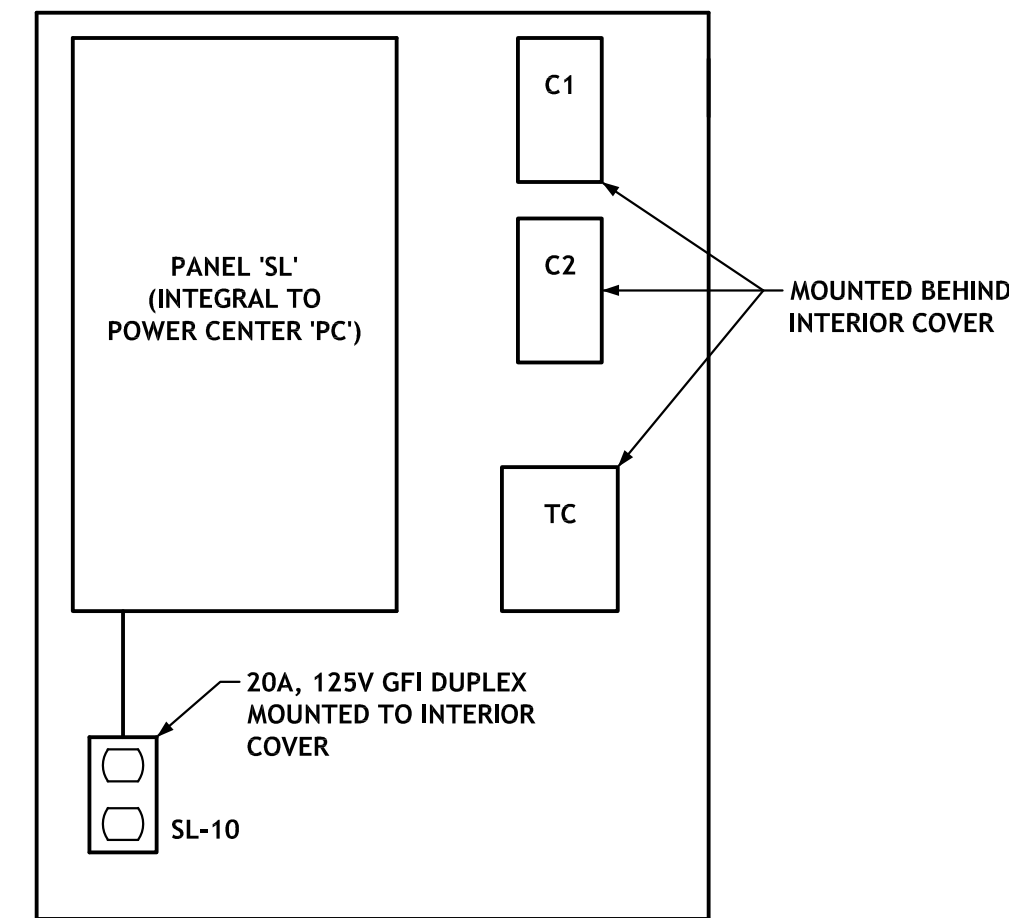
MARK	DESCRIPTION
30	30 AMP, 4 POLE LIGHTING CONTACTOR WITH 120V COIL, H-O-A SELECTOR SWITCH (2 SPARE CONTACTS)
TC	TWO CHANNEL DIGITAL TIMECLOCK, "PARAGON" #EL72 SERIES OR EQUAL BY "TORK" MOUNTED IN NEMA 1 ENCLOSURE

NOTE:
STREET LIGHTS TO BE ON ALL NIGHT. TIMECLOCK INSTALLED TO KEEP LIGHTING FROM TURNING ON DURING THE DAY.

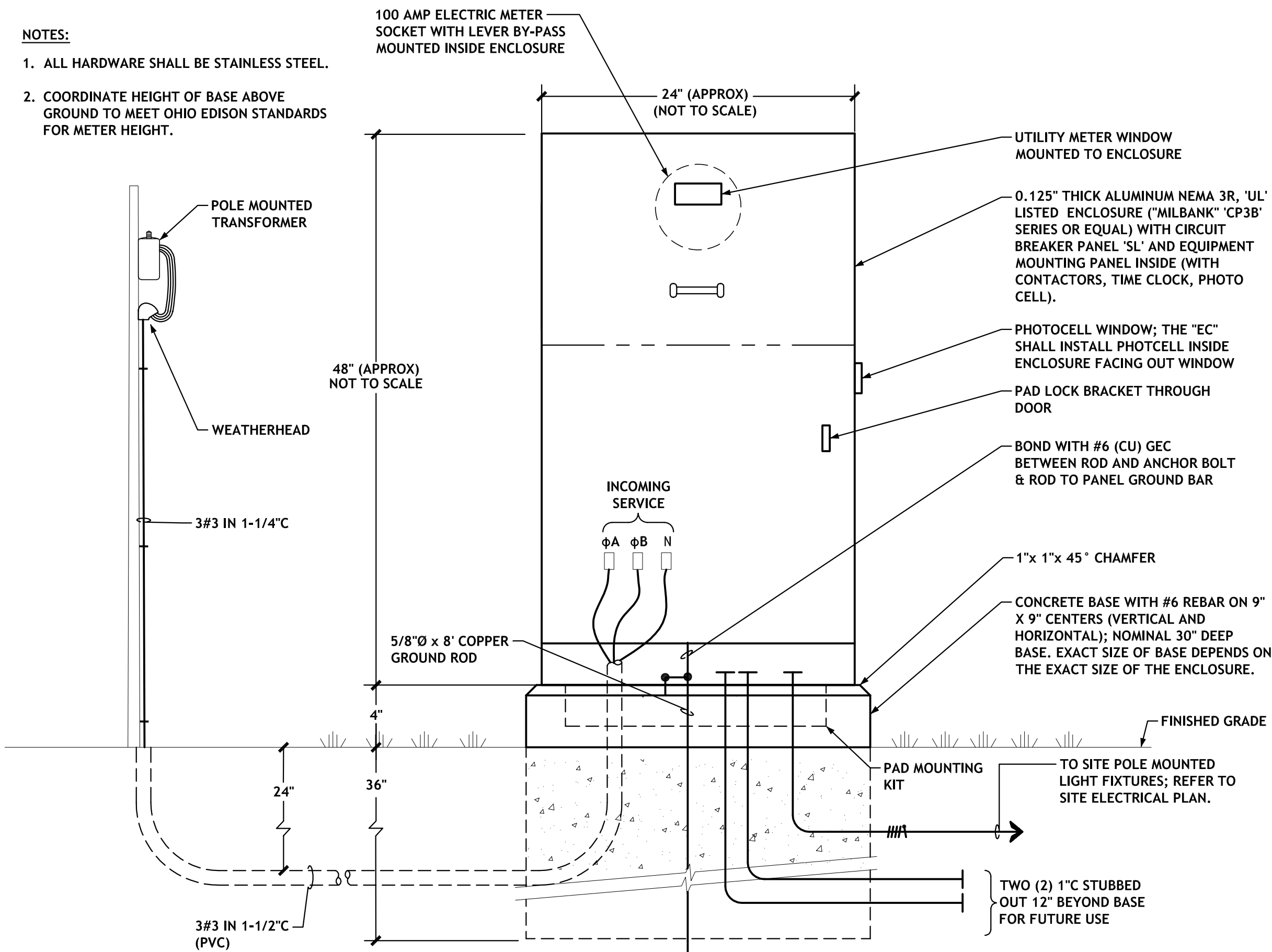


SITE LIGHTING CONTROL WIRING DIAGRAM
NO SCALE

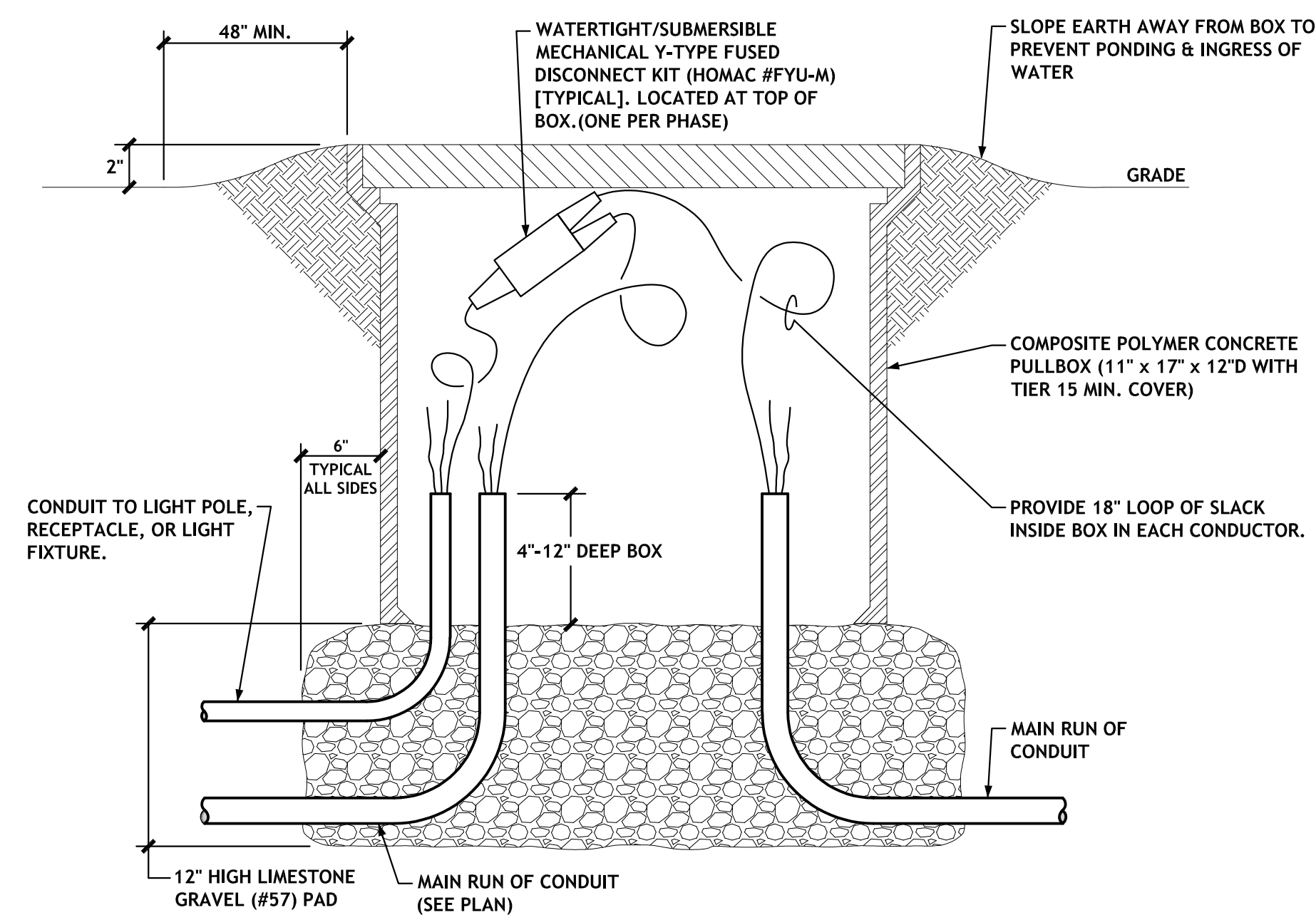
NOTES:
1. THE ABOVE LAYOUT REPRESENTS INTENT. EXACT ENCLOSURE SIZE MUST BE DETERMINED FROM EXACT PHYSICAL DIMENSIONS AND LOCATIONS OF EQUIPMENT SHOWN.
2. CONTACTORS MAY BE OPEN TYPE.
3. METER PEDESTAL AS MANUFACTURED BY 'MILBANK'.



POWER CENTER 'PC' INTERIOR PANEL LAYOUT
NO SCALE

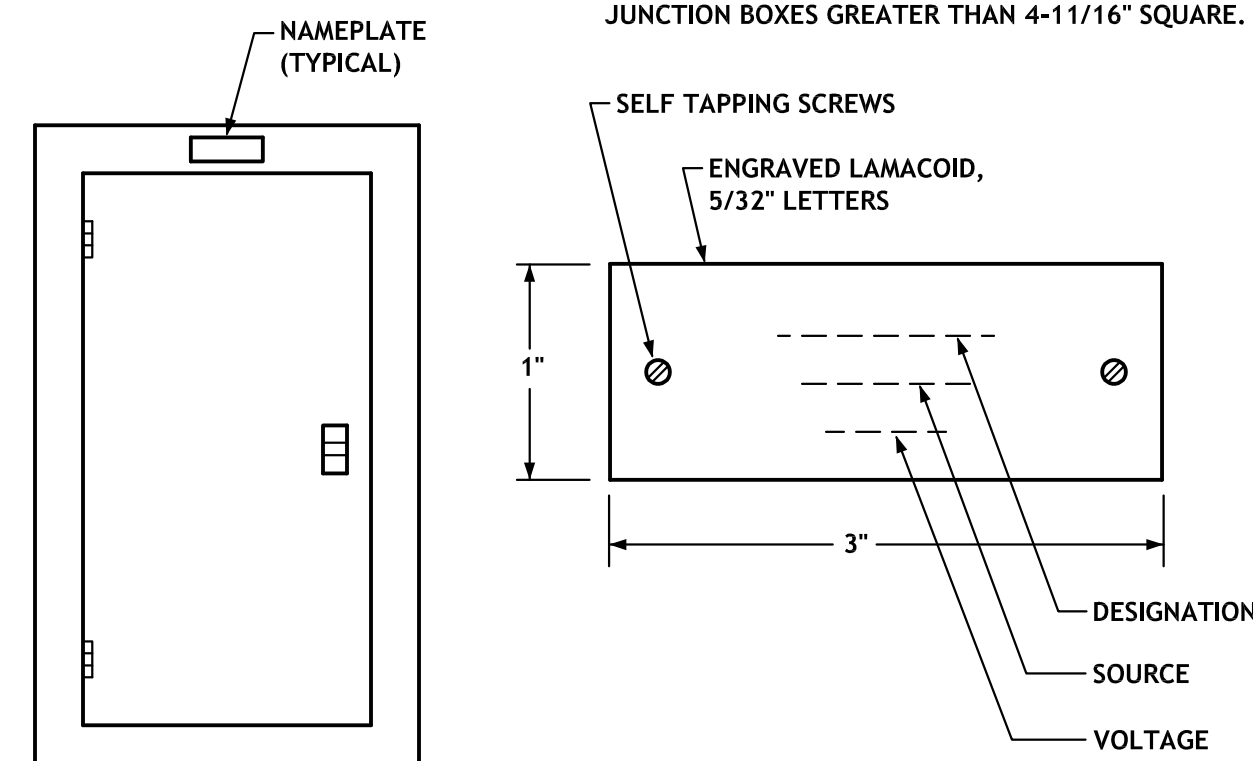


POWER CENTER 'PC' ELEVATION
NO SCALE



FLUSH IN-GRADE PULL BOX DETAIL
NO SCALE

NOTE:
NAMEPLATES ARE REQUIRED ON ALL PANELS, DISCONNECT SWITCHES, STARTERS, RELAYS, AND JUNCTION BOXES GREATER THAN 4-11/16" SQUARE.



STANDARD COLORS:
1. 240/120 VOLTS - GREEN BACKGROUND, WHITE LETTERS

IDENTIFICATION TAGGING DETAIL
NO SCALE

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Drawings and Specifications are to be considered as supplementing each other. Work specified but not shown, or shown but not specified, shall be provided as though mentioned in both specifications and drawings.
- B. The architectural, structural, mechanical, electrical and equipment drawings and specifications are hereby incorporated into and become a part of this Division. This contractor shall examine all such drawings and specifications and become thoroughly familiar with provisions contained therein and the submission of his bid shall be construed as indicating such knowledge.
- C. The drawings, as prepared, are diagrammatic, but shall be followed as closely as actual operation of building and work of other trades will permit. All changes from these drawings, necessary to make the work conform to the building as constructed, and to fit the work of other trades or to conform to the rules and regulation of the State, City or Municipal bodies having jurisdiction, shall be made by this Contractor, at his own expense. Do not scale drawings.

1.2 DESCRIPTION

- A. This Electrical Contractor's work includes but is not limited to the following:
1. All labor, materials and equipment required for a complete and operating electrical installation.
 2. All permits and inspections required for electrical work.
 3. Cutting and patching required for electrical work.
 4. Service and branch circuit conduit and wiring.
 5. Lighting fixtures, poles, and lamps.
 6. Receptacle outlets, contactors, time locks, photocells, and equipment connections.
 7. Distribution equipment, panelboards, meter enclosures, etc.

1.3 REQUIREMENTS OF REGULATION AGENCIES

- A. Permits, Inspections and Notices
1. Secure and pay for all permits and inspections required for the execution of the Electrical Work. Turn over all certificates of approvals to the Engineer promptly when received. Give the proper authorities notice as required by law.
- B. Codes and Standards
1. Comply with latest edition of the following as interpreted by local board having jurisdiction as well as any further modifications or regulations of local or state authorities.
 - a. National Electrical Code
 - b. National Fire Protection Association
 - c. National Electric Safety Code
 - d. National Bureau of Fire Underwriters
 - e. Ohio Basic Building Code
 - f. Life Safety Code
 - g. ANSI Standards No. A117 (Handicapped)
 - h. Local and County Laws and Ordinances

1.4 SUBMITTALS

- A. Within 30 days from contract award, this contractor shall submit to the Engineer, in triplicate, shop drawings and / or descriptive literature showing manufacturer's name and identifying number on the following items of equipment:
1. Lighting Fixtures & Poles
 2. Contactors
 3. Time Clocks
 4. Wiring devices
 5. Fuses and in-line fuse devices.
 6. Photocells
 7. Distribution equipment, panelboards, meter enclosures, etc.
- B. Equipment submittals and shop drawings shall be reviewed, approved and so stamped by the contractor prior to being submitted for the Engineer's review and acceptance. If electronic submittals are sent via email for review, at least one (1) paper copy must be sent to the engineer for his use before approval is given.
- C. The submittals returned marked "No Exception Taken" or "Make Corrections Noted" shall be used for procurement, however, the responsibility for correct procurement remains solely with the contractor. Any submittals returned marked "Revise and Resubmit" or "Rejected" or "Submit Specification" shall be resubmitted as noted.

1.5 SUBSTITUTIONS

- A. These specifications shall establish the quality standard for materials and equipment to be furnished. Items specified by manufacturer, trade name, or catalogue number shall be furnished Base Bid as specified.
- B. Where more than one manufacturer is specified for an item or system, the contractor may furnish any item or system specified.
- C. Should the Contractor desire to furnish materials other than those specified, he must submit a written request for substitutions as specified in the "Instructions to Bidders". Any proposed substitutions not received 10 days prior to bid will not be accepted unless so decided by the Owner.
- D. The project drawings have been designed around the equipment specified and same equipment shall be bid as "Base Bid". If the contractor decides to submit a system other than specified, it shall be the responsibility of the contractor to state in writing the amount to add or deduct to or from the base bid and furthermore, contractor shall pay for additional engineering time spent over and above the time that would be required to review base bid shops.
- E. If a manufacturer so listed as an acceptable alternate manufacturer, this manufacturer's equipment is still subject to approval 10 days prior to the bid date and shall meet the requirements as stated in "D" above.

1.6 AS-BUILT DRAWINGS

- A. Provide as-built drawings. Maintain as-built drawings on media required by Architect. As work progresses, record any deviation from contract drawings. Notations shall be neat and legible with any additional explanatory drawings or sketches necessary. At completion of job and before request for final payment, submit as-built drawings to the Engineer.

1.7 FIXTURE LAMPING

- A. The Electrical Contractor shall provide 12 spare drivers of each type used, or as specified on drawings.

1.8 GUARANTEE

- A. Guarantee all workmanship and materials furnished under the contract for one year after acceptance by Owner. Repair or replace any defect during the guarantee period, without cost to Owner.
- B. Provide additional warranties for specific systems as specified in the related section of the specifications.

1.9 MAINTENANCE AND OPERATING MANUALS

- A. Assemble and submit to the Engineer for subsequent submission to the Owner, four (4) complete sets of manual of operations and maintenance on all systems and a copy of fixture cuts with manufacturers name and model number, for each item furnished.

PART 2 - MATERIALS AND SYSTEMS

2.1 CONDUIT

- A. All wiring shall be installed in Polyvinyl Chloride Conduit (PVC) and shall be used for installation in concrete slabs, underground, in exterior walls where not subject to physical damage. Provide schedule 40 underground and schedule 80 where exposed.
- B. Minimum conduit size for power wiring shall be 1" trade size (PVC) unless otherwise noted.
- C. Underground conduits shall be run in as direct a line and with as long of bends as practical. Provide saddles at intervals not exceeding 10'. Locate conduit runs to avoid equipment of other trades.
- D. Extend exposed raceways parallel and perpendicular to the surface of the exposed structural members and surface contours as much as practical to provide a neat appearance.
- E. A support shall be provided for exposed or concealed raceway as close as practical to and not exceeding 1' from an unsupported box or access fitting. In vertical runs, the load produced by the weight of the raceway and the enclosed conductors shall not be carried by the raceway terminal, but shall be carried entirely by the conduits supports.

2.2 JUNCTION, PULL AND OUTLET BOXES

- A. All boxes required under this section shall be code gauge steel boxes with bolted or screwed covers, except where otherwise indicated. Boxes exposed to weather and used in ground shall be concrete/fiberglass type and equipped with gaskets to meet weatherproof requirements.
- B. Each box shall have volume in accordance with requirements of the National Electrical Code.
- C. All boxes shall be set in ground so as to be flush with grade. The boxes shall be accurately set and rigidly secured in position.
- D. Boxes shall be supported independently of conduit and not fastened to other equipment.

2.3 CABLE AND WIRE

- A. All cable and wire shall be in strict accordance with the U.S. Standards and shall be delivered on site with original factory tags attached and shall be less than one (1) year old when installed.
- B. Install products in accordance with manufacturers instructions.
- C. Use stranded conductors for service and branch circuits.
- D. Use stranded conductors for control circuits unless specified otherwise.
- E. Use conductor not smaller than 12 AWG for power and lighting circuits.
- F. Use conductor not smaller than 14 AWG for control circuits unless specified otherwise.
- G. Use 10 AWG home run conductors for 20 ampere, 120 volt branch circuits longer than 100 feet.
- H. Pull all conductors into raceway at same time.
- I. Use wire pulling lubricant for building wire 4 AWG and larger.
- J. Protect exposed cable from damage.
- K. Use suitable cable fittings and connectors.
- L. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- M. Clean conductor surfaces before installing lugs and connectors.
- N. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
- O. Use insulated mechanical connectors for copper conductor splices and taps, 6 AWG and larger.
- P. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
- Q. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.
- R. All wiring to be copper type THHN, XHHW or THWN, 600 volt (75° C).

2.4 CONTACTOR AND AUXILIARIES

- A. Contactors shall have a snap action closing and opening mechanism with provisions for locking the contactor in the open position. Contactors of the Allen Bradley Bulletin 400 class may be used for loads up to 90 amperes.
- B. All push button stations, and other accessory control devices shall be of the heavy duty type and/or oil tight type unless specifically designated otherwise on drawings. Provide a minimum of one (1) normally open and one (1) normally closed contact, control transformer, and H-O-A selector switch or stop/start pushbutton with each contactor.
- C. Enclosures: NEMA type 1 and/or type 3R or as indicated on drawings, or as required based on environment in use.
- D. Mount contactors as indicated on drawings and per NEC.
- E. Contactors and accessories shall be manufactured by Allen Bradley, General Electric, Cutler Hammer, Square D, or ITE.
- F. Shop drawings shall be submitted to Engineer for approval.

2.5 WIRING DEVICES

- A. RECEPTACLES
- Duplex Convenience Receptacle, 20A, 125V, Grounding
1. Pass & Seymour #P53262A
 2. Hubbell #HBL5362
 3. Leviton #5362
 4. Cooper #5362
- GFCI Receptacle, 20A, 125V, Grounding:
1. Pass & Seymour #Z095
 2. Hubbell #GF20L
 3. Leviton #7899
 4. Cooper #VGF20

B. COVER PLATES

Decorative Cover Plate: Smooth #1302 / 304 stainless steel 0.035" thick or smooth high-impact nylon.

1. Pass & Seymour #302 stainless steel or smooth high-impact nylon.
2. Hubbell #302 / 304 stainless steel or smooth high-impact nylon.
3. Leviton #302 stainless steel or smooth high-impact nylon.

Stamped Steel Cover Plate:

1. Thomas & Betts #450 series.
2. Raco #900C series

C. GENERAL

1. Install products in accordance with manufacturer's instructions.
2. Install devices plumb and level.
3. Install receptacles with grounding pole on bottom.
4. Connect wiring device grounding terminal to outlet box with bonding jumper or branch circuit equipment grounding conductor if supplied.
5. Install cover plates on switch, receptacle, and blank outlets in all areas.
6. Connect wiring devices by wrapping conductor around screw terminal or under clamp type terminal.
7. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, and on surface mounted outlets in unfinished areas.
8. Install receptacles as shown on drawings. Mount horizontally where indicated on drawings.

2.6 COMMERCIAL METER PEDESTAL WITH BRANCH CIRCUIT PANELBOARD

- A. Enclosure: NEMA 3R or as indicated.
- B. Cabinet Size: 16 inches deep; 24 inches wide and 48 inches high for 240 volt or as indicated on drawings.
- C. Lighting and Appliance Branch Circuit Panelboard: Plug-on circuit breaker type construction or as indicated on drawings.
- D. Isolated, lockable, sealable utility metering and lug landing section approved by local utility company.
- E. Provide panelboard with copper bus, ratings as scheduled on drawings. Provide copper ground bus in panelboard.
- F. Minimum Integrated Short Circuit Rating: 22,000 amperes rms symmetrical for 240 volts.
- G. Molded Case Circuit Breakers: Plug-on type thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where scheduled on drawings.
- H. Individual breakers shall be capable of being locked using a safety lock in the OPEN position for maintenance of downstream equipment.
- I. Install cabinet plumb on concrete pad and anchor to same.
- J. Provide filler plates for unused spaces in panelboard.
- K. Provide typed circuit directory for branch circuit panelboard. Revise directory to reflect circuiting changes required to balance phase loads.
- L. Measure steady state load currents at panelboard feeder. Should the difference at the panelboard between phases exceed 20 percent, rearrange circuits in the panelboard to balance the phase loads within 20 percent. Take care to maintain proper phasing for multi-wire branch circuits.
- M. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers and metering lugs.
- N. Acceptable manufacturers shall be Millbank or approved equal

2.7 FUSES

- A. No fuses shall be included in the equipment until the installation is complete, including tests and inspections required prior to be energized.
- B. All fuses shall be of the same manufacturer to insure retention of selective coordination as designated. Fuses shall be UL listed to have interrupting capacities as indicated below.
- C. Fuses 600 amperes and less shall be NEMA Class R dual element current limiting with 200,000 amperes rms symmetrical interrupting capacity. Fuses shall have at least 10 seconds time delay at 500% rating. Fuses shall have a spring-loaded stored energy overload element. All dual element fuses shall be self-protecting from extraneous heat.
- D. Three spare fuses of each size shall be furnished to Owner at end of project.

PART 3 - PROCEDURES

3.1 CUTTING, PATCHING, TRENCHING AND BACKFILLING FOR ELECTRICAL INSTALLATION

- A. All cutting, patching, trenching and backfilling associated with the Electrical installation shall be done by the Electrical Contractor. The Electrical Contractor shall lay out and discuss his proposed routes of conduit with the other Contractors and work out any conflicts or interferences. If the Electrical Contractor does not provide sufficient information to the other Contractors, thus causing additional cutting and patching, he shall pay the cost of the additional work.

3.2 RUBBISH AND CLEANUP

- A. All rubbish resulting from the work herein specified shall be removed from the premises by the trade which produced it, daily as it accumulates.
- B. On completion of his work, the Electrical Contractor shall remove and see that each of his subcontractors removes from the site all tools, equipment surplus materials, and rubbish pertaining to his own operation.

3.3 TESTS

- A. At completion of the job and before final acceptance; electrical systems shall be given a final test, fixtures lighted and placed in operation. Any fuses blown or lamps burned out in testing shall be replaced by this Contractor without additional cost to the Owner.
- B. The test shall be made only in the presence of the Engineer or his authorized representative and shall be to his authorized representative and shall be to his entire satisfaction.

3.4 LOAD BALANCING

- A. The Electrical Contractor shall furnish personnel and equipment to balance the appliance and lighting loads between phases of panels, as closely as possible

3.5 GROUNDING

- A. All equipment, materials, conduit system, etc. shall be properly and adequately grounded to assure complete safety to personnel and public. Such grounding shall be done in a proper manner and in accordance with all provisions of the National Electrical Code and all local codes.
- B. System neutral conductor shall be identified throughout and shall be grounded at the building service only.
- C. Metallic conduit system shall be electrically continuous throughout.
- D. All flexible metal conduit connectors shall be bonded with a separate grounding conductor.
- E. All conduits shall include a separate equipment grounding conductor sized in accordance with NEC.

3.6 EQUIPMENT IDENTIFICATION

- A. Nameplates: Engraved three-layer plastic.
- B. Wire and Cable Markers: Cloth markers, split sleeve or tubing type.
- C. Degrease and clean surfaces to receive nameplates.
- D. Install nameplates parallel to equipment lines.
- E. Secure nameplates to equipment using screws, rivets, or adhesive.
- F. Provide nameplates of minimum letter height as scheduled below.
- G. Meter Pedestal, panelboard, light poles, and junction boxes: 5/32 inch; identify equipment designation. 5/32 inch; identify voltage rating and source.
- H. Provide, new, typed, accurate panelboard legends for all new panelboards at project completion.

3.7 NAMEPLATE COLOR SCHEDULE

- A. 240/120 Volts - Green background, white letters.
- B. Relays, relay panels, electrical equipment, light poles, and junction boxes - White background, black letters.

HOUGH GREENSPACE

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Cleveland, Ohio 44106

OWNER
WESTERN RESERVE LAND
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812 HURON ROAD E SUITE 840
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440-528-4150

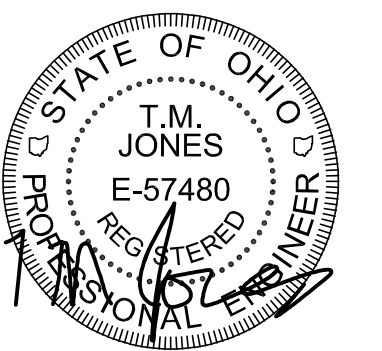
LANDSCAPE ARCHITECT
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ELECTRICAL SPECIFICATIONS

REV # DATE DESCRIPTION

SEAL



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E301

HOUGH GREENSPACE

East 86th Street
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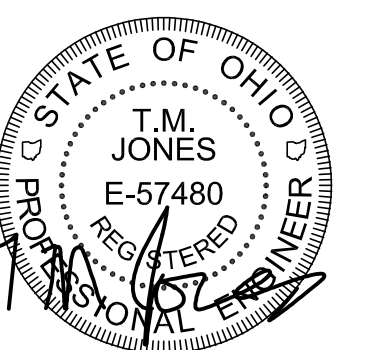
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ELECTRICAL SITE PLAN

REV # DATE DESCRIPTION

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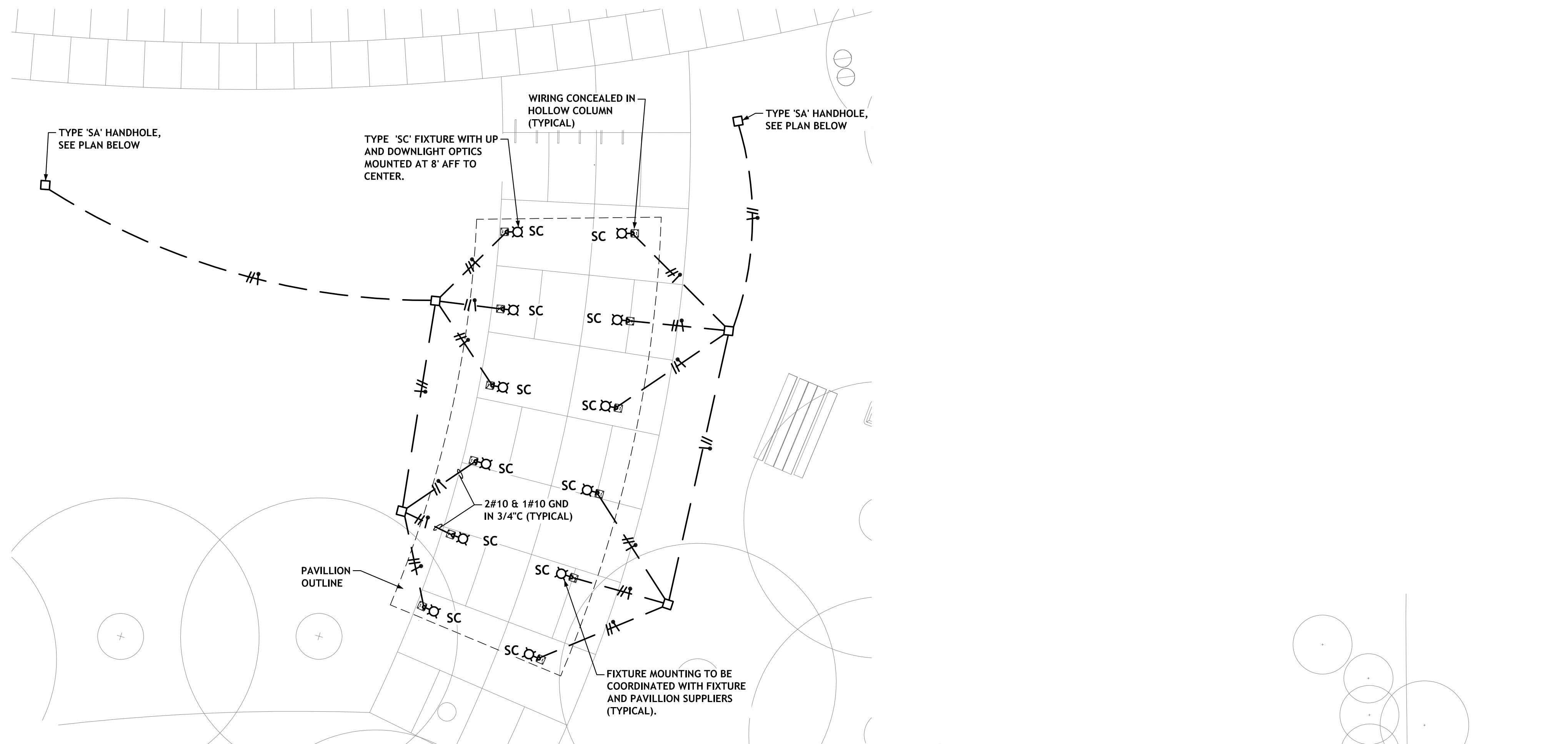


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PAVILLION LIGHTING PLAN
SCALE: 1/8" = 1'-0"

ALTERNATES

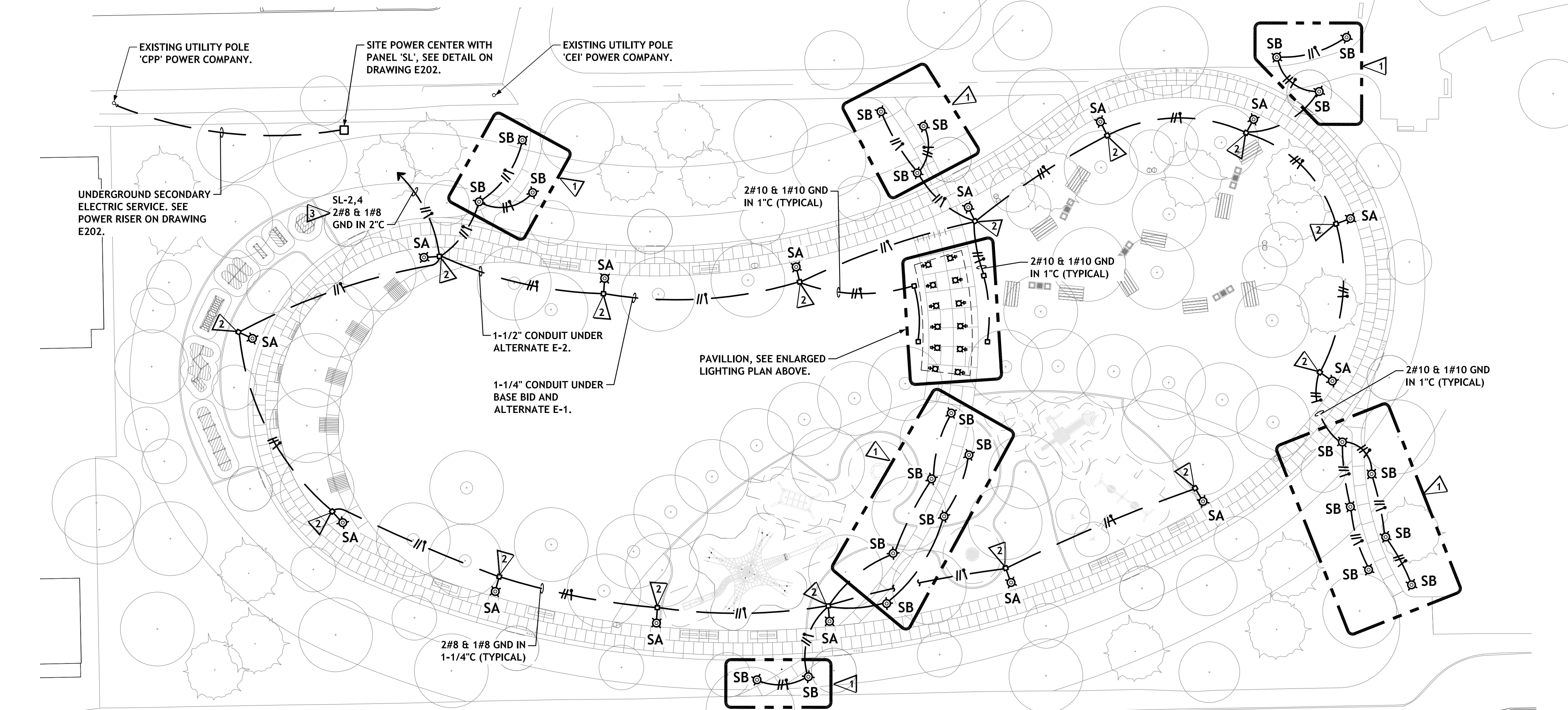
- E-1 STATE THE AMOUNT TO BE ADDED TO THE BASE BID TO INCLUDE GFI/WP RECEPTACLE ON POLE (BY POLE MANUFACTURER) THIS INCLUDES GFI DEVICE (BY THE 'EC') AND ALL ASSOCIATED WIRING.
- E-2 STATE THE AMOUNT TO BE ADDED TO THE BASE BID TO FURNISH AND INSTALL 'COLE' PLUGGING BOXES AS SHOWN ON E103 INCLUDING ASSOCIATED BASES, CONDUIT AND WIRING.
- E-3 STATE THE AMOUNT TO BE ADDED TO THE BASE BID TO FURNISH AND INSTALL TYPE 'SB' FIXTURES INCLUDING ASSOCIATED BASES, CONDUIT AND WIRING.

REFERENCE NOTES: (THESE NOTES APPLY TO THIS PLAN ONLY)

- 1 TYPE 'SB' FIXTURES FURNISHED AND INSTALLED UNDER ALTERNATE E-3.
- 2 11" x 18" x 12"D POLYMER CONCRETE FLUSH PULLBOX (QUAZITE #PG1118BG12 OR EQUAL) WITH TIER 15 GASKETED COVER (QUAZITE #PG1118HG0029) WITH "LIGHTING" ENGRAVED IN COVER (SAME BOX AS SHOWN ON E-102).
- 3 1-1/4" CONDUIT UNDER BASE BID AND ALTERNATE E-1, 2" UNDER ALTERNATE E-2.

SITE NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE INCOMING ELECTRIC SERVICE REQUIREMENTS WITH THE ELECTRIC COMPANY.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE INCOMING ELECTRIC SERVICE INCLUDING CONDUIT, TRENCHING, BACKFILLING, ETC, ALL AS REQUIRED BY THE POWER COMPANY.
3. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATIONS OF THE EXTERIOR LIGHTING FIXTURES WITH THE ARCHITECT.
4. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL, AND COMPACTION THAT IS NECESSARY FOR HIS OWN WORK. THIS INCLUDES OFF-SITE DISPOSAL OF ANY EXCESS EXCAVATED MATERIAL WHICH IS LEFT AFTER HIS WORK IS INSTALLED. ALL BACKFILL SHALL BE PREMIUM GRADE.
5. PRIMARY CABLE / PRIMARY TERMINATIONS AT THE POLE AND PRIMARY / SECONDARY TERMINATIONS AT THE TRANSFORMER SHALL BE BY THE ELECTRIC UTILITY COMPANY.
6. ALL CONCRETE LIGHT POLE BASES SHALL BE BY THE ELECTRICAL CONTRACTOR.
7. ALL SITE LIGHTING CONDUITS SHALL BE 1-1/4" CONDUIT MINIMUM, UNLESS NOTED OTHERWISE.
8. RUN ALL SITE CONDUITS BELOW CONCRETE WALKS AND DRIVEWAYS. DO NOT INSTALL CONDUITS IN CONCRETE POUR.
9. ALL CONDUCTORS SHALL BE #8 AWG COPPER, UNLESS NOTED OTHERWISE.
10. THE COMPLETE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL AND STATE OF OHIO BUILDING CODES.
11. THE ELECTRICAL CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS.



ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

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LANDSCAPE ARCHITECT

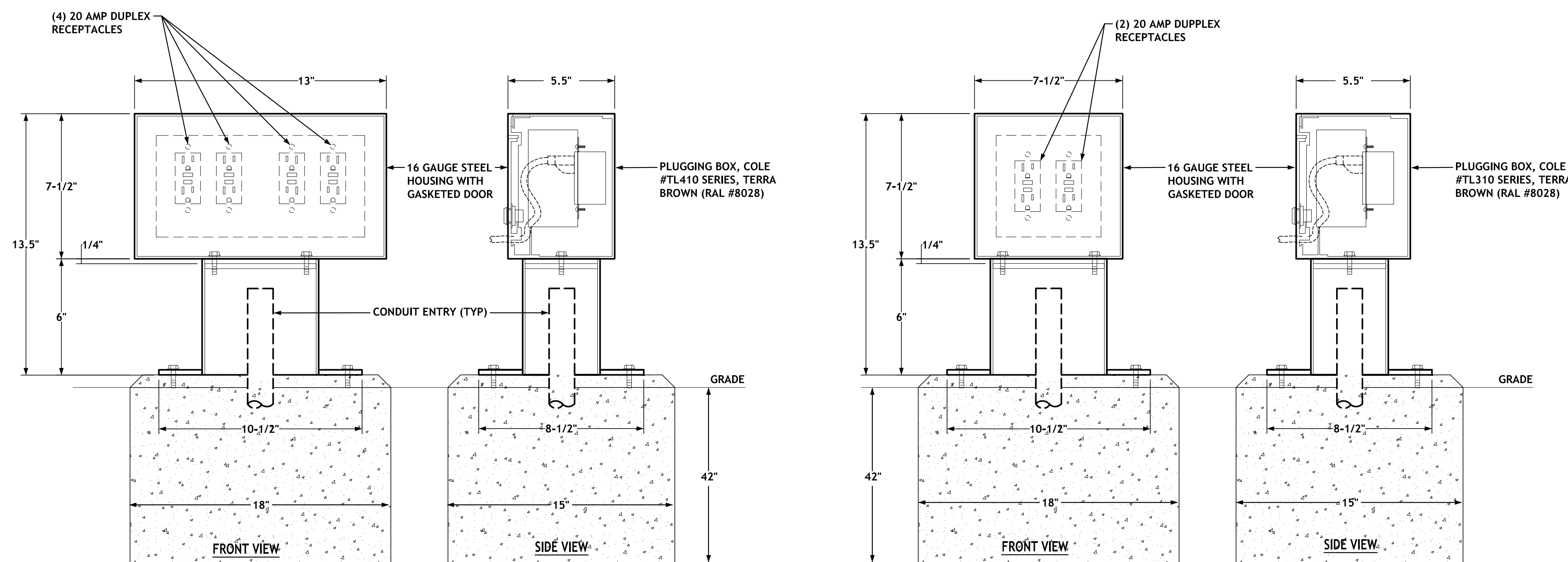
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CLEVELAND, OH 44114
216.491.9640

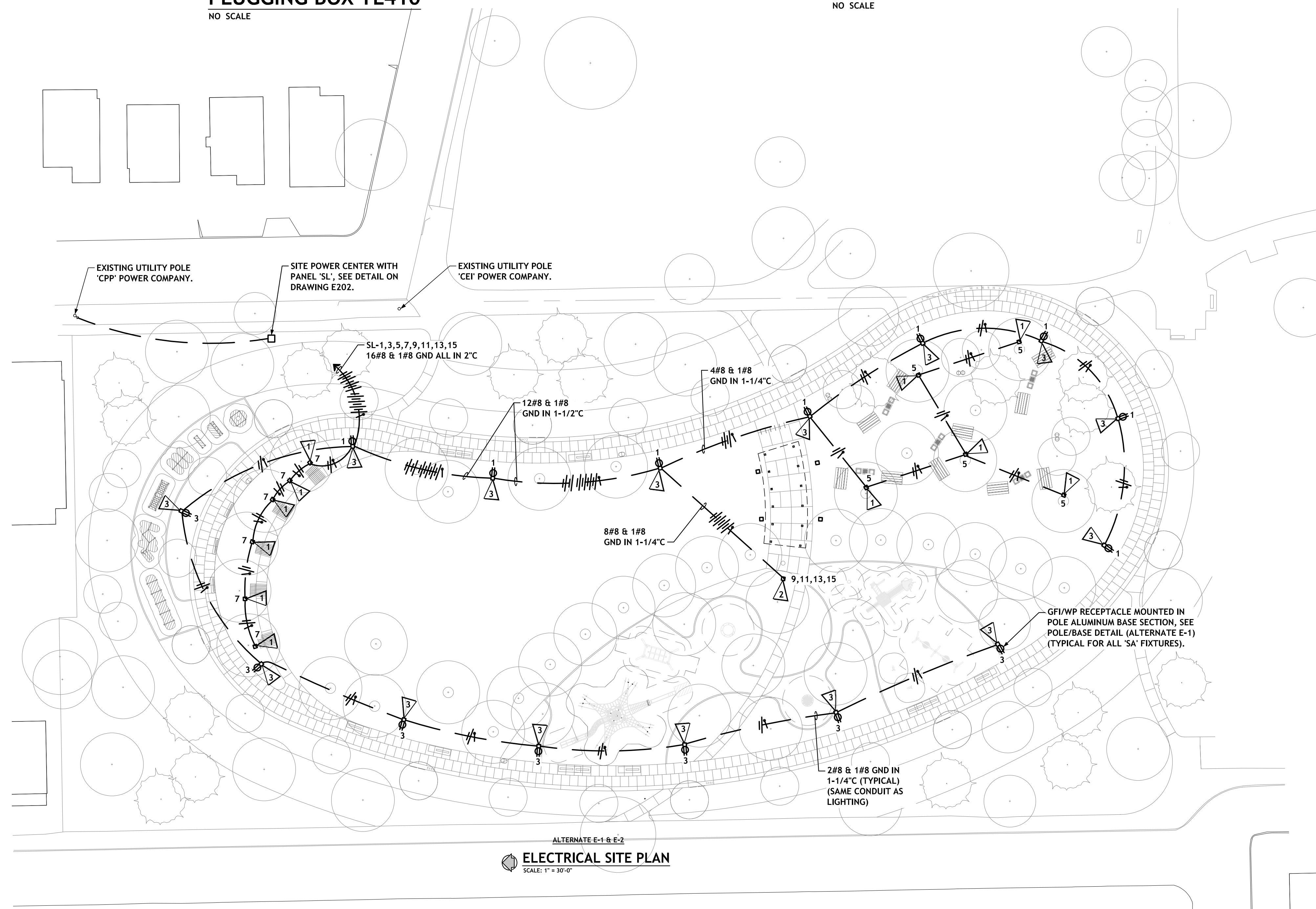


PLUGGING BOX TL410

NO SCALE

PLUGGING BOX TL310

NO SCALE



ALTERNATE E-1 & E-2
ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

REFERENCE NOTES:

(THESE NOTES APPLY TO THIS PLAN ONLY)

- 1 ABOVE GROUND PLUGGING BOX WITH TWO (2) 20 AMP GFI DUPLEX RECEPTACLES, SEE DETAILS ABOVE, COLE #TL310-WCS SERIES (ALTERNATE E-2). COORDINATE EXACT LOCATION WITH ARCHITECT.
- 2 ABOVE GROUND PLUGGING BOX WITH FOUR (4) 20 AMP GFI DUPLEX RECEPTACLES, SEE DETAILS ABOVE, COLE #TL410-WCS SERIES (ALTERNATE E-2). COORDINATE EXACT LOCATION WITH ARCHITECT.
- 3 11" x 18" x 12"D POLYMER CONCRETE FLUSH PULLBOX (QUAZITE #PG1118BG12 OR EQUAL) WITH TIER 15 GASKETED COVER (QUAZITE #PG1118HG0029) WITH "LIGHTING" ENGRAVED IN COVER (SAME BOX AS SHOWN ON E-101).

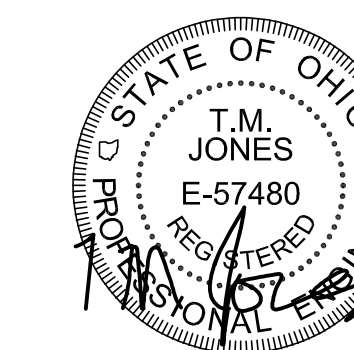
SITE NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATIONS OF THE QUAZITE BOXES WITH THE ARCHITECT/OWNER.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL, AND COMPACTION THAT IS NECESSARY FOR HIS OWN WORK. THIS INCLUDES OFF-SITE DISPOSAL OF ANY EXCESS EXCAVATED MATERIAL WHICH IS LEFT AFTER HIS WORK IS INSTALLED. ALL BACKFILL SHALL BE PREMIUM GRADE.
3. ALL SITE POWER CONDUITS SHALL BE 1-1/4" CONDUIT MINIMUM, UNLESS NOTED OTHERWISE.
4. RUN ALL SITE CONDUITS BELOW CONCRETE WALKS AND DRIVEWAYS. DO NOT INSTALL CONDUITS IN CONCRETE POUR.
5. ALL CONDUCTORS SHALL BE #8 AWG COPPER, UNLESS NOTED OTHERWISE.

ELECTRICAL SITE PLAN

REV # DATE DESCRIPTION

SEAL



All ideas, designs, arrangements and plans indicated or represented by this drawing and written material appearing herein constitute the original and unpublished work of LayerCake, LLC and the same may not be duplicated, used or disclosed to any person, firm or corporation for any purpose whatsoever without the written consent of the architect.

PRICING SET NOT FOR CONSTRUCTION

LC PROJECT # 8119.04

ISSUE DATE 01/23/2023

DRAWN BY

CHECKED BY

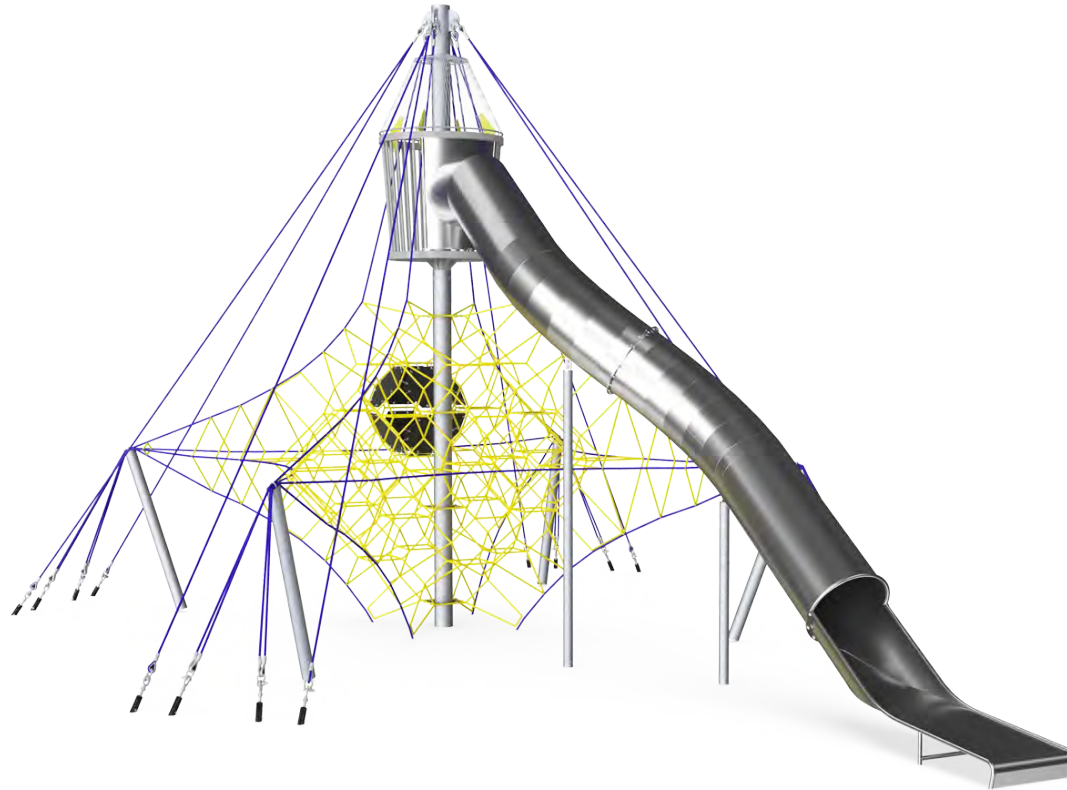
SCALE


E102

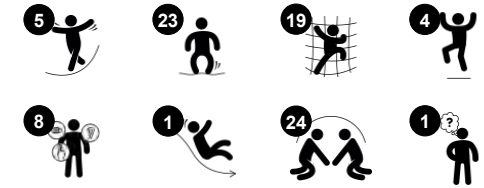
Large Octa Net, Crows Nest, Steel Tunnel

COR10430

KOMPANI
Let's play



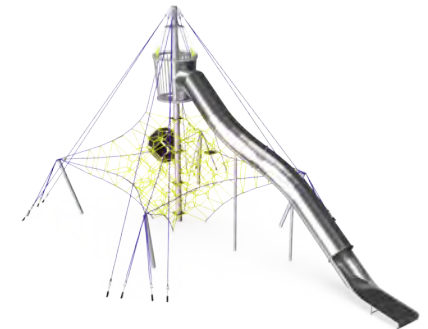
Item no. COR104301-1005	
General Product Information	
Dimensions LxWxH	44'4"x29'1"x23'11"
Age group	5 - 12
Play capacity (users)	41
Color options	



Children will be excited to challenge themselves through intense climbing and sliding play on the Treasure Island! The carefully designed, bouncy net will challenge children to explore the space by using their muscles for a climb to the top, and the reward of the slide down will encourage them to play more. The repeated climbing and sliding will

strengthen physical endurance, as well as aerobic and cardio capacity. The bounce and height trains spatial awareness and proprioception, both crucial in managing obstacles securely. The variety of directions to take helps children to develop their strategic thinking skills along with their physical skills, supporting the body-mind connection. The

large net provides opportunities for children to socialize through play. It is all play and beneficial for life skills on Treasure Island.



Large Octa Net, Crows Nest, Steel Tunnel

COR10430



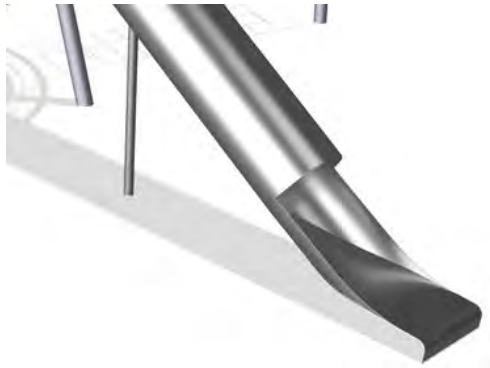
Corocord ropes with 19mm diameter or more are special 'Hercules' - type with galvanized six-stranded steel wires. Each strand is tightly wrapped with PES yarn, which is melted onto each individual strand. The ropes are highly wear-and vandalism-resistant and can be replaced at site if needed.



Corocord 'S' clamps are used as universal connections in Corocord products. 8mm stainless steel rods with rounded edges are pressed around the ropes with a special hydraulic press, making them the ideal connector: safe, durable and vandalism-proof, all while allowing the typical movement of rope structures.



Corocord membranes consist of friction-proof rubberized material of conveyor belt quality with excellent UV resistance. Tested and compliant with REACH requirements for PAH. Embedded is a four-layered armoring made of woven polyester. The armoring and the two surface layers result in a total thickness of 7.5 mm.



The stainless steel components are made of high quality stainless steel in compliance with global playground standards. The steel is glass blasted after manufacturing to ensure a smooth gliding surface.



The steel structure are hot dip galvanized inside and outside with lead free zinc. The galvanization has excellent corrosion resistance in outside environments and requires low maintenance.

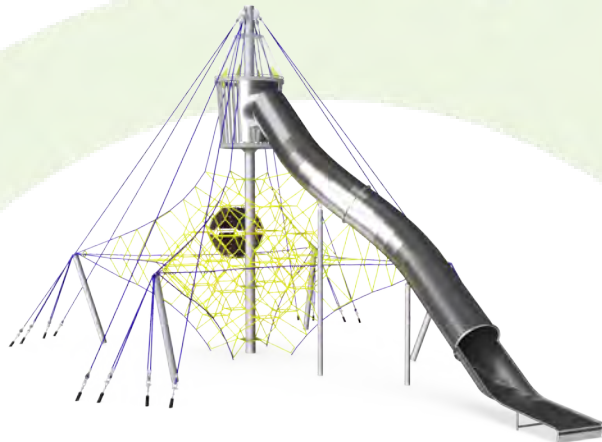
Item no. COR104301-1005	
Installation Information	
Max. fall height	7'5"
Safety surfacing area	1597ft ²
Total installation time	85.8
Excavation volume	22.6yd ³
Concrete volume	13.56yd ³
Footing depth (standard)	3'3"
Shipment weight	5697lbs
Anchoring options	In-ground ✓
Warranty Information	
Corocord Rope	10 Years
S-Clamps	10 Years
Hot dip galvanized steel	Lifetime
Membrane	2 Years
Spare parts guaranteed	10 Years

Elevated activities 2	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	0	0
Required	1	0	1

ASTM F1487
compliant

Large Octa Net, Crows Nest, Steel Tunnel

COR10430



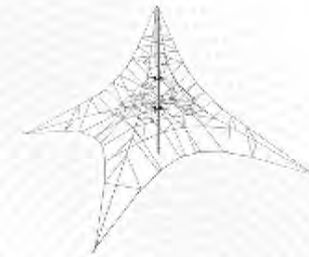
Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
COR104301-1005	8,059.10	3.28	46.10

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Validation of CO₂ calculation of:
Corocord



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Corocord" represented by item no.: COR314011-1101.

(Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

Validation based on report: Validation of CO₂ calculation of 8 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Bente Hviid and Peter Bendtsen.

Publication date: 15. October 2021

By Bureau Veritas HSE
www.bureauveritas.dk
+45 7731 1000

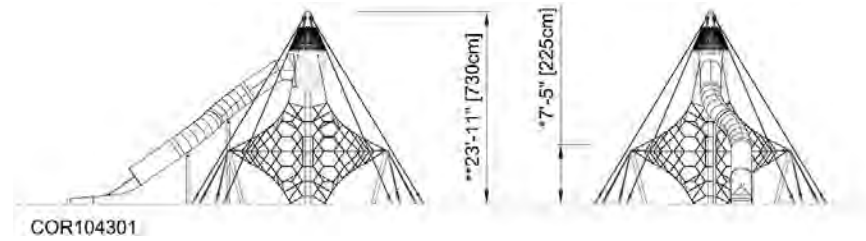
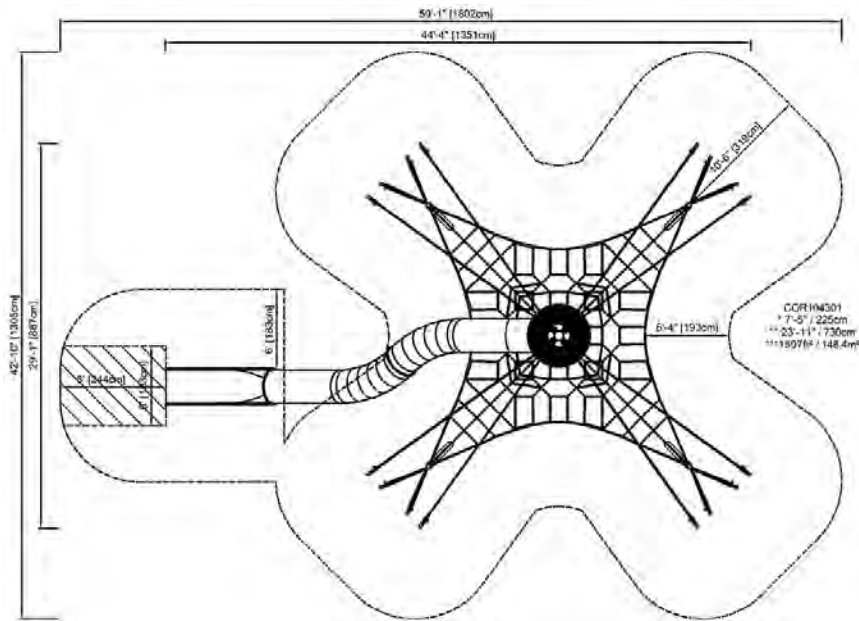


Large Octa Net, Crows Nest, Steel Tunnel

COR10430

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



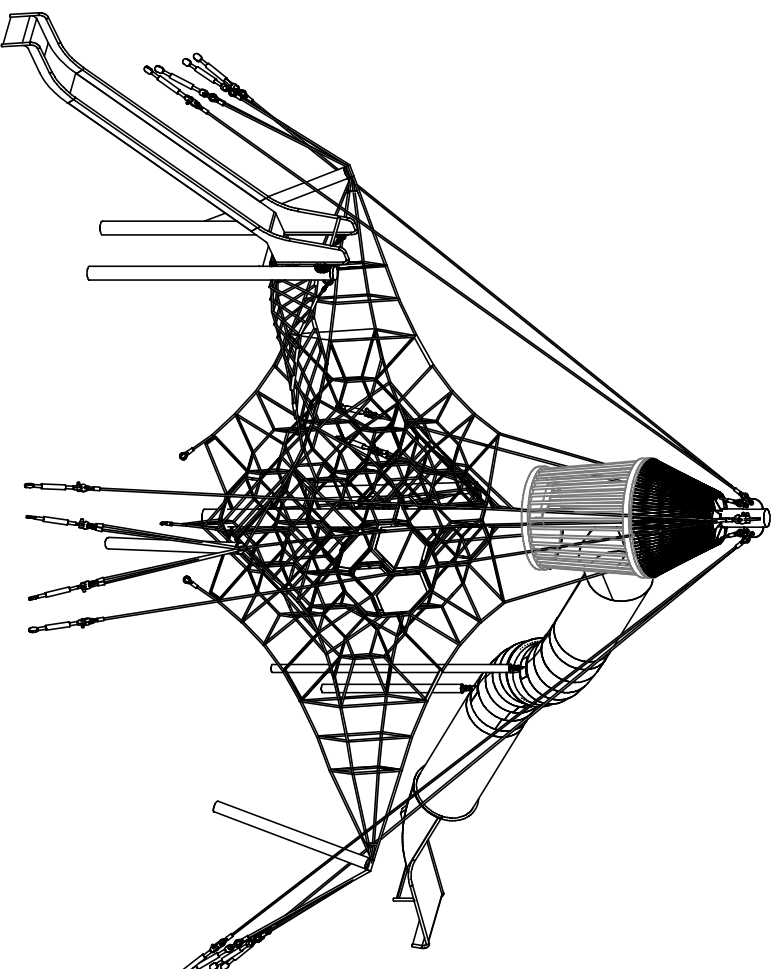
[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Binding approval for Variant Design

When pressing "Prepare to order" in CRM all purchases are subject to this design. This design is defined under its own KOMPAN identification number, which is stated in upper right corner. All constructional details, dimensions, materials, colours and specifications shown on attached datasheets (plan, side, perspective view + safety zone) are hereby accepted when placing the order. Changes are no longer possible.

Notwithstanding the aforementioned and without changing the overall design, Variant Team may in the construction phase, without obtaining approval, perform smaller modifications when deemed beneficial or necessary for the construction. All other modifications are subject to prior approval.



KOMPAN 

COR-SPACE-CUSTOM

882753

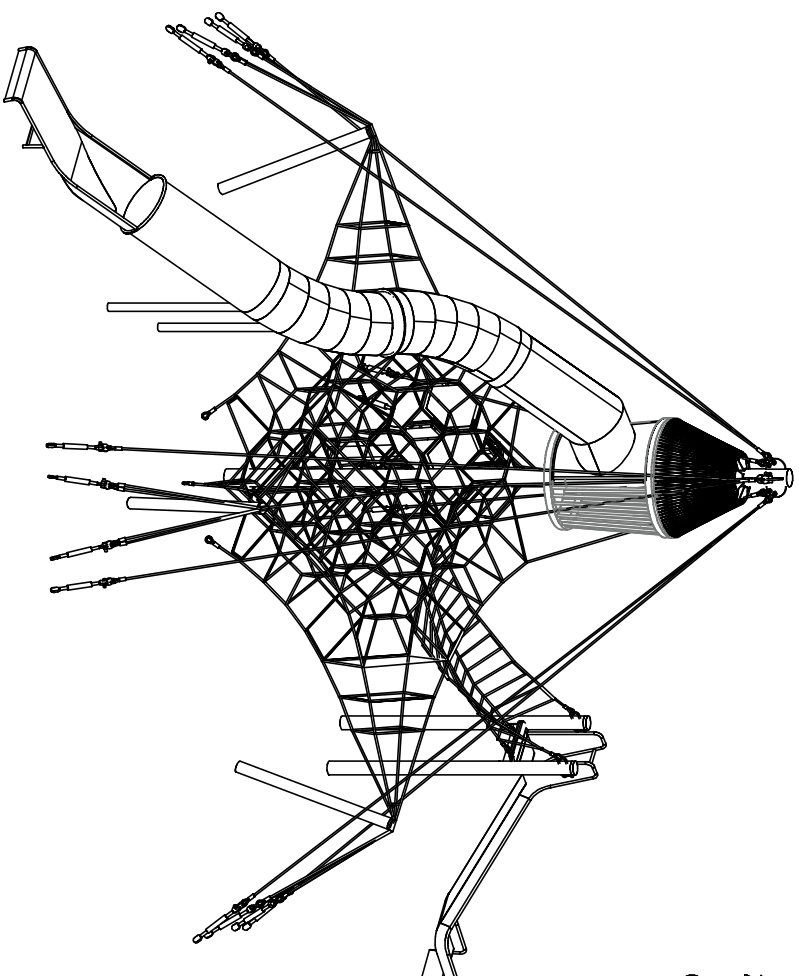
20231221 MLR

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Variant of: COR104301-1006

Footings: 100 cm

Color: Rope (Hemp) -147



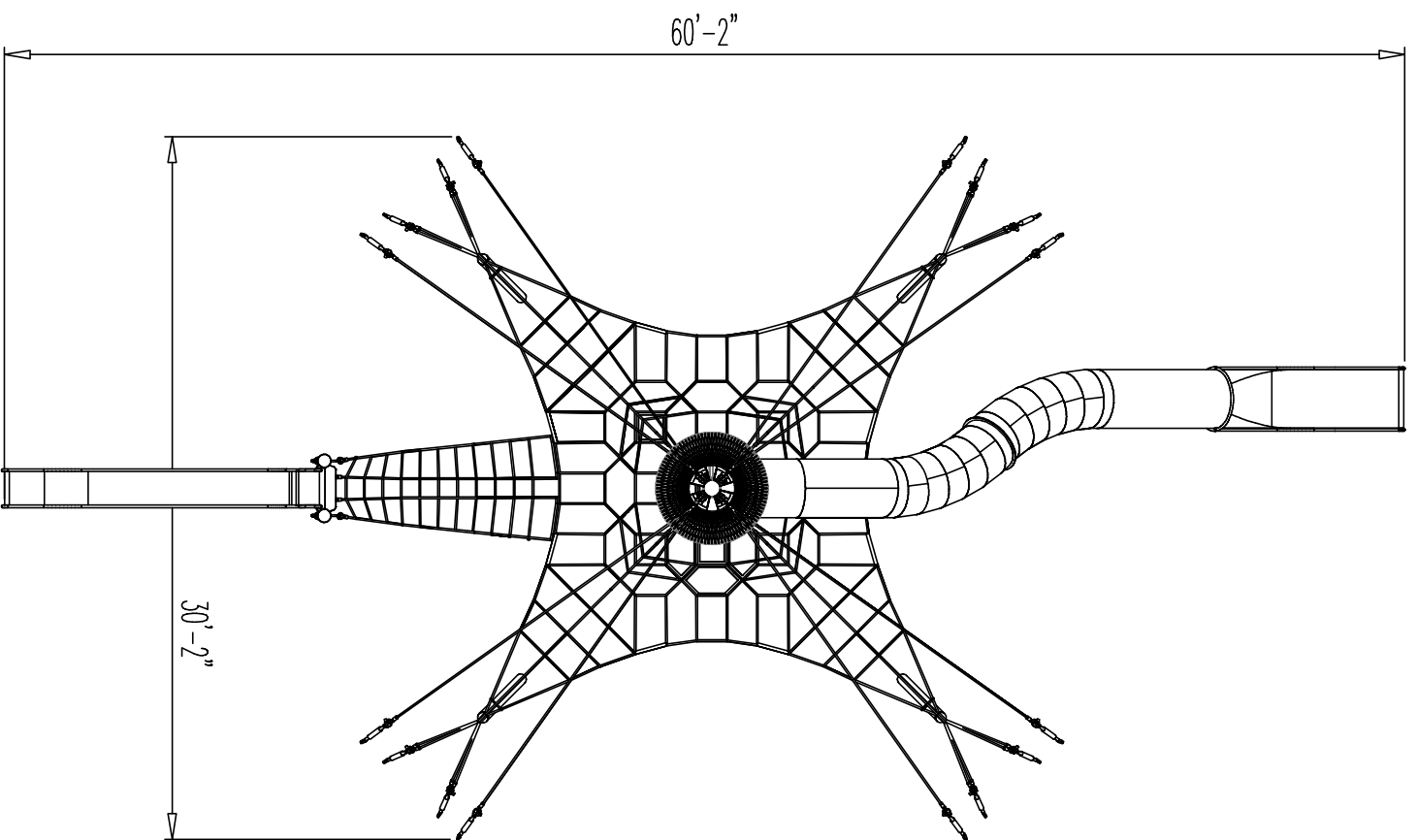
KOMPANij

COR-SPACE-CUSTOM

882753

20231221 MLR

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KOMPANI

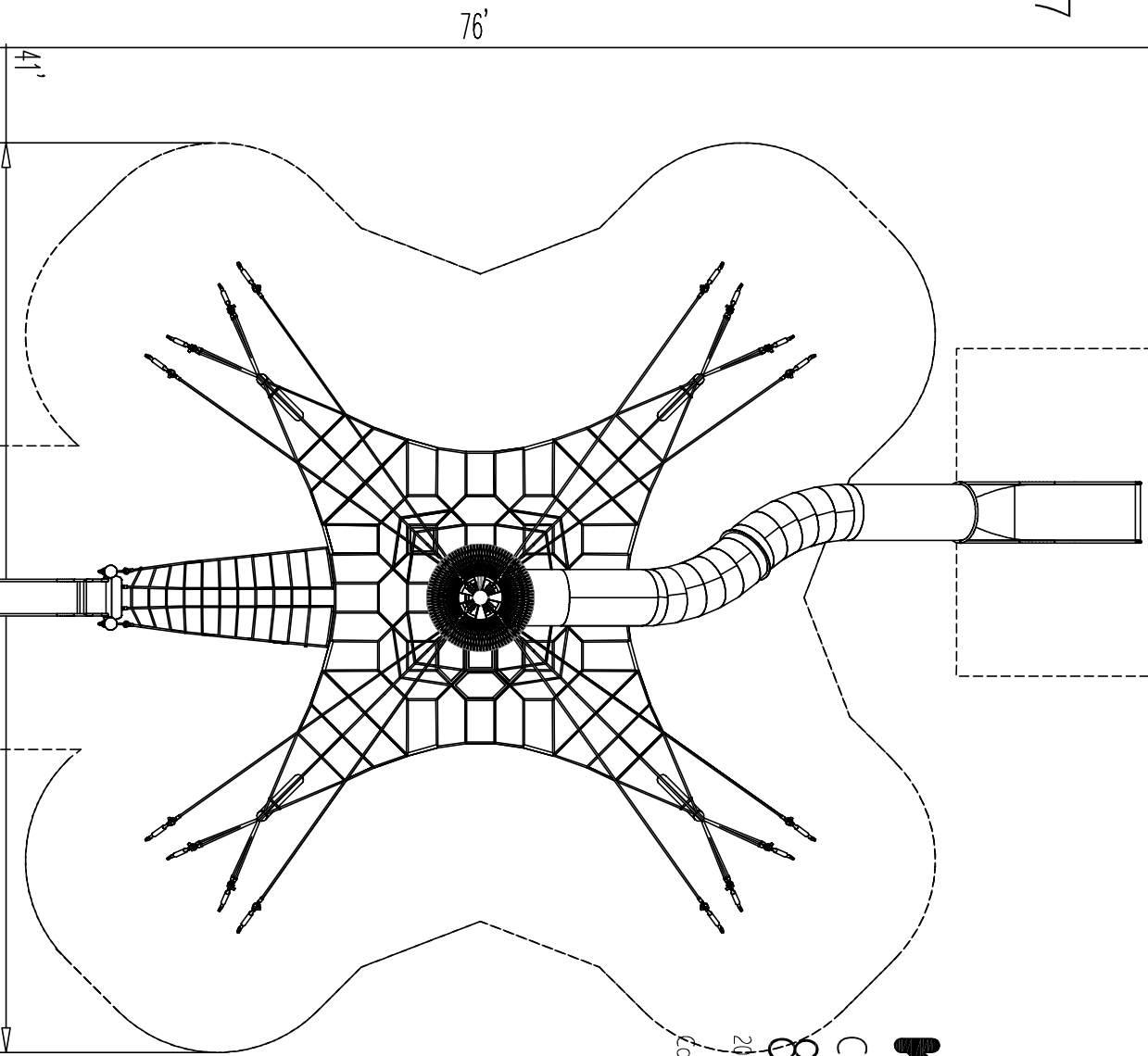
COR-SPACE-CUSTOM

882753

20231221 MLR

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1:1/8"

ASTM F1487



KOMPANij

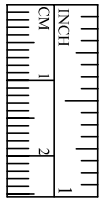
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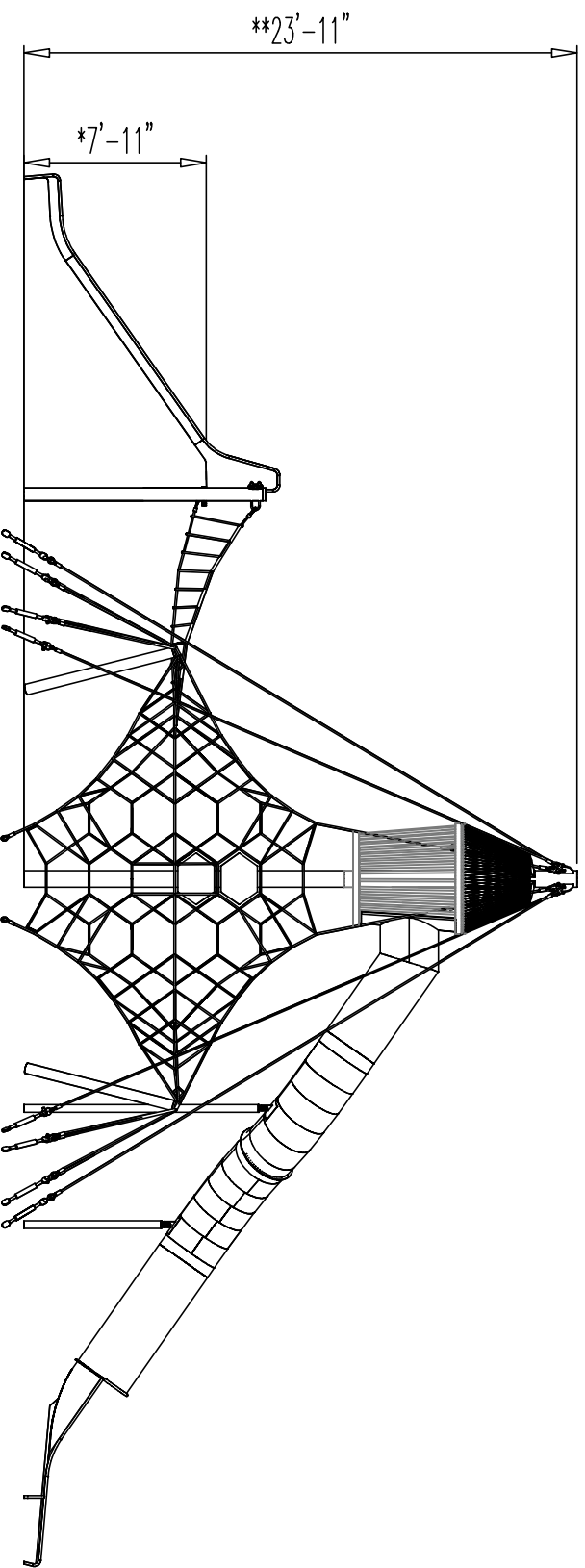
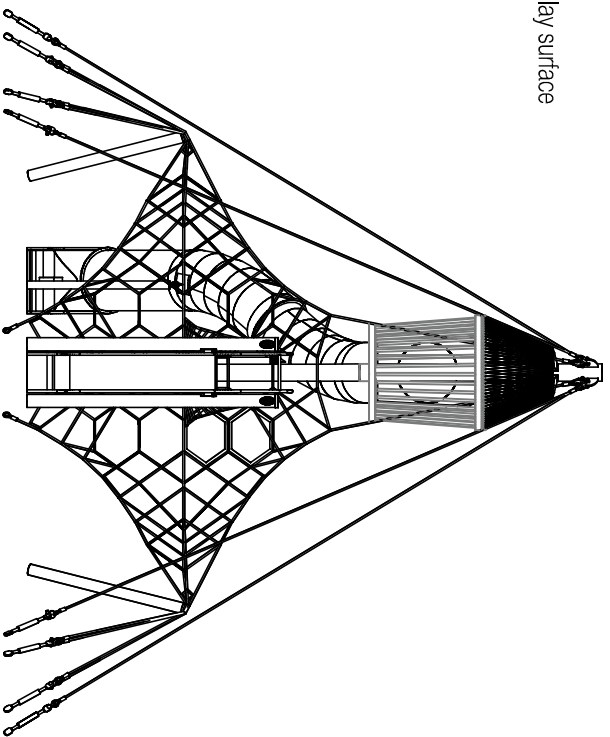
20231221 MLR

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1'-1/8"



Highest designated play surface



KOMPANi

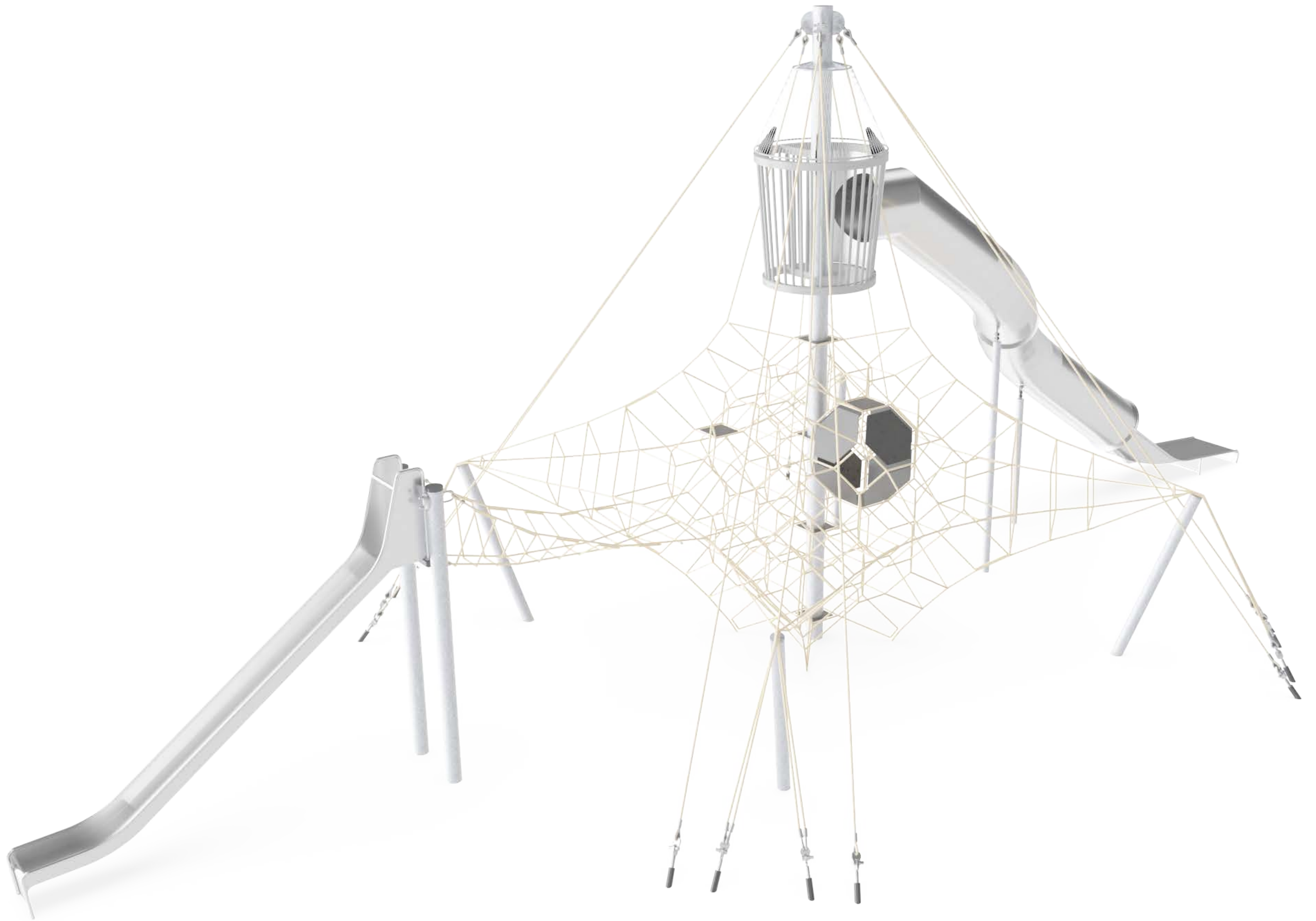
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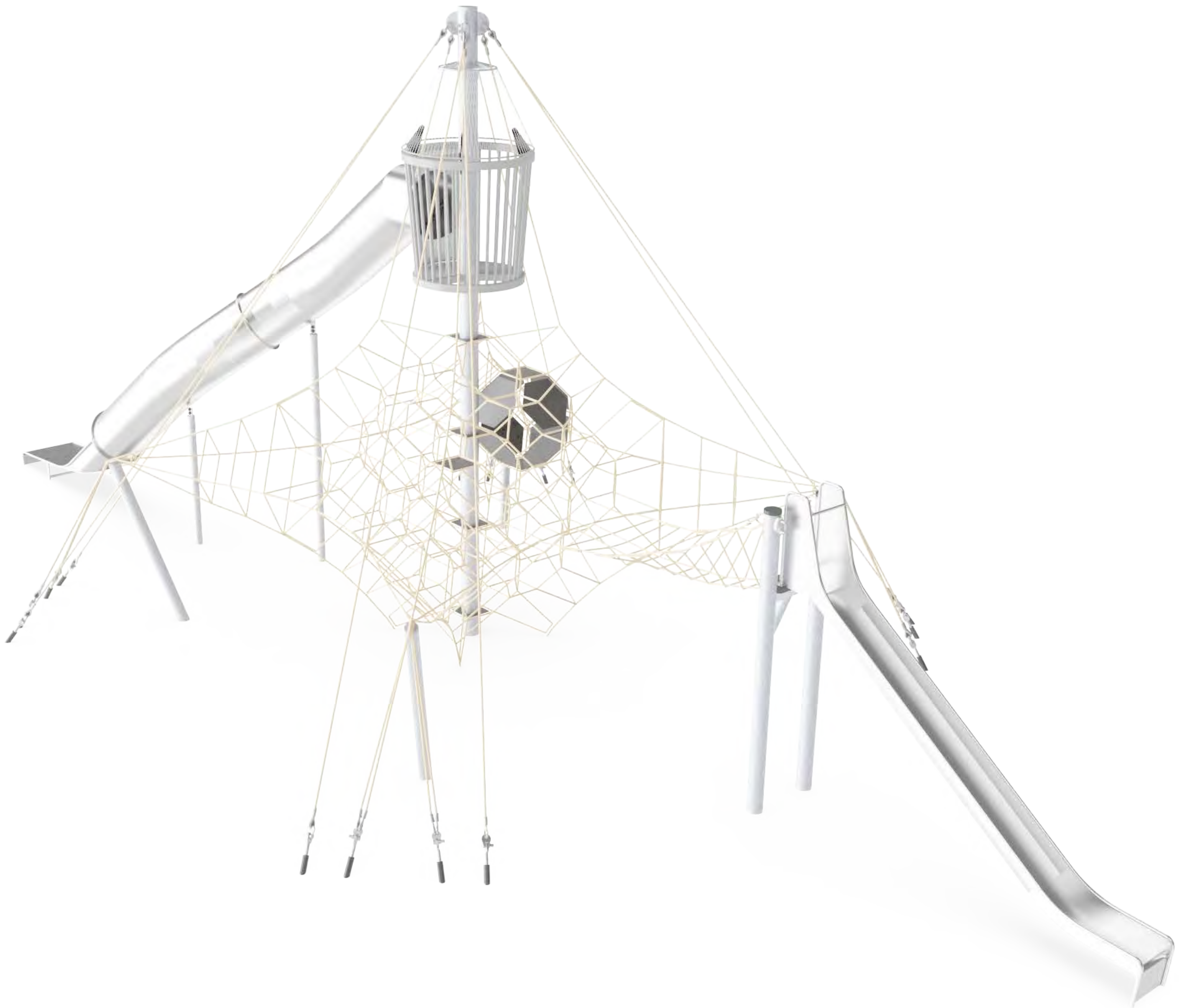
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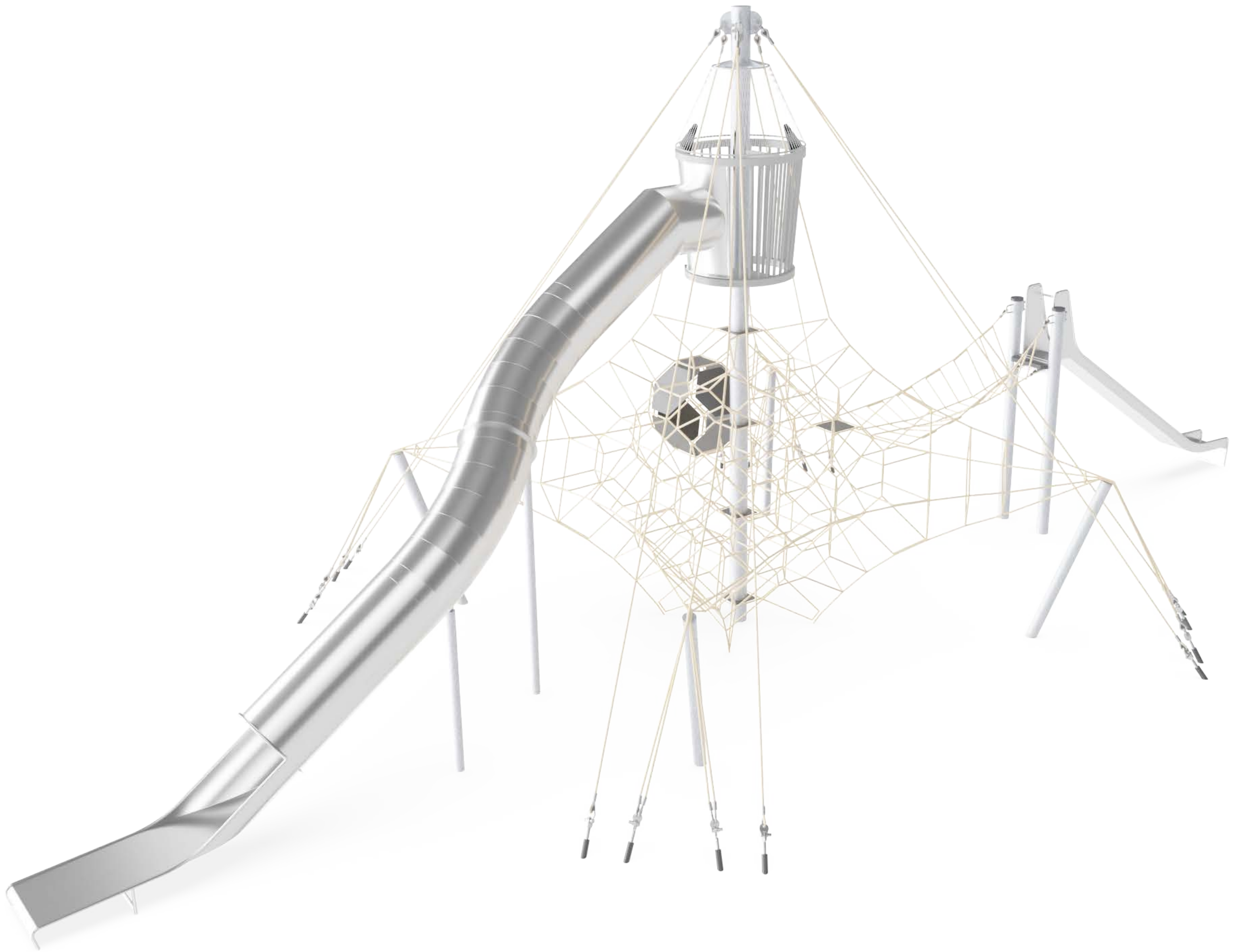
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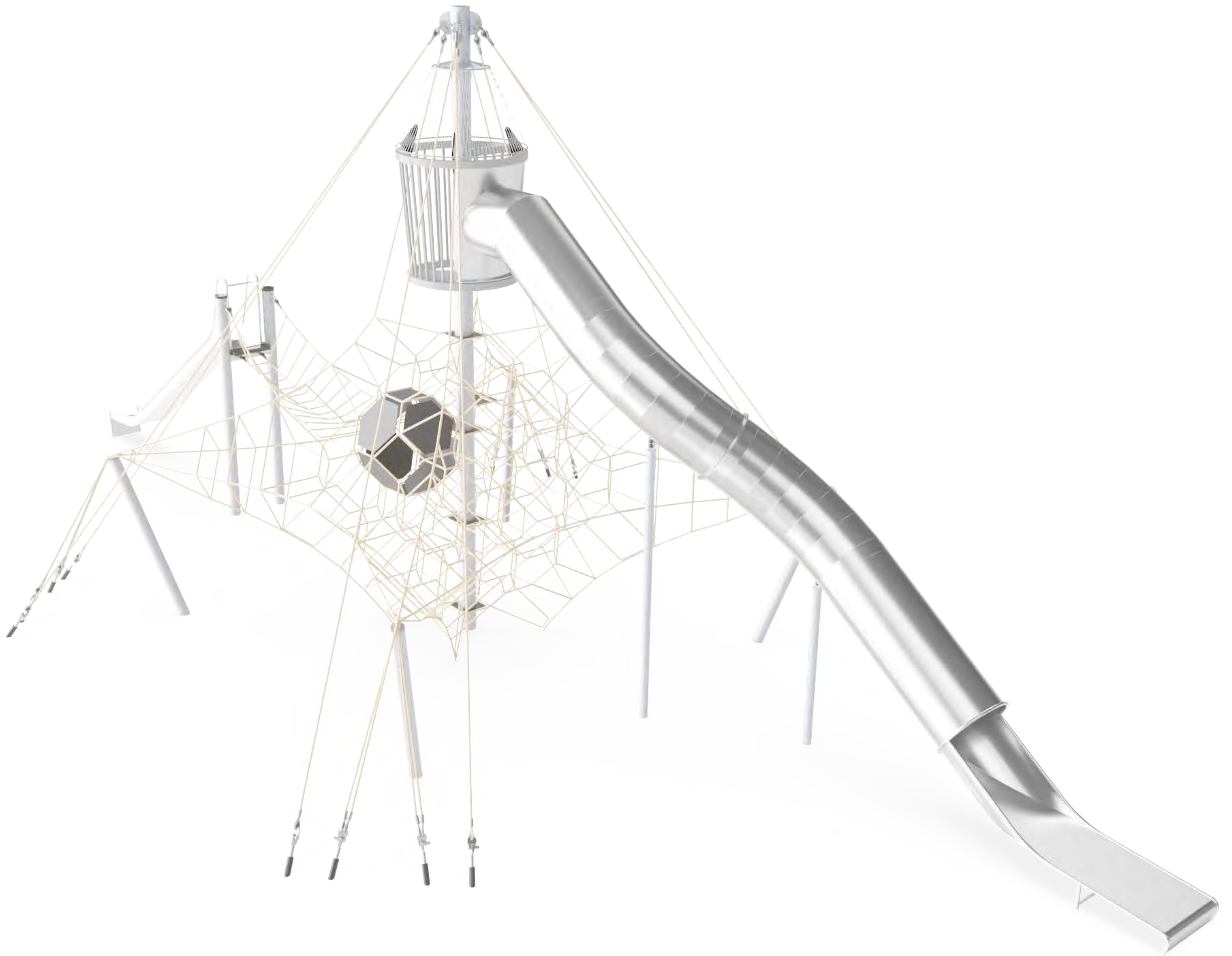
Copyright © KOMPAN A/S 2023

1:1/8"









Cocowave Rope Pendulum Swing

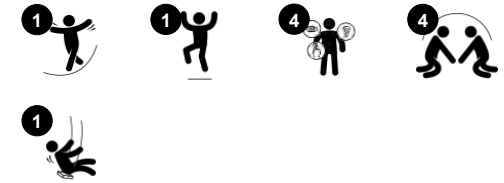
NRO915



Item no. NRO915-1001

General Product Information

Dimensions LxWxH	18'6"x10'9"x12'9"
Age group	5 - 12
Play capacity (users)	8
Color options	



The size and appearance of the Robinia Cocowave Pendulum Swing is an irresistible invitation for all children to play. With its robust, oblong coconut rope, the Robinia Cocowave Pendulum Swing allows for swinging from a seated, lying or standing position. The thrill of swinging – mildly or wildly – is for bigger groups, of different sizes, ages and physical

abilities. It takes teamwork to make the swing move, and this stimulates important social-emotional skills. Apart from being fun, swinging on the Cocowave swing also trains muscles and important motor skills, such as balance, coordination and sense of space. These are important to train vestibular skills that matter profoundly for many real life situations,

including navigating traffic safely. The exciting, challenging feeling of speed and height stimulates children's self-esteem, risk management and other important social-emotional life skills.

Cocowave Rope Pendulum Swing

NRO915



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



The paint used for colored components is water based environmental friendly with excellent UV resistance. The paint is in compliance with EN 71 Part 3.



Unique designed swing hangers of stainless steel with anti-twist function. The hangers are attached to the cross beam by a bolt through connection to ensure high durability.



The rope of the pendulum swing is made of polypropylene (PP) rope in Coconut style with a square shape of 14x14cm. The ends of the Coconut rope are closed by a steel clamps and sealed by a glued-on shrinkable tubing. The last 10cm of the rope ends are cut open to make a tassel with bumper function to fulfill global safety requirements.



The chain/ropes are attached to the Coconut rope by KOMPAN swivel bushings made of stainless steel with bronze bearings. The swivels have an outside cover of black PUR. The usage of side mounted swivels provides frictionless movement, eliminates fingers and feet entrapments and enlarges the standing surface on top of the rope.



The Cocowave pendulum swing is available in multiple options: untreated Robinia wood, brown pigmented or green colored version, rope or stainless steel chain suspensions, wood in-ground or steel footings.

Item no. NRO915-1001	
Installation Information	
Max. fall height	10'10"
Safety surfacing area	732ft ²
Total installation time	14.4
Excavation volume	3.66yd ³
Concrete volume	2.2yd ³
Footing depth (standard)	3'3"
Shipment weight	1592lbs
Anchoring options	In-ground ✓
Warranty Information	
Robinia Wood	10 Years
Chains	10 Years
Ropes & nets	10 Years
Movable parts	2 Years
Spare parts guaranteed	10 Years

Elevated activities 8	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	1	1
Required	0	1	1



Cocowave Rope Pendulum Swing

NRO915



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
NRO915-1001	734.30	1.17	6.50
NRO915-1001	734.30	1.17	6.50

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Validation of CO₂ calculation of:
Nature play



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Nature play" represented by item no.: NRO409-0621. (Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

Validation based on report: Validation of CO₂ calculation of 8 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Bente Hviid and Peter Bendtsen.

Publication date: 15. October 2021

By Bureau Veritas HSE
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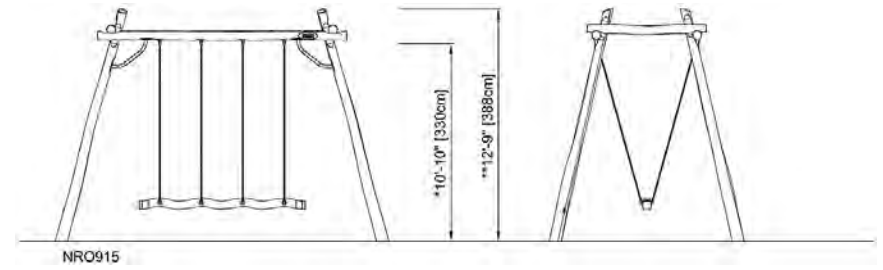
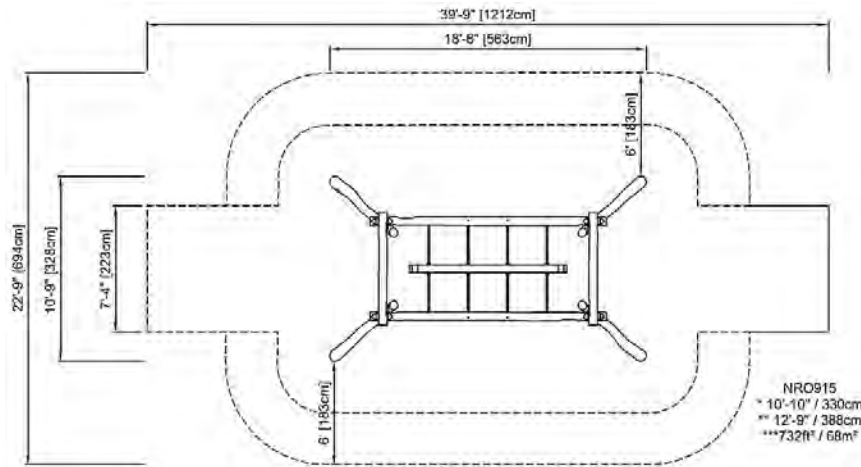


Cocowave Rope Pendulum Swing

NRO915

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height

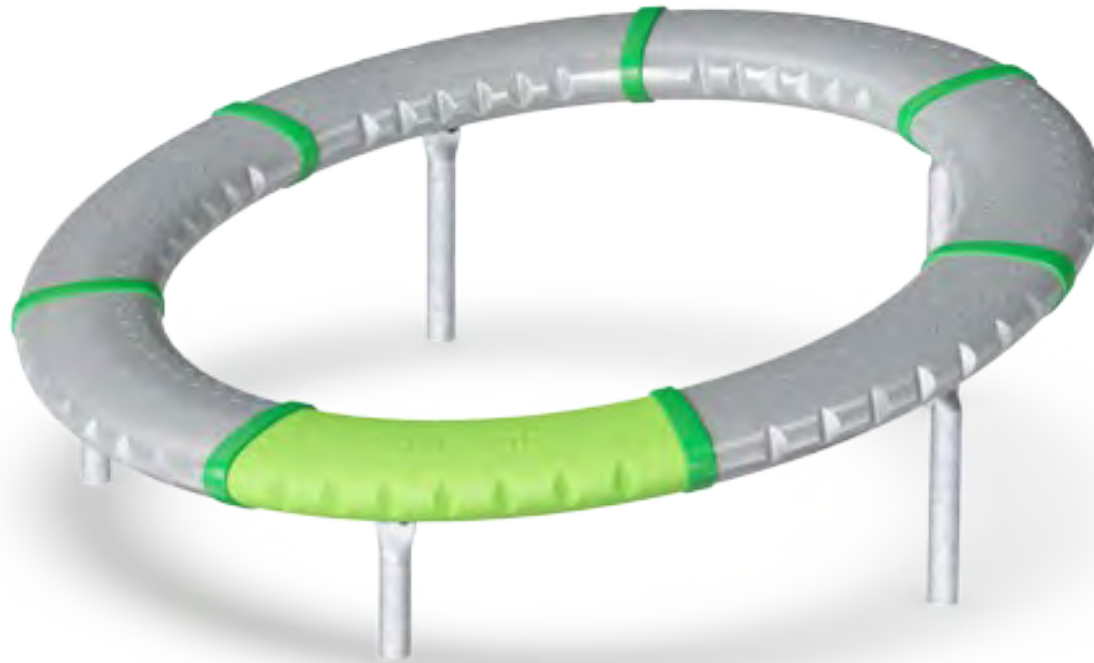


[Click to see TOP VIEW](#)

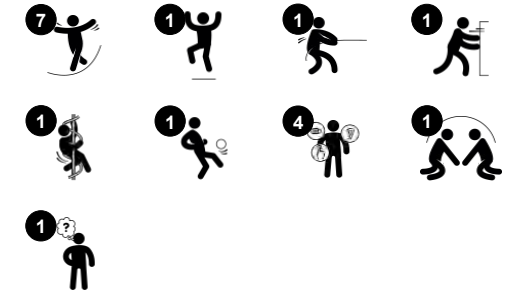
[Click to see SIDE VIEW](#)

Supernova

GXY960



Item no. GXY960012-3417	
General Product Information	
Dimensions LxWxH	6'10"x6'10"x2'4"
Age group	5 - 12
Play capacity (users)	8
Color options	



The large, slanting, rotating ring with 7 divided areas motivates children to explore Supernova's countless play options: turning, spinning, balancing – seated, lying, standing, alone or with friends. The 7 areas of the ring inspire a multitude of different games-with-rules. The many play opportunities and the open ground level design makes it possible for

all abilities to be included in play. Rough-and-tumble play is on, and the pushing of the ring and running train the children's arm and leg muscles and cardio. The jumping on and off of the rotating ring builds bone density. The Supernova trains the sense of balance and space, which is crucial for being able to sit still or navigate traffic safely. Children help one

another and invent games. These stimulate the child's social-emotional skills and cognition, empathy, cooperation skills and logical thinking.

Supernova

GXY960



The Supernova is a unique carousel with no center point placed in an angle of 10° which makes it turn when children walk the ring. The outside ring diameter is 208cm and the upper point is 60cm above ground level.



The 7 ring segments are made of low density PE with excellent impact strength and usable within a large temperature span. Each segment has integrated handholds on both sides and non-skid top surface for safe usage.



The Supernova is designed with a lifetime lubricated maintenance free roller system of vertical and horizontal rollers. The roller system is fully closed and sealed by two rubber lists.

Item no. GXY960012-3417	
Installation Information	
Max. fall height	2'4"
Safety surfacing area	484ft ²
Total installation time	3.0
Excavation volume	0.54yd ³
Concrete volume	0yd ³
Footing depth (standard)	1'12"
Shipment weight	570lbs
Anchoring options	In-ground ✓ Surface ✓
Warranty Information	
Hollow PE Parts	10 Years
Connector brackets	10 Years
Hot dip galvanized steel	Lifetime
Roller system	5 Years
Spare parts guaranteed	10 Years



The Supernova is designed with 5 legs with hot dip galvanized surfacing treatment. The galvanization has excellent corrosion resistance in outside environments and requires low maintenance.



The sand colored variant is made of rotomolded stone mixed PE material with non skid surface texture. Minor differences in the stone mix visuality of the material are to be expected.



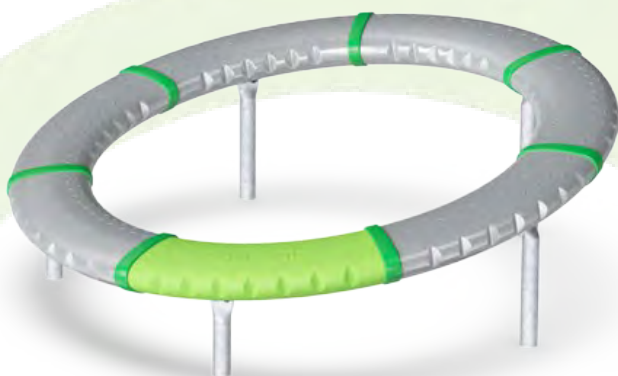
GreenLine versions in a dark teal color are designed with molded PP parts which consist of 25% recycled post-consumer waste and 75% virgin material. GreenLine ensures the lowest possible CO2e emission factor.

Elevated activities	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	1	1
Required	0	1	1



Supernova

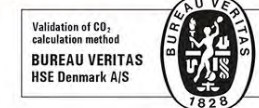
GXY960



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
GXY960012-3417	431.90	2.85	38.50
GXY960021-3417	424.20	2.80	42.50

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Validation of CO₂ calculation of: Freestanding play equipment



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Freestanding play equipment" represented by item no.: GXY916012-3417.

(Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

Validation based on report: Validation of CO₂ calculation of 8 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Bente Hviid and Peter Bendtsen.

Publication date: 15. October 2021

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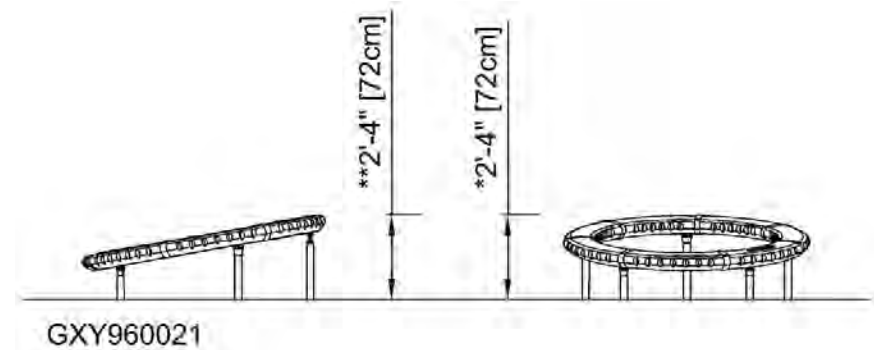
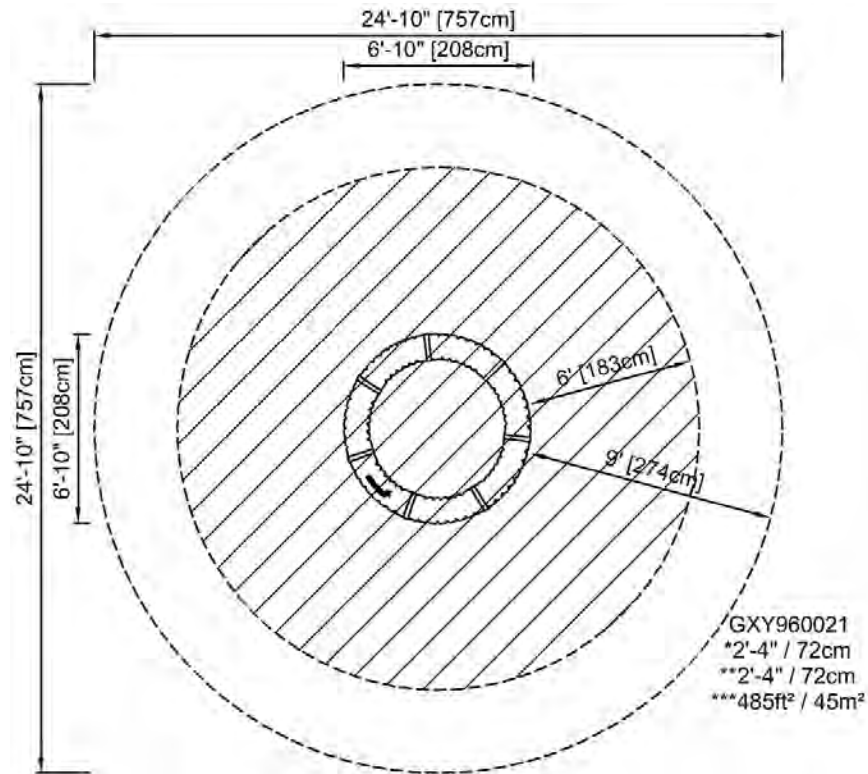


Supernova

GXY960

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

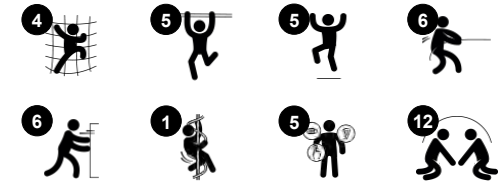
[Click to see SIDE VIEW](#)

Rhombus Twister

COR20340



Item no. COR203401-1108	
General Product Information	
Dimensions LxWxH	5'7"x5'7"x9'6"
Age group	5 - 12
Play capacity (users)	10
Color options	



This Twister's rhombus-shaped rope attracts children to spin, rotate and climb to the top, over and over. It provides play for children of various ages encouraging social play across different age groups. It's a particular favorite of older children who can stand, sit and chat while spinning and seeking out challenging play. The Twister's fixed rings create an opportunity for

more children to rotate the Twister from the outside. The two rings provide good support for sitting, hanging in arms, or standing, for many children, while rotating. This is a great thrill and it develops children's motor skills, muscle strength, and bone density when they climb, jump, push, pull and hang in arms. The negotiation of who does what to turn the

Rhombus Twister net trains social-emotional skills such as turn-taking, tolerance, and empathy. This is a playful way to make friends.



Rhombus Twister

COR20340



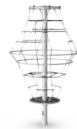
Climbing net

Physical: the net allow for climbing and crawling, supporting proprioception, cross-coordination and spatial awareness. Climbing here takes muscle strength, pushing and pulling arms to get upwards. **Social-Emotional:** the net allows more children to sit together, sharing.



Rotation

Physical: pushing or pulling into motion, children use their muscle strength and their cardio. The rotation develops the sense of balance and space when enjoying the ride. **Social-Emotional:** listening and negotiating how slow or fast to go, children develop empathy and cooperation skills.



Big meshes

Physical: the big meshes allow for climbing and crawling, supporting proprioception, cross coordination and spatial awareness. Climbing here takes muscle strength, pushing and pulling arms to get upwards. **Social-Emotional:** allow more children being seated together, sharing.

Rhombus Twister

COR20340



Corocord ropes with 19mm diameter or more are special 'Hercules' - type with galvanized six-stranded steel wires. Each strand is tightly wrapped with PES yarn, which is melted onto each individual strand. The ropes are highly wear-and vandalism-resistant and can be replaced at site if needed.



Corocord 'S' clamps are used as universal connections in Corocord products. 8mm stainless steel rods with rounded edges are pressed around the ropes with a special hydraulic press, making them the ideal connector: safe, durable and vandalism-proof, all while allowing the typical movement of rope play structures.



Heavy duty engineered bearing system with single row deep groove ball bearings with rubber seals. The fully closed bearing construction is lifetime lubricated and maintenance free. The bearing system has an integrated drag brake according to global safety standards.



All decks are supported by a unique steel construction with multiple deck supports and fixations. The HPL decks with a thickness of 17.8mm have a very high wearing strength and feature a unique KOMPAN non skid surface texture.



The steel posts are hot dip galvanized inside and outside with lead free zinc. The galvanization has excellent corrosion resistance in outside environments and requires low maintenance.

Item no. COR203401-1108	
Installation Information	
Max. fall height	8'0"
Safety surfacing area	437ft ²
Total installation time	5.6
Excavation volume	1.44yd ³
Concrete volume	0.92yd ³
Footing depth (standard)	3'7"
Shipment weight	1094lbs
Anchoring options	
Warranty Information	
Hot dip galvanized steel	Lifetime
HPL decks	15 Years
Corocord Rope	10 Years
Movable parts	2 Years
Spare Parts Availability	10 Years

Elevated activities 0	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	1	1
Required	0	1	1

**ASTM
F1487**
compliant

Rhombus Twister

COR20340



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
COR203401-1108	718.40	2.89	45.90

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Verification of CO₂ calculation of: Corocord



Data version no. 2023-10-05

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Corocord" represented by item no.: COR314011-1101.

(Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 30. October 2023 | Valid until: 30. October 2025

Verified by:

Julie Marie Vejsgaard Larsen, LCA & EPD Consultant

Verification based on report: Validation of CO₂ calculation of 9 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Julie M. V. Larsen.

Publication date: 30. October 2023

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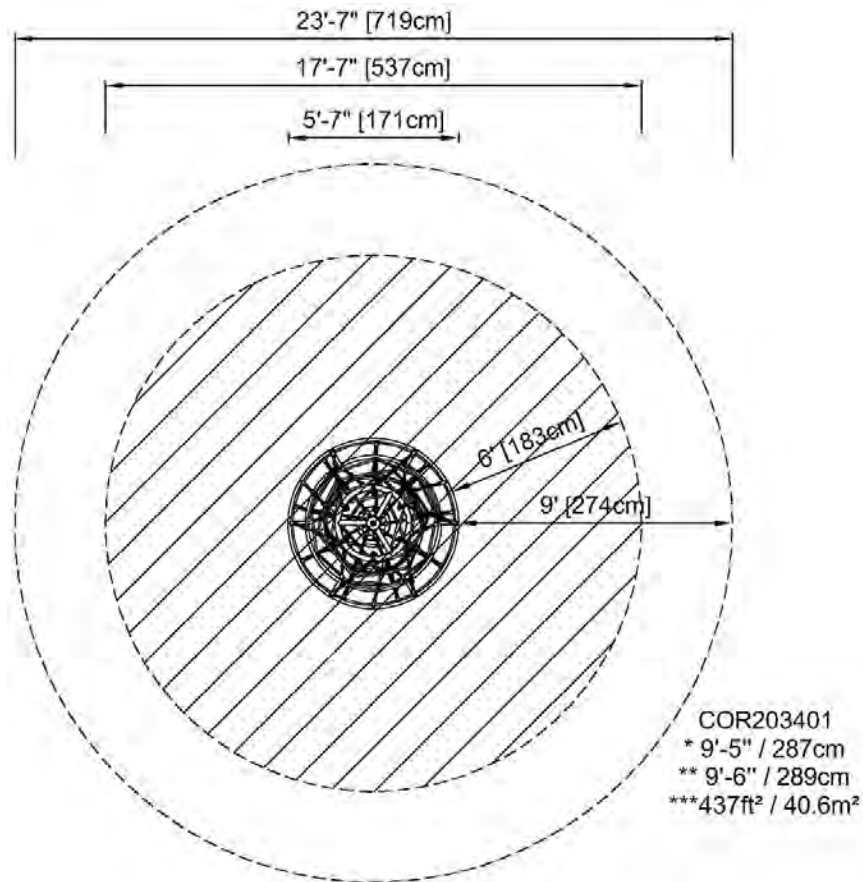


Rhombus Twister

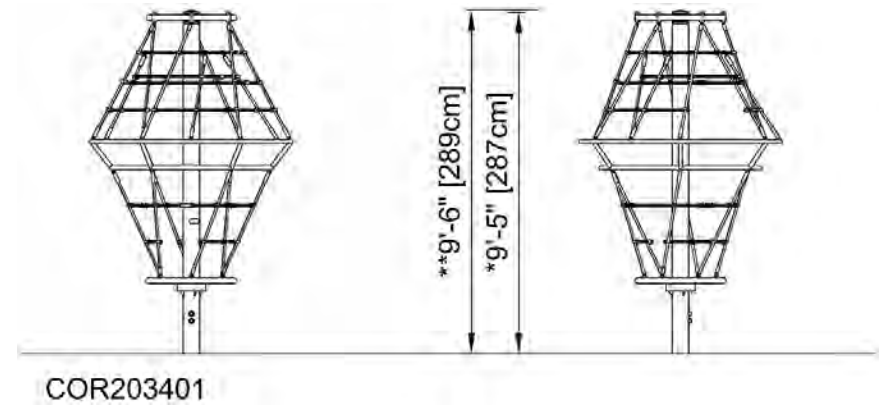
COR20340

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)



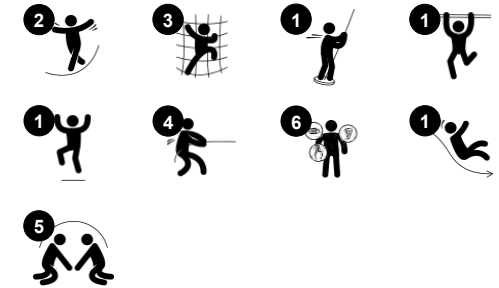
[Click to see SIDE VIEW](#)

Double Tower with Spider Net

NRO2009



Item no. NRO2009-1021	
General Product Information	
Dimensions LxWxH	26'12"x22'3"x13'8"
Age group	5 - 12
Play capacity (users)	27
Color options	



The voluminous Double Tower with Spider Net is an irresistible play attraction for children. Its varied play corners and diverse physical play activities attracts children again and again, for a long time. The Spider Web Net trains the children's cross-coordination, balance and spatial awareness with its inclined net rungs. All of these motor skills are crucial when

managing obstacles and traffic safely. The balance beam and fireman's pole both appeal to dare-devils with their stomach-tickling height and speed. These play events train the balance and sense of space. Furthermore, jumping down from the fireman's pole helps to build children's bone density. This is particularly important as children build bone for life

primarily in the early years. The accessible stairway leads children with a range of abilities up to the slide. Going down, children are looped back to the stair entrance, which is also a meeting place.

Double Tower with Spider Net

NRO2009



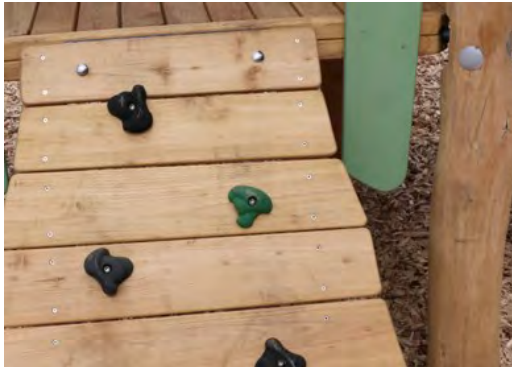
All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



The paint used for colored components is water based environmental friendly with excellent UV resistance. The paint is in compliance with EN 71 Part 3.



The Robinia products are designed with a KOMPAN color concept with a number of different standard colors. The wood can also be supplied as untreated or with brown painted with a pigment that maintains the wood color.



The product/activities are preassembled from the factory to ensure all safety requirements are considered.



The hardware is made of stainless steel or galvanized steel to ensure durable connections with a high corrosion resistance.

Item no. NRO2009-1021

Installation Information

Max. fall height	6'10"
Safety surfacing area	811ft ²
Total installation time	36.4
Excavation volume	3yd ³
Concrete volume	0.42yd ³
Footing depth (standard)	3'3"
Shipment weight	3768lbs
Anchoring options	In-ground ✓

Warranty Information

Robinia Wood	10 Years
Stainless steel components	Lifetime
Ropes & nets	10 Years
Spare parts guaranteed	10 Years

Elevated activities 5	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	3	1	1
Required	3	2	2

**ASTM
F1487**
compliant



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
NRO2009-1021	1,449.70	1.01	5.60
NRO2009-1001	1,444.30	1.01	5.40

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
 C.F. Tietgens Boulevard 32C
 DK-5220 Odense SØ
 Denmark



Validation of CO₂ calculation of: Nature play



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Nature play" represented by item no.: NRO409-0621. (Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

Validation based on report: Validation of CO₂ calculation of 8 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Bente Hviid and Peter Bendtsen.

Publication date: 15. October 2021

By Bureau Veritas HSE
 www.bureauveritas.dk
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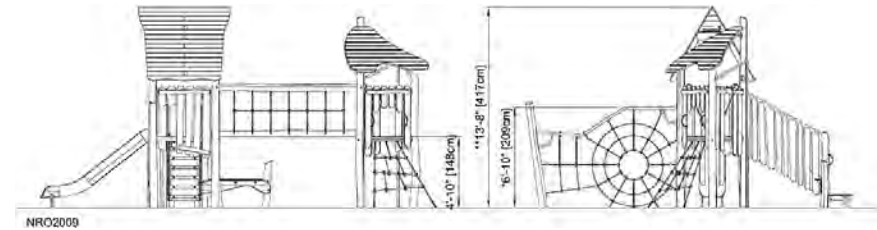
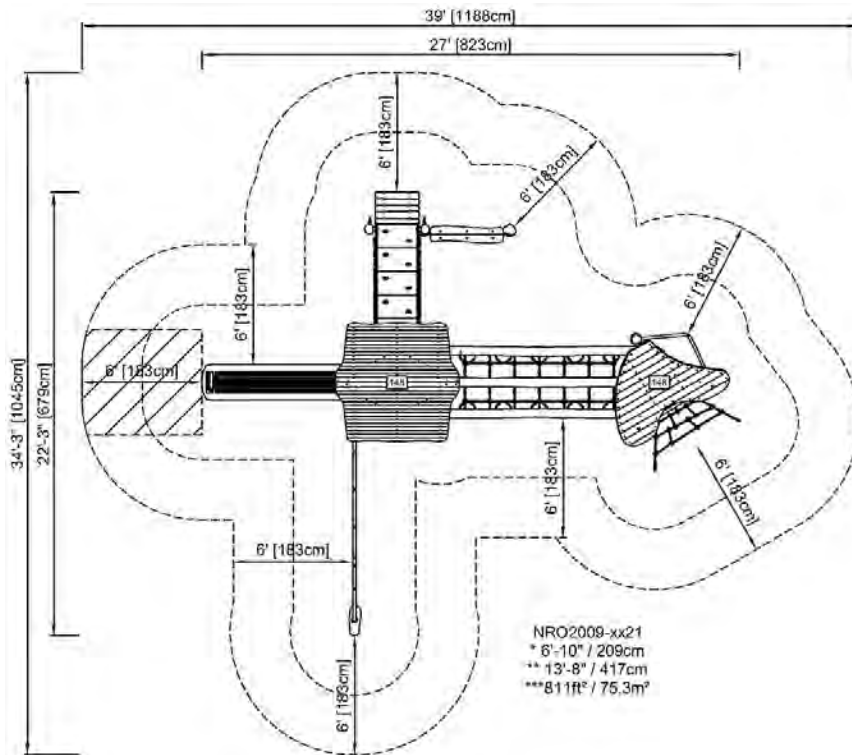
Double Tower with Spider Net



NRO2009

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Swing Frame, 4 seats

NRO924

KOMPAN
Let's play



Item no. NRO924-0901	
General Product Information	
Dimensions LxWxH	27'1"x7'2"x9'6"
Age group	2 - 12
Play capacity (users)	-
Color options	



A harmonic design of play frames attracts attention. Swinging in the stable, solid framework of the Kompan Swing Frame increases the feeling of security and thus increases the force, concentration and energy that the child dare put into swinging. The more stable, the more play intensity. So children will come back to enjoy the timeless experience of

swinging, again and again, benefiting the development of balance and coordination. Adding more seats in a swing frame motivates and enhances social play and cooperation.

Swing Frame, 4 seats

NRO924



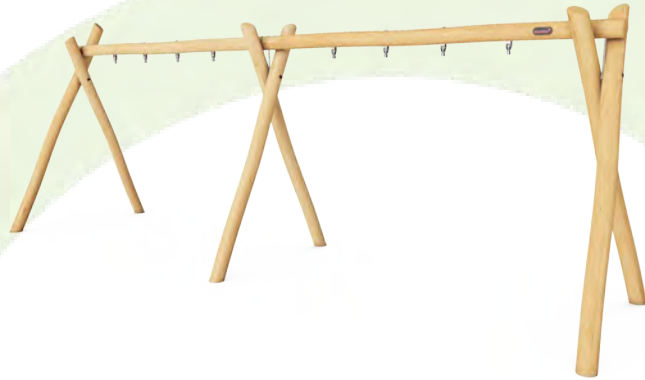
Item no. NRO924-0901	
Installation Information	
Max. fall height	0'0"
Safety surfacing area	715ft ²
Total installation time	9.2
Excavation volume	2.33yd ³
Concrete volume	0.71yd ³
Footing depth (standard)	2'11"
Shipment weight	1370lbs
Anchoring options	In-ground ✓
Warranty Information	

Elevated activities 0	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	0	0
Required	0	0	0

**ASTM
F1487**
compliant

Swing Frame, 4 seats

NRO924



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
NRO924-0901	282.20	0.58	1.20
NRO924-0901	282.20	0.58	1.20

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

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Validation of CO₂ calculation of: Nature play



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Nature play" represented by item no.: NRO409-0621. (Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid

Bente Hviid, Senior Consultant

Peter Bendtsen

Peter Bendtsen, Senior Consultant

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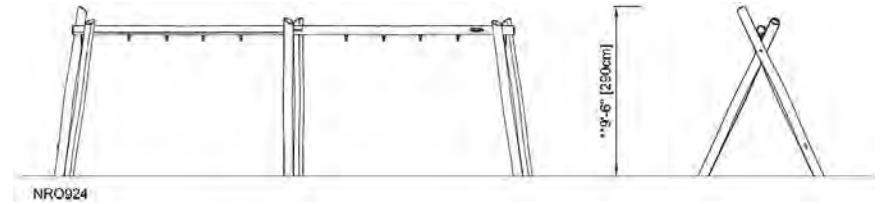
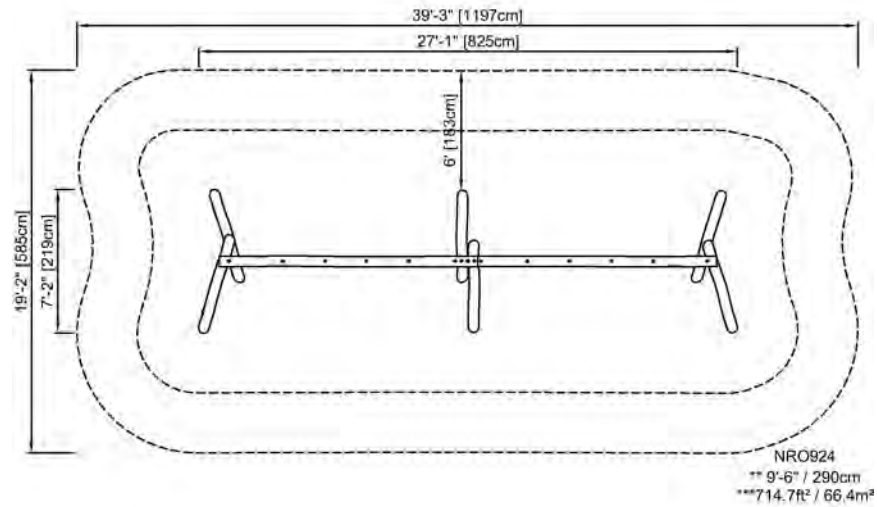


Swing Frame, 4 seats

NRO924

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Rope Nest, 47in wide, 8 ft

SW990111




Wow! The shallow, smooth Rope Nest swing is a hugely inviting play activity. The soft bumpers makes this a very comfortable swing seat, which is easy and pleasant to push and use. The light weight seat welcomes users of all ages, and abilities, and lots of them! They can swing lying, standing or seated, making children return for more play again and again.

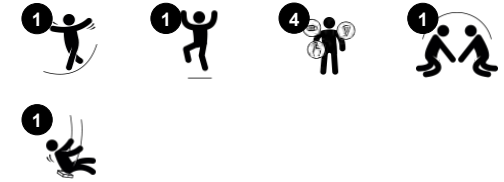
The holes in the surface provides an extra support for holding tight. Swinging in Rope Nest stimulates children's motor skills, such as balance and coordination. They train core muscles as well as leg and arm muscles when pulling and pushing the swing into motion. The basket invites rough-and-tumble play and stimulates important social-emotional skills:

taking turns and cooperation. These are crucial life skills and fun to learn in play.

Item no. SW990111-03

General Product Information

Dimensions LxWxH	6'4"x4'1"x0'0"
Age group	2+
Play capacity (users)	7
Color options	  

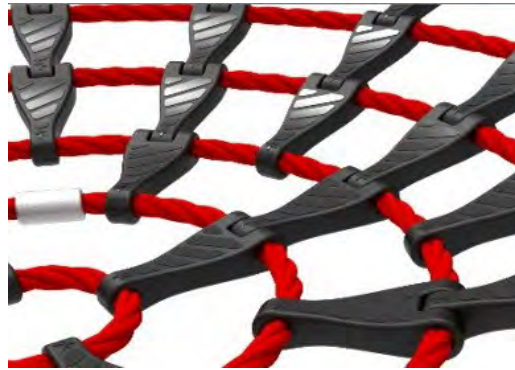


Rope Nest, 47in wide, 8 ft

SW990111



KOMPAN designed the bird's nest seats to be light in weight and in compliance with global safety standards. The soft, shock absorbent bumpers with non-slip surface makes the swing seat extremely user friendly. Choose between a rope version with reinforced PA rope or a molded PE version. Both equipped with soft rubber bumpers.



Rope loops of the seat are made of single braided 16 mm PES ropes. PES has high strength with excellent resistance to abrasion and UV radiation. The rope loops are connected by nylon (PA6) connectors.



The bumpers are made with a core of strong polypropylene (PP) with a softer outer layer of thermoplastic rubber (TPE). The soft, shock absorbent bumpers with non slip surface makes the swing seat extremely user friendly.

Item no. SW990111-03	
Installation Information	
Max. fall height	7'9"
Safety surfacing area	299ft ²
Total installation time	0.5
Excavation volume	0yd ³
Concrete volume	0yd ³
Footing depth (standard)	0'0"
Shipment weight	81lbs
Anchoring options	
Warranty Information	
Ropes & nets	10 Years
PE/PP Components	5 Years
Chains	10 Years
Spare parts guaranteed	10 Years



KOMPAN heavy duty designed swing hangers of stainless steel with anti-twist function. The hangers are attached to the cross beam on a welded bracket with two bolts, The bearings are embedded with silicone lubricant and needs no further lubrication.



Upper chain and safety chain are made of high quality stainless steel to ensure durability of the product.



Ropes are made of UV-stabilized PA with inner steel cable reinforcement. The rope is induction treated in order to create a strong connection between steel and rope which leads to good wear resistance.

Elevated activities 0	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	0	0
Required	0	0	0

ASTM F1487
compliant

Rope Nest, 47in wide, 8 ft

SW990111



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
SW990111-03	196.10	5.44	19.50

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

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Denmark



Validation of CO₂ calculation of: Freestanding play equipment



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Freestanding play equipment" represented by item no.: KSW92011-0910.

(Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

Validation based on report: Validation of CO₂ calculation of 8 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Bente Hviid and Peter Bendtsen.

Publication date: 15. October 2021

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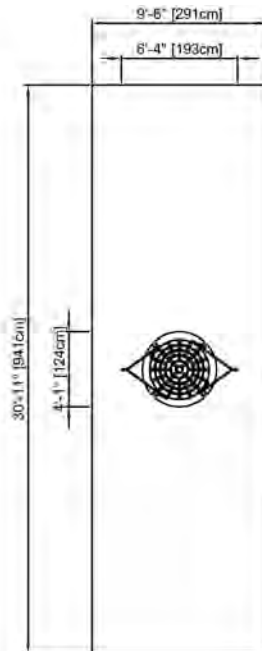


Rope Nest, 47in wide, 8 ft

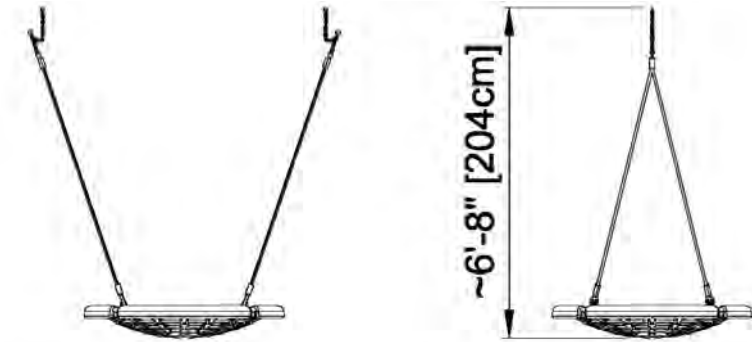
SW990111

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



SW990111
***298ft² / 27.8m²



SW990111
1:100


[Click to see TOP VIEW](#)

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Snail Springer

NRO115



Item no. NRO115-0401	
General Product Information	
Dimensions LxWxH	2'5"x1'7"x2'3"
Age group	2 - 12
Play capacity (users)	1
Color options	



The Snail with its colorful shell and friendly face invites toddlers for shorter or longer rides, over and over again. Apart from its appealing shape, the Snail offers tactile variation with its steel hand hold, rubber foot support and smooth, wooden body. Tactile richness is a main motivator, especially in younger children. It supports their understanding of material

characteristics such as weight, smoothness, temperature and flexibility, an important skill for risk management. The spring ensures hours, years and decades of fun. The soothing, rocking movement of the Snail trains the sense of balance and the spatial awareness, crucial for body confidence and avoiding falling. A good sense of balance is essential for the

ability to sit still and concentrate.

Snail Springer

NRO115



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



The paint used for coloured components is water based environmentally friendly with excellent UV resistance. The paint is in compliance with EN 71 Part 3.



Handles and footrests are made of high-quality stainless steel and equipped with molded on PUR handholds and footsteps. The PUR footrests are designed with grooves to make the surface slip resistant.



KOMPAN Springs are made of high quality spring steel according to EN10270. The springs are cleaned by phosphating before they are painted with an epoxy primer and a polyester powder coating as top finish. The springs are fixed by unique anti pinch fittings for maximum safety and long lifetime.



The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.

Item no. NRO115-0401	
Installation Information	
Max. fall height	1'8"
Safety surfacing area	167ft ²
Total installation time	2.2
Excavation volume	0.22yd ³
Concrete volume	0yd ³
Footing depth (standard)	1'5"
Shipment weight	122lbs
Anchoring options	In-ground ✓ Surface ✓
Warranty Information	
Robinia Wood	10 Years
Stainless steel components	Lifetime
Springs	5 Years
PUR components	10 Years
Spare parts guaranteed	10 Years

Elevated activities 0	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	1	1
Required	0	1	1





Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
NRO115-0401	90.90	1.66	32.40
NRO115-0401	90.90	1.66	32.40

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

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Validation of CO₂ calculation of: Nature play



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Nature play" represented by item no.: NRO409-0621. (Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

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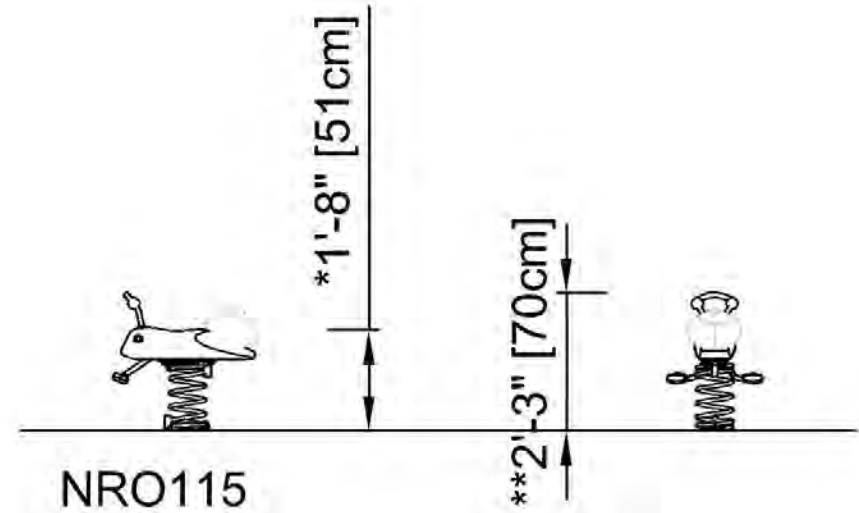
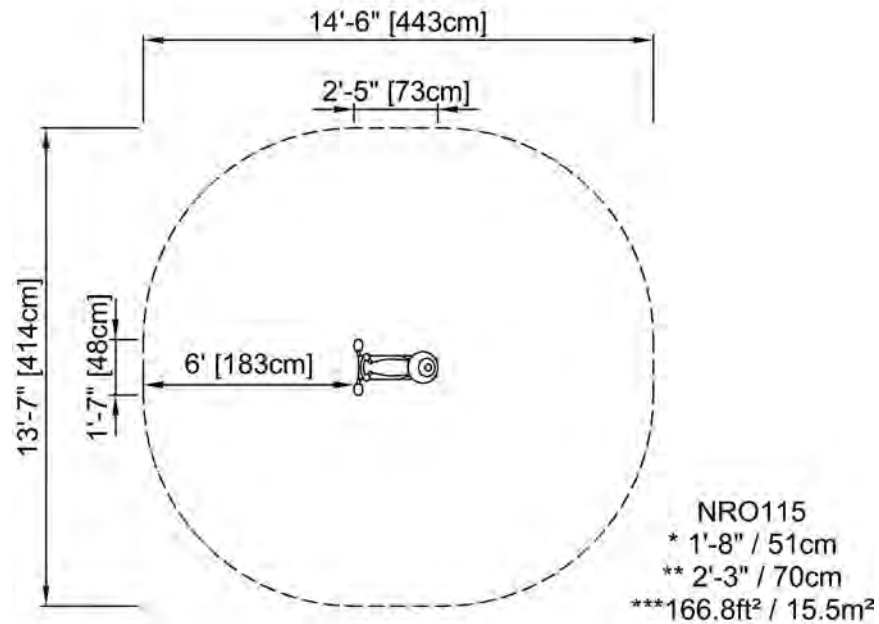


Snail Springer

NRO115

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Bee Springer

NRO118



The Bee Springer with its rich tactile elements and appealing shape motivates children to rock, alone or two together. The rocking movement attracts children again and again, for shorter or longer rides. Apart from its charming appearance, the Bee Springer has a rich tactile variation with its rubber wings, wooden body and stainless steel hand and

footholds. Tactile richness is a main motivator, especially for younger children. It supports their understanding of material characteristics such as weight, smoothness, temperature and flexibility. This is important in for children's ability to assess differences and make decisions. The soothing, rocking movements of the bee trains spatial awareness and sense of

balance, which are both crucial for body confidence, which is important for children to avoid falls. A good sense of balance also improves the ability to sit still and concentrate.



Item no. NRO118-0421

General Product Information

Dimensions LxWxH	2'6"x2'3"x2'5"
Age group	2 - 12
Play capacity (users)	1
Color options	



Bee Springer

NRO118



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



The paint used for colored components is water based environmental friendly with excellent UV resistance. The paint is in compliance with EN 71 Part 3.



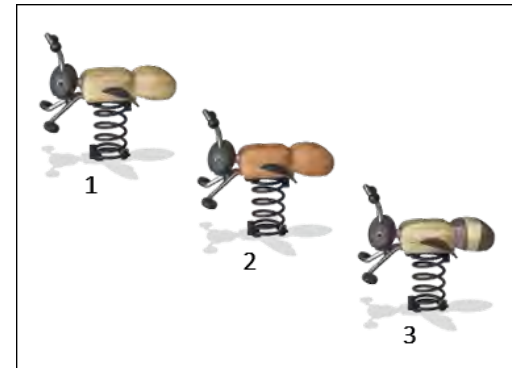
Handles and footrests are made of high quality stainless steel and equipped with molded on PUR handholds and footsteps. The PUR footrests are designed with groves to make the surface slip resistant.



KOMPAN Springs are made of high quality spring steel according to EN10270. The springs are cleaned by phosphating before they are painted with an epoxy primer and a polyester powder coating as top finish. The springs are fixed by unique anti pinch fittings for maximum safety and long lifetime.



Membranes consist of friction-proof rubberized material of conveyor belt quality with excellent UV resistance. Tested and comply with strict PAH requirements. Embedded is a four-layered armoring made of woven polyester to ensure high vandalism resistance.



Robinia products are available in three different wood treatment options: Untreated Robinia wood or brown painted with a pigment that maintains the wood color and colored version with paint of selected components.

Item no. NRO118-0421	
Installation Information	
Max. fall height	1'10"
Safety surfacing area	165ft ²
Total installation time	1.9
Excavation volume	0.22yd ³
Concrete volume	0yd ³
Footing depth (standard)	1'5"
Shipment weight	88lbs
Anchoring options	In-ground ✓ Surface ✓
Warranty Information	
Robinia Wood	10 Years
Stainless steel components	Lifetime
Springs	5 Years
Membrane	2 Years
Spare parts guaranteed	10 Years

Elevated activities	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	1	1
Required	0	1	1



Bee Springer

NRO118



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
NRO118-0421	87.70	2.32	30.00
NRO118-0401	87.20	2.31	29.90

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
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 Denmark



Validation of CO₂ calculation of: Nature play



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Nature play" represented by item no.: NRO409-0621. (Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

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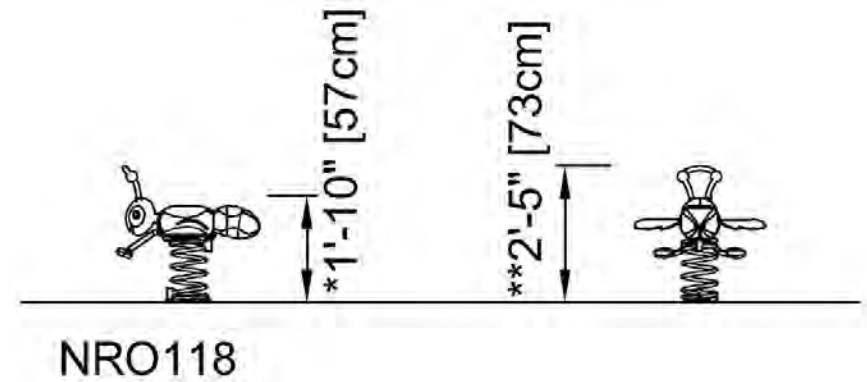
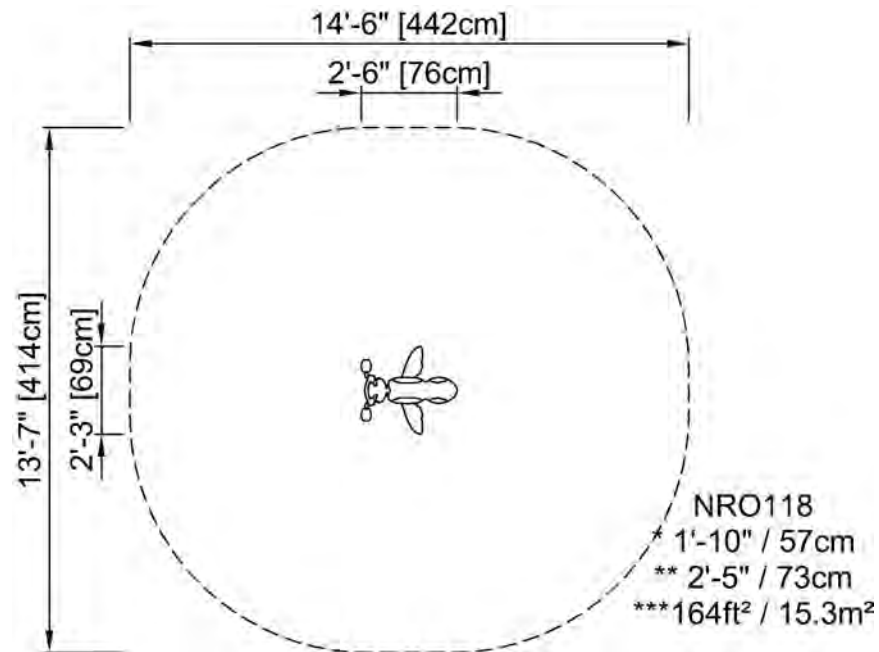


Bee Springer

NRO118

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Spinner Bowl

ELE400024



Item no. ELE400024-3717LG	
General Product Information	
Dimensions LxWxH	1'8"x1'10"x1'12"
Age group	5 - 12
Play capacity (users)	1
Color options	



This wildly or mildly spinning piece with its cute rounded design evokes squeals of joy when children rotate again and again. With its easily accessible, tilted spinning bowl it invites children of all abilities and a wide age span to play. The small footprint allows for placing 2-3 Spinner Bowls together, encouraging social play. The variety of play opportunities include

sitting in, on edge of, pushing, pulling or even standing in the spinner bowl. these make the Spinner Bowl a long-time attraction. The tilted bowl allows the child to adjust the spinning speed with their body movements. This trains the logical thinking to speed up by scooping up or slow down by spreading arms and legs out. Spinner Bowls train the sense of balance,

which is mandatory for concentration skills and the ability to sit still. Pushing or being pushed by others trains social-emotional skills such as turn-taking.



Spinner Bowl

ELE400024



The Spinner Bowl is made of recyclable PE. The bowl is moulded in one piece with integrated metal thread bushings and a water drain hole to ensure high durability in all climates around the world.



Heavy duty engineered bearing system with single row deep groove ball bearings with rubber seals. The fully closed bearing construction is lifetime lubricated and maintenance free.



The steel surfaces are hot-dip galvanized inside and outside with lead-free zinc. The galvanization has excellent corrosion resistance in outside environments and requires minimal maintenance.

Item no. ELE400024-3717LG	
Installation Information	
Max. fall height	1'12"
Safety surfacing area	149ft ²
Total installation time	1.2
Excavation volume	0.14yd ³
Concrete volume	0.08yd ³
Footing depth (standard)	2'11"
Shipment weight	44lbs
Anchoring options	In-ground ✓ Surface ✓
Warranty Information	
Hollow PE Parts	10 Years
Bearing construction	5 Years
Hot dip galvanized steel	Lifetime
Hardware	10 Years
Spare parts guaranteed	10 Years



The Spinner Bowl is available in five different color options.



The sand colored variant is made of rotomolded stone mixed PE material with non skid surface texture. Minor differences in the stone mix visuality of the material are to be expected.



GreenLine versions in a dark teal color are designed with molded PP parts which consist of 25% recycled post-consumer waste and 75% virgin material. GreenLine ensures the lowest possible CO2e emission factor.

Elevated activities 0	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	1	1
Required	0	1	1





Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
ELE400024-3717LG	56.10	3.04	29.70
ELE400024-3717DT	54.30	2.94	37.60

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
 C.F. Tietgens Boulevard 32C
 DK-5220 Odense SØ
 Denmark



Validation of CO₂ calculation of: Freestanding play equipment



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Freestanding play equipment" represented by item no.: GXY916012-3417.

(Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

Validation based on report: Validation of CO₂ calculation of 8 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Bente Hviid and Peter Bendtsen.

Publication date: 15. October 2021

By Bureau Veritas HSE
 www.bureauveritas.dk
 +45 7731 1000

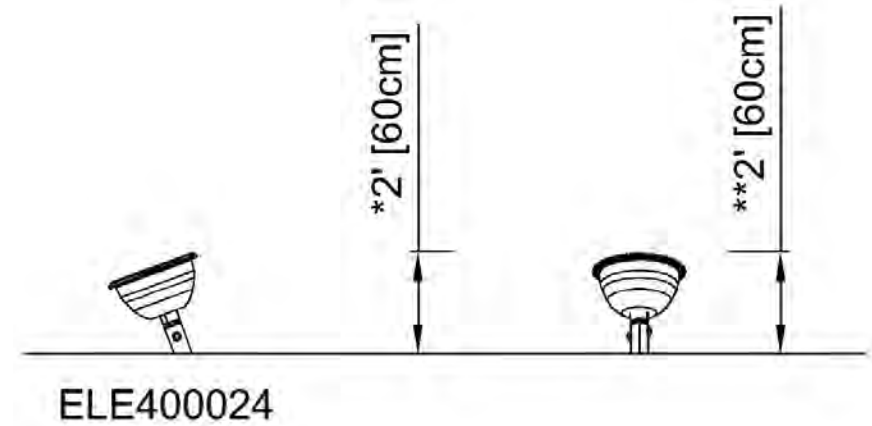
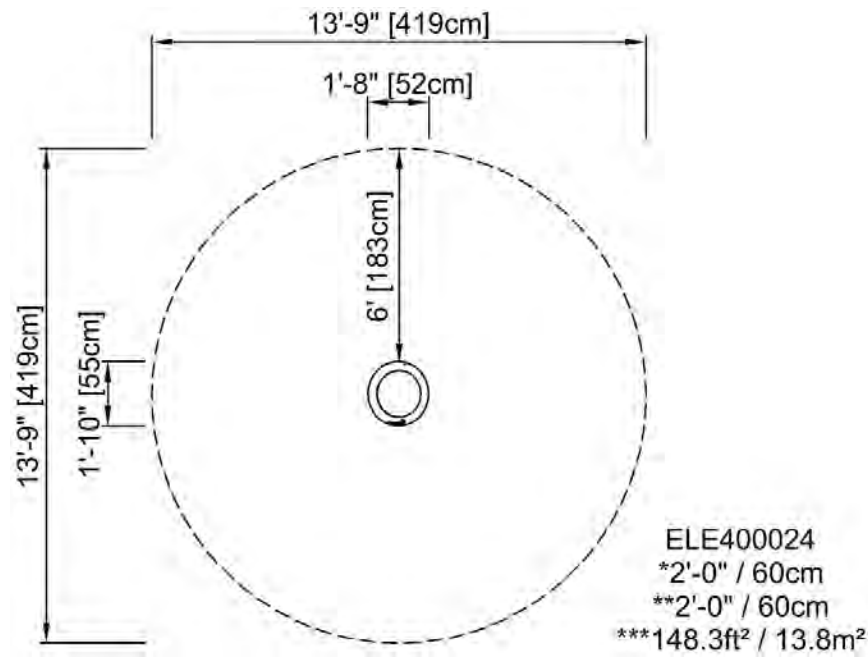


Spinner Bowl

ELE400024

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

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Combi 2 Robinia

FRO102



Item no. FRO10200-1001	
General Product Information	
Dimensions LxWxH	12'10"x13'7"x8'7"
Age group	13+
Play capacity (users)	5
Color options	



See KOMPAN Fit App for More Information



The Bench provides perfect training for the core and lower back muscles by doing exercises such as leg lifts and sit ups. Easy grips are created to make sure anyone can do the exercise in a correct way. Compact and complete street workout combination featuring an incline bench, push up bar, decline press, horizontal ladder and pull up station. The

Combi 2 is suitable for pro's to beginners, with both cleverly placed bars to determine difficulty level, and clean work out space for advanced training. The Pull Up Bar is made from solid steel and has a diameter of Ø32 mm. An ideal size for both men and women to have a good grip. As the Bar hangs at a height of 233 cm everyone will be able to hang freely and use

the bar for a variety of Pull Ups. The Robinia bars are made from de-barked and sap free Robinia trunks in various dimensions. Robinia is a native European wood species with high strength and natural durability in various climatic conditions. KOMPAN uses wood from FSC-certified sources.

Combi 2 Robinia

FRO102



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).

The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.



The pull up bar is made from Ø32 mm HDG steel bar. The bar is 1080mm wide and 2300mm above ground

Item no. FRO10200-1001	
Installation Information	
Max. fall height	7'8"
Safety surfacing area	319ft ²
Total installation time	11.2
Excavation volume	1.39yd ³
Concrete volume	0.31yd ³
Footing depth (standard)	3'3"
Shipment weight	1054lbs
Anchoring options	
Warranty Information	
Robinia Wood	10 Years
Hot dip galvanized steel	Lifetime
Spare parts guaranteed	10 Years



The surface is made of Ekogrip™ panels, consisting of 15mm polyethylene with a 3mm top-layer of thermoplastic rubber. The Ekogrip™ panels have a non-skid effect for comfortable and safe training at all weather circumstances.

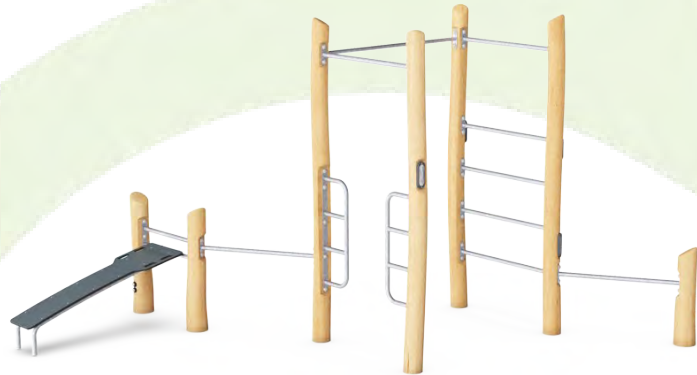


All KOMPAN fitness products are compliant with the ASTM F3101 & EN16630 Outdoor Fitness Standards. Load tests are performed as a static test by adding dynamic factors as well as safety factors to the specified load of 78kg per user. A product intended for 1 user is loaded with 420kg.

**ASTM
F3101**
compliant

Combi 2 Robinia

FRO102



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
FRO10200-1001	334.10	0.88	7.00

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Validation of CO₂ calculation of: Fitness



Data version no. 2021-09-27

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Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

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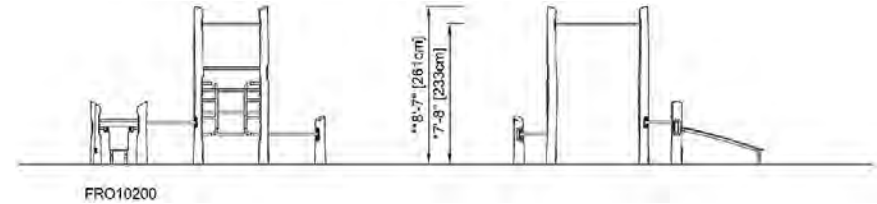
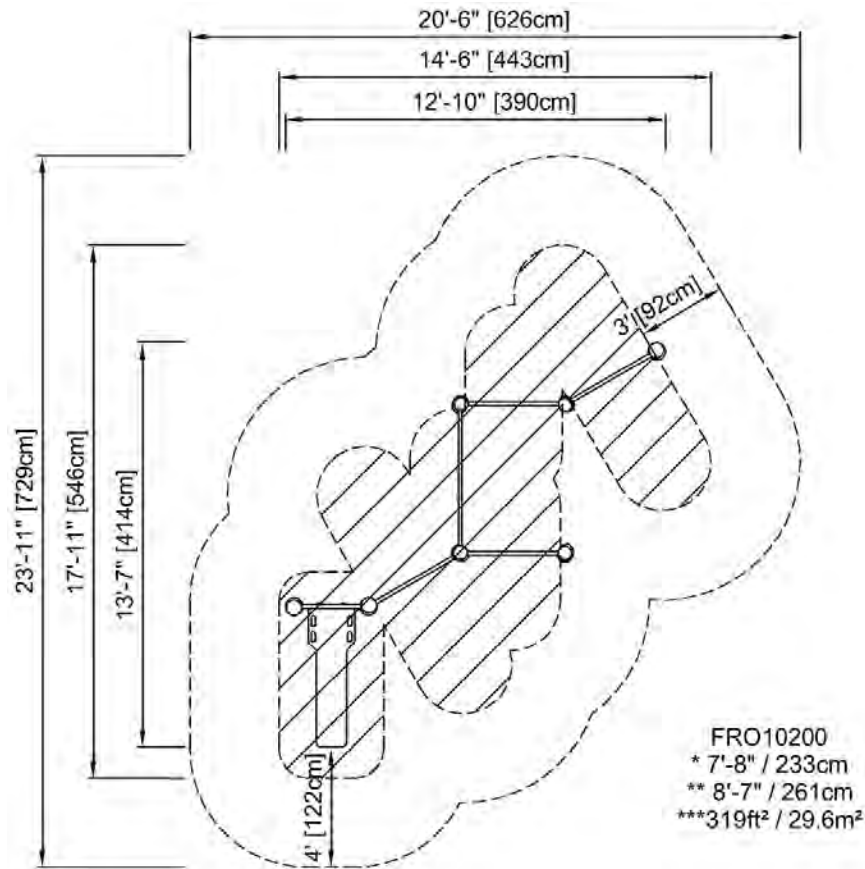


Combi 2 Robinia

FRO102

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Parallel Bars Robinia

FRO201



Item no. FRO20100-1001	
General Product Information	
Dimensions LxWxH	6'8"x2'4"x4'5"
Age group	13+
Play capacity (users)	1
Color options	



See KOMPAN Fit App for More Information



Street workout is a physical activity that symbolizes the freedom of movement and encourages socializing. It is a combination of athletics, calisthenics, and other sports, and is mostly performed in the public space. A Parallel Bar can be found on every street workout area to train the upper body and core stability. The Parallel Bar also fits really well in an Obstacle

Course as an upper-body exercise. The Robinia bars are made from de-barked and sap-free Robinia trunks in various dimensions. Robinia is a native European wood species with high strength and natural durability in various climatic conditions. KOMPAN uses wood from FSC-certified sources.

Parallel Bars Robinia

FRO201



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).

The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.



The FSW 209 features three 38 x 2mm push up bars at three heights of respectively 38cm, 58cm and 133cm.

Item no. FRO20100-1001

Installation Information

Max. fall height	3'6"
Safety surfacing area	88ft ²
Total installation time	3.4
Excavation volume	0.65yd ³
Concrete volume	0.2yd ³
Footing depth (standard)	3'3"
Shipment weight	345lbs
Anchoring options	

Warranty Information

Robinia Wood	10 Years
Hot dip galvanized steel	Lifetime
Spare parts guaranteed	10 Years



All KOMPAN fitness products are compliant with the ASTM F3101 & EN16630 Outdoor Fitness Standards. Load tests are performed as a static test by adding dynamic factors as well as safety factors to the specified load of 78kg per user. A product intended for 1 user is loaded with 420kg.

**ASTM
F3101**
compliant

Parallel Bars Robinia

FRO201



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
FRO20100-1001	90.60	0.73	5.30

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
 C.F. Tietgens Boulevard 32C
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 Denmark



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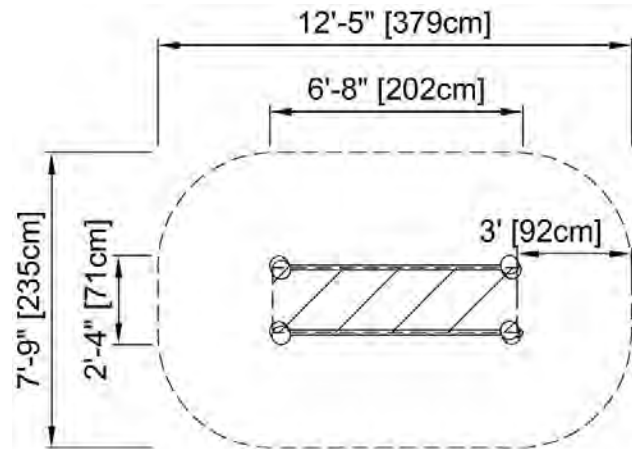


Parallel Bars Robinia

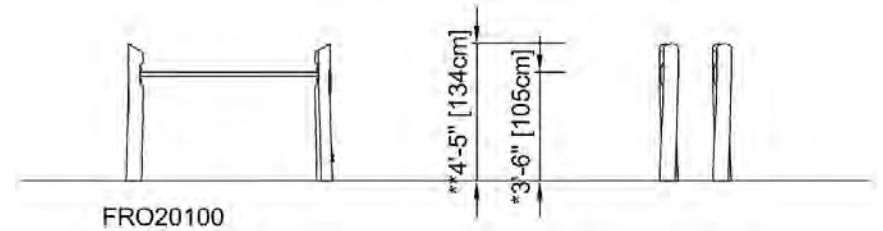
FRO201

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



FRO20100
* 3'-6" / 106cm
** 4'-5" / 134cm
*** 88ft² / 8.2m²



FRO20100


[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Dip Bench Robina

FRO202



Item no. FRO20200-1001	
General Product Information	
Dimensions LxWxH	7'8"x1'12"x2'5"
Age group	13+
Play capacity (users)	2
Color options	



A row of parallel handlebars is suitable for the more advanced hand balancing exercises such as handstand push-ups. Also perfect for dips, an ideal exercise for strengthening the chest, shoulder, and arm muscles. Rounded corners make it safe and simple for anyone to try exercises in which they try to swing their legs over the bar. The Dip Bench has a clear

instruction sign showing the basic exercise and a QR code. By using the QR code users can connect to the KOMPAN fitness App, where they will find multiple exercises and workouts at every level.

The Robinia bars are made from de-barked and sap-free Robinia trunks in various dimensions. Robinia is a native European

wood species with high strength and natural durability in various climatic conditions. KOMPAN uses wood from FSC-certified sources.

Dip Bench Robina

FRO202



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.



Bars intended as grips during exercises are made of hot-dip galvanized steel ø38mm. A great diameter to support the wrist when doing dips or handstands.

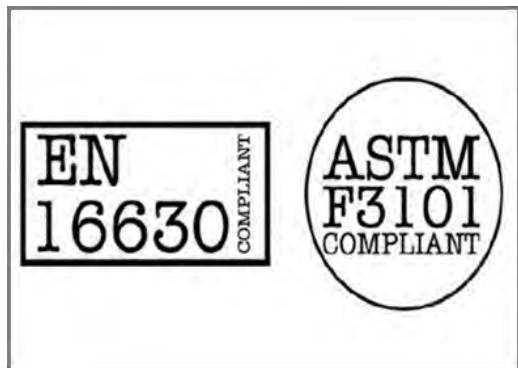
Item no. FRO20200-1001

Installation Information

Max. fall height	2'5"
Safety surfacing area	125ft ²
Total installation time	3.6
Excavation volume	0.37yd ³
Concrete volume	0yd ³
Footing depth (standard)	3'3"
Shipment weight	403lbs
Anchoring options	

Warranty Information

Hot dip galvanized steel	Lifetime
Robinia Wood	10 Years
Spare parts guaranteed	10 Years

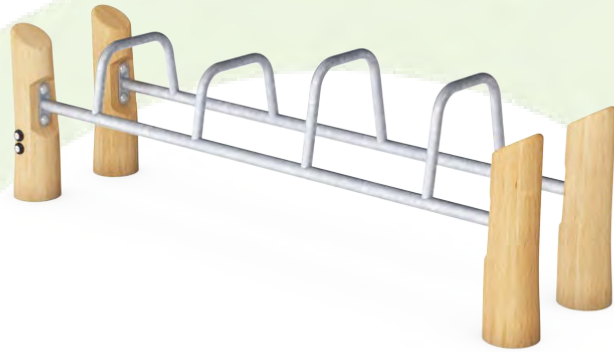


All KOMPAN fitness products are compliant with the ASTM F3101 & EN16630 Outdoor Fitness Standards. Load tests are performed as a static test by adding dynamic factors as well as safety factors to the specified load of 78kg per user. A product intended for 1 user is loaded with 420kg.

**ASTM
F3101**
compliant

Dip Bench Robina

FRO202



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
FRO20200-1001	126.90	0.87	8.80

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Validation of CO₂ calculation of: Fitness



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Fitness" represented by item no.: FAZ10100-0900 (Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

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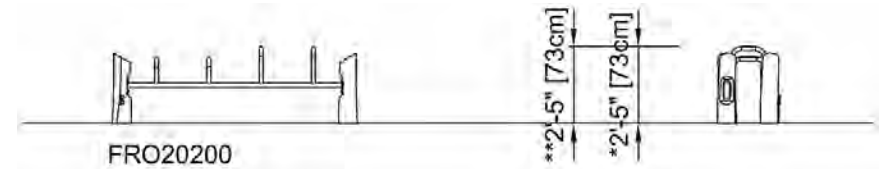
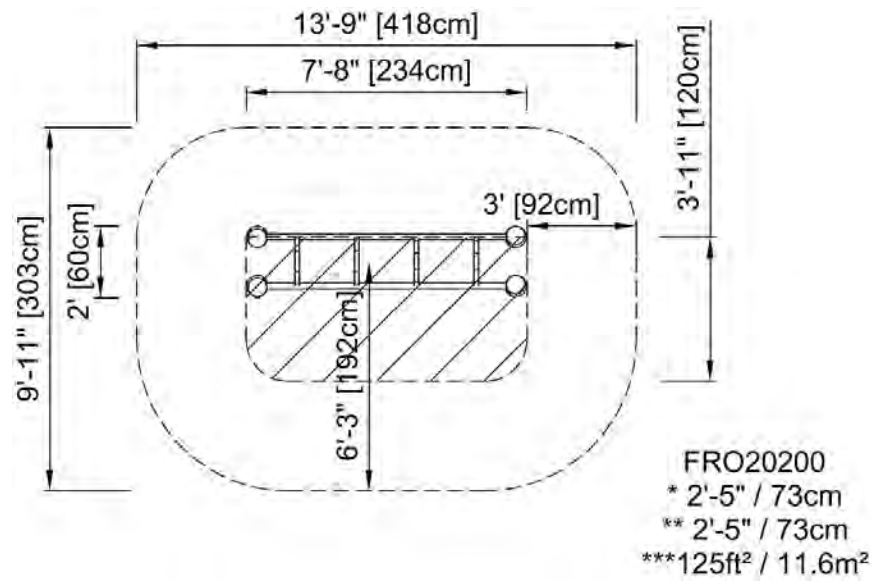


Dip Bench Robina

FRO202

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)


[Click to see SIDE VIEW](#)

Push Up Bars Robinia

FRO209

KOMPAN
Let's play



Item no. FRO20900-1001	
General Product Information	
Dimensions LxWxH	11'3"x0'7"x5'3"
Age group	13+
Play capacity (users)	3
Color options	



See KOMPAN Fit App for More Information



The push-up bars are specifically designed for upper body training. The chest and arms can be trained through exercises such as rows or dips. If you do not mind getting dirty you can 'belly crawl' underneath the bars. Otherwise, a single hurdle can also be used for exercises on the spot such as push-ups and high jumps. The Push-up Bars have a clear instruction sign

showing the basic exercise and a QR code. By clicking on the QR code users can connect to the KOMPAN fitness App, where they will find multiple exercises and workouts at every level. The Robinia bars are made from de-barked and sap-free Robinia trunks in various dimensions. Robinia is a native European wood species with high strength and natural

durability in various climatic conditions. KOMPAN uses wood from FSC-certified sources.

Push Up Bars Robinia

FRO209



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.



The FSW 209 features three 38 x 2mm push up bars at three heights of respectively 38cm, 58cm and 133cm.

Item no. FRO20900-1001	
Installation Information	
Max. fall height	4'4"
Safety surfacing area	240ft ²
Total installation time	4.2
Excavation volume	0.51yd ³
Concrete volume	0.1yd ³
Footing depth (standard)	3'3"
Shipment weight	436lbs
Anchoring options	
Warranty Information	
Robinia Wood	10 Years
Hot dip galvanized steel	Lifetime
Spare parts guaranteed	10 Years



All KOMPAN fitness products are compliant with the ASTM F3101 & EN16630 Outdoor Fitness Standards. Load tests are performed as a static test by adding dynamic factors as well as safety factors to the specified load of 78kg per user. A product intended for 1 user is loaded with 420kg.

**ASTM
F3101**
compliant

Push Up Bars Robinia

FRO209



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
FRO20900-1001	94.80	0.61	2.40

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Validation of CO₂ calculation of: Fitness



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Bente Hviid

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Peter Bendtsen

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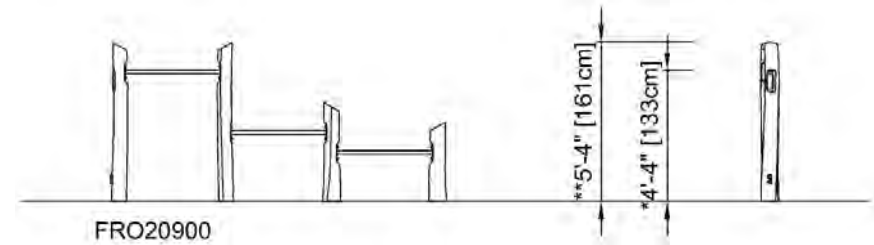
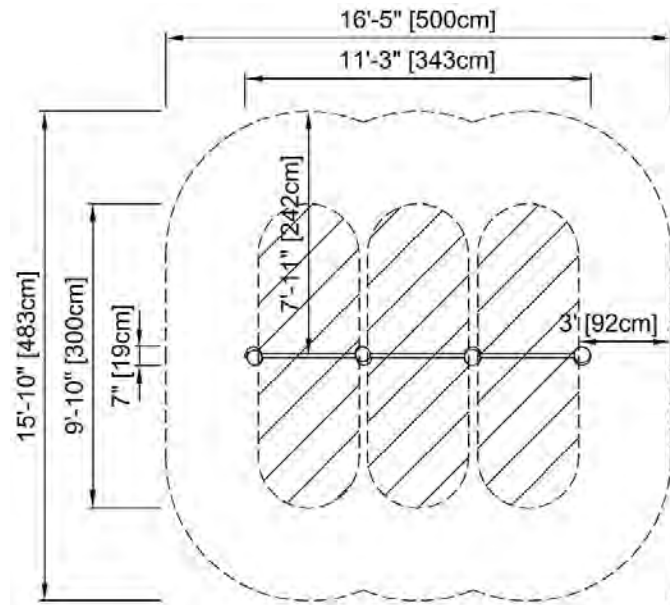


Push Up Bars Robinia

FRO209

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height




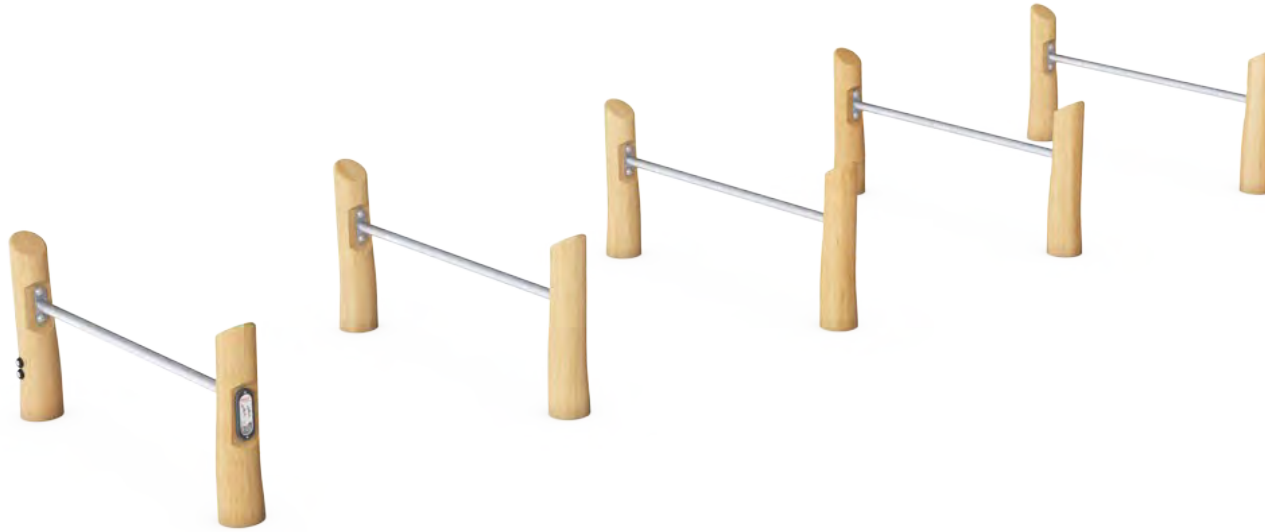
[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Hurdles Robinia

FRO211

Item no. FRO21100-1001	
General Product Information	
Dimensions LxWxH	5'7"x21'7"x2'7"
Age group	13+
Play capacity (users)	5
Color options	

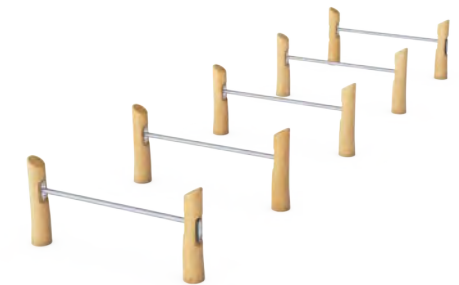


See KOMPAN Fit App for More Information

The five hurdles form an obstacle that can be overcome in several ways. If you do not mind getting dirty you can 'belly crawl' underneath them. Otherwise, you go over the hurdles by walking or running. A single hurdle can also be used for exercises on the spot such as push-ups and high jumps.

The Robinia bars are made from de-barked

and sap-free Robinia trunks in various dimensions. Robinia is a native European wood species with high strength and natural durability in various climatic conditions. KOMPAN uses wood from FSC-certified sources.



Hurdles Robinia

FRO211



The FSW 209 features three 38 x 2mm push up bars at three heights of respectively 38cm, 58cm and 133cm.



All KOMPAN fitness products are compliant with the ASTM F3101 & EN16630 Outdoor Fitness Standards. Load tests are performed as a static test by adding dynamic factors as well as safety factors to the specified load of 78kg per user. A product intended for 1 user is loaded with 420kg.



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



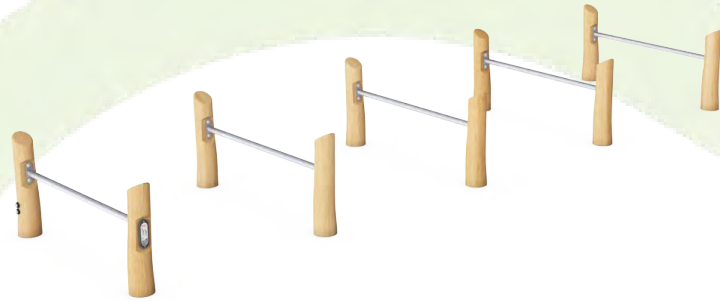
The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.

Item no. FRO21100-1001	
Installation Information	
Max. fall height	1'8"
Safety surfacing area	340ft ²
Total installation time	7.3
Excavation volume	0.93yd ³
Concrete volume	0yd ³
Footing depth (standard)	3'3"
Shipment weight	934lbs
Anchoring options	
Warranty Information	
Hot dip galvanized steel	Lifetime
Robinia Wood	10 Years
Spare parts guaranteed	10 Years

**ASTM
F3101**
compliant

Hurdles Robinia

FRO211



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
FRO21100-1001	242.10	0.72	5.30

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
 C.F. Tietgens Boulevard 32C
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 Denmark



Validation of CO₂ calculation of: Fitness



Data version no. 2021-09-27

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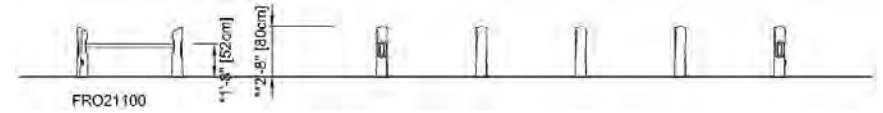
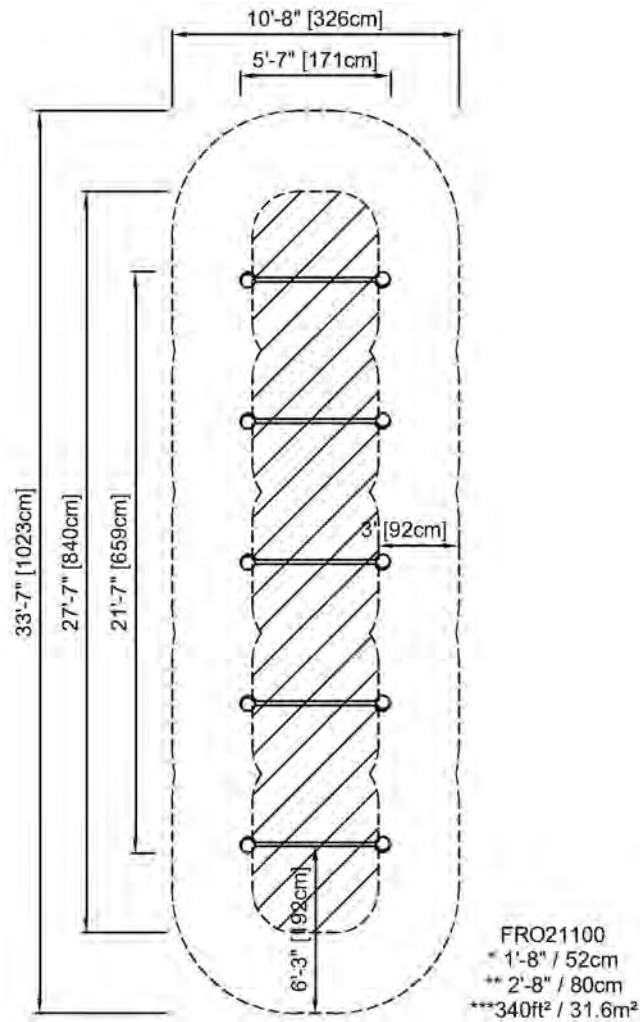


Hurdles Robinia

FRO211

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



[Click to see TOP VIEW](#)

[Click to see SIDE VIEW](#)

Double Overhead Ladder Robinia

FRO213



Item no. FRO21300-1001	
General Product Information	
Dimensions LxWxH	14'10"x4'2"x8'7"
Age group	13+
Play capacity (users)	4
Color options	



See KOMPAN Fit App for More Information



The overhead ladder, also known as the monkey bar, may be the most well-known of all obstacle course elements. The goal is to get to the other side without using your feet. Training upper body strength and cross-body coordination. This overhead ladder is wide and high to ensure anyone can hang and move freely. To make sure that everyone can reach

the overhead ladder there are 4 stepping pods at different heights. As a stand-alone item, the Double Overhead Ladder is great to work in the group workout. It offers space for 8 people to perform pull-up exercises or to attach suspension trainers for a full-body workout. The Robinia bars are made from de-barked and sap-free Robinia trunks in various

dimensions. Robinia is a native European wood species with high strength and natural durability in various climatic conditions. KOMPAN uses wood from FSC-certified sources.

Double Overhead Ladder Robinia

FRO213



All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).



The Robinia wood can be supplied as untreated raw wood or painted with a brown colored transparent pigment that maintains the golden wood color of the wood.



All KOMPAN fitness products are compliant with the ASTM F3101 & EN16630 Outdoor Fitness Standards. Load tests are performed as a static test by adding dynamic factors as well as safety factors to the specified load of 78kg per user. A product intended for 1 user is loaded with 420kg.

Item no. FRO21300-1001	
Installation Information	
Max. fall height	7'8"
Safety surfacing area	195ft ²
Total installation time	7.8
Excavation volume	1.54yd ³
Concrete volume	0.46yd ³
Footing depth (standard)	3'3"
Shipment weight	1119lbs
Anchoring options	
Warranty Information	
Robinia Wood	10 Years
Hot dip galvanized steel	Lifetime
Spare parts guaranteed	10 Years

**ASTM
F3101**
compliant

Double Overhead Ladder Robinia

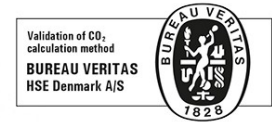
FRO213



Cradle to Gate A1-A3	Total CO ₂ emission	CO ₂ e/kg	Recycled materials
	kg CO ₂ e	kg CO ₂ e/kg	%
FRO21300-1001	327.00	0.81	7.50

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark



Validation of CO₂ calculation of: Fitness



Data version no. 2021-09-27

The CO₂ calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Fitness" represented by item no.: FAZ10100-0900 (Scope 3 emissions include emission sources in the upstream and downstream value chain).

Date: 15. October 2021 | Valid until: 15. October 2023

Validated by:

Bente Hviid, Senior Consultant

Peter Bendtsen, Senior Consultant

Validation based on report: Validation of CO₂ calculation of 8 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Bente Hviid and Peter Bendtsen.

Publication date: 15. October 2021

By Bureau Veritas HSE
www.bureauveritas.dk
+45 7731 1000

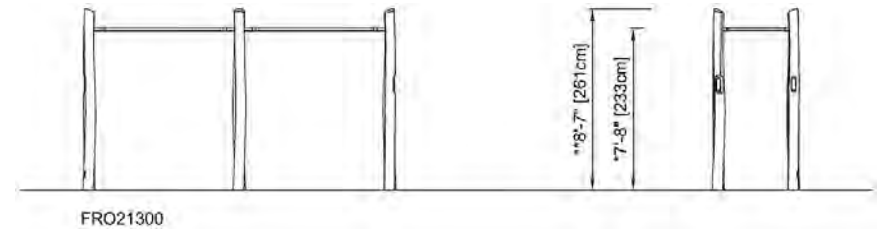
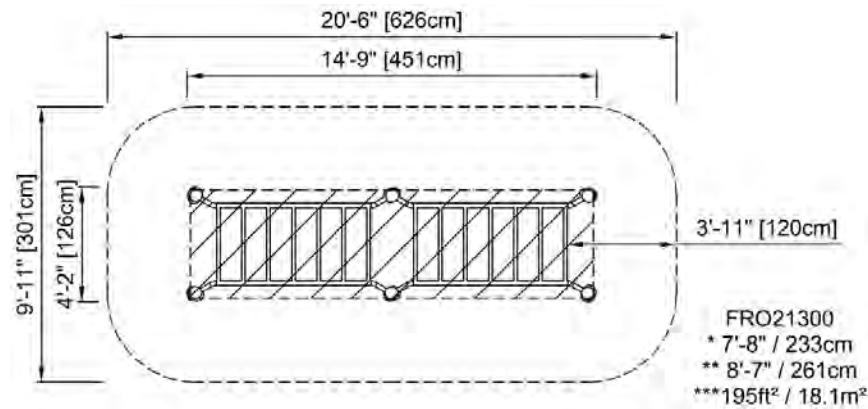


Double Overhead Ladder Robinia

FRO213

* Max fall height | ** Total height | *** Safety surfacing area

* Max fall height | ** Total height



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info@americanathletix.com ♦ Office: (888) 399-4999 ♦ Fax: (888) 295-2319 ♦ P.O. Box 1881 ♦ Muskegon, MI 49443

PROJECT NAME: Hough Greenspace
ATTN: Andrew Sargeant
ACCOUNT: Western Reserve Land Conservancy
ADDRESS:
CITY, STATE, ZIP:
EMAIL: asargeant@clevelandnp.org
PHONE:
DESCRIPTION: Equipment & Pricing for Hough Greenspace
SALES REP: Daniel Paul 216.235.2269

Quotation

Date: 1/18/2024
Quote #:
Expires: 30 days
Approx. Lead Time: 12-14 weeks
Ship To: TBD

Ship To Contact: TBD

Reference Image	Quantity	Item Number	Description		Price Each	Net Price
	1	COR882753	Large Octa Net, Crows Nest, 2x Steel slides; tube+open	INGROUND	205,000.00	\$205,000.00
	1	GXY960021-3717	Supernova - Greenline In-ground 90cm	INGROUND	9,900.00	\$9,900.00
	1	NRO915-1001	Cocowave Rope Pendulum Swing - Untreated In-ground 100cm	INGROUND	17,550.00	\$17,550.00
	1	COR203401-1108	RHOMBUS TWISTER SAND - IN-GROUND	INGROUND	22,800.00	\$22,800.00
	1	NRO924-CUSTOM (20262324)	Swing Frame, 4 seats - Variant	INGROUND	12,530.00	\$12,530.00
	1	NRO118-0421	Bee Springer - Colored Finish In-ground 40cm	INGROUND	5,200.00	\$5,200.00
	1	NRO119-0421	Forest Ant Springer - Colored Finish In-ground 40cm	INGROUND	5,050.00	\$5,050.00
	3	ELE400024-3717 BL+LG+GR	Spinner Bowl - Blue, Lime, Green In-ground 90cm	INGROUND	1,390.00	\$4,170.00
	1	NRO2009-1001	Double Tower with Spider Net - Untreated In-ground 100cm	INGROUND	43,840.00	\$43,840.00
	1	FRO20200-CUST (20262330)	Custom - Dip Bars Robinia	INGROUND	2,100.00	\$2,100.00
	1	FRO21100-CUST (20262325)	Custom - Hurdles Robinia	INGROUND	4,270.00	\$4,270.00
	1	FRO20100-CUST (20262326)	Custom - Parallel Bars Robinia	INGROUND	1,890.00	\$1,890.00
	1	FRO20900-CUST (20262327)	Custom - Push Up Bars Robinia	INGROUND	1,890.00	\$1,890.00
	1	FRO10200-CUST (20262328)	Custom - Combi 2 Robinia	INGROUND	7,780.00	\$7,780.00
	1	FRO21300-CUST (20262329)	Custom - Overhead Ladder Robinia	INGROUND	7,170.00	\$7,170.00
	1	FRO21800-1001	Square Pull Up Station - Robinia Untreated Wood In-ground 100cm	INGROUND	4,380.00	\$4,380.00

Additional Services

Included/Requested:

1	Yes	SAFETY SURFACING PROVIDED & INSTALLED	>Playground safety surfacing: Poured In Place Rubber Provided & installed to critical fall height compliance of equipment selected. 50/50% Color option with design.	\$209,925.00		
1	Yes	SAFETY SURFACING PROVIDED & INSTALLED	>Playground safety surfacing: Poured In Place Rubber Provided & installed to critical fall height compliance of equipment selected. 100% Color option with design.	\$240,000.00		
1	Yes	DEMOLITION/SITWORK/RADING	>Aggregate base installation for poured in place rubber surfacing	\$53,750.00		Total additional services: \$503,675.00
1	No	CONCRETE/PAVING	>Any specified asphalt paving and/or concrete flatwork based on provided layouts/blueprints/siteplans.	\$0.00		
				EQUIPMENT TOTAL:	\$351,140.00	
				TOTAL FREIGHT:	\$29,490.50	
				Subtotal:	\$884,305.50	
				-	\$0.00	

PAYMENT TERMS: DEP 50% & 50% DUE UPON COMPLETION

Quote Total: \$884,305.50

*ACCEPTANCE OF QUOTATION: This quotation is subject to policies in the current catalog and the following terms and conditions. Quotation is based on shipment of all items at the same time to one destination.

, unless otherwise noted. Pricing is subject to change beyond expiration date. Purchases in excess of \$1000,00 must be supported by a written purchase order to American Athletix, LLC.

LEAD TIME: Tentative dates from receipt of deposit (if required); final approved drawings; colors and site prep and readiness.

FREIGHT: Freight charges are estimated. Subject to final charges from freight carrier.

EXCLUSIONS: Unless specifically included, this quotation excludes: all site work and landscaping; removal and disposal of existing equipment;

acceptance of equipment and off-loading; storage of goods prior to installation; equipment assembly and installation; safety surfacing, borders and drainage provisions.

Proposal by: Daniel Paul, American Athletix, LLC

Customer Acknowledges that he/she has read, understands, accepts and agrees to be bound by the Terms and Conditions attached

Accepted by: _____ Date: _____

Purchase Order: _____



Philadelphia, January-22-2024

JMEJ / NA230207 US - Hough Greenspace - Cleveland, OH

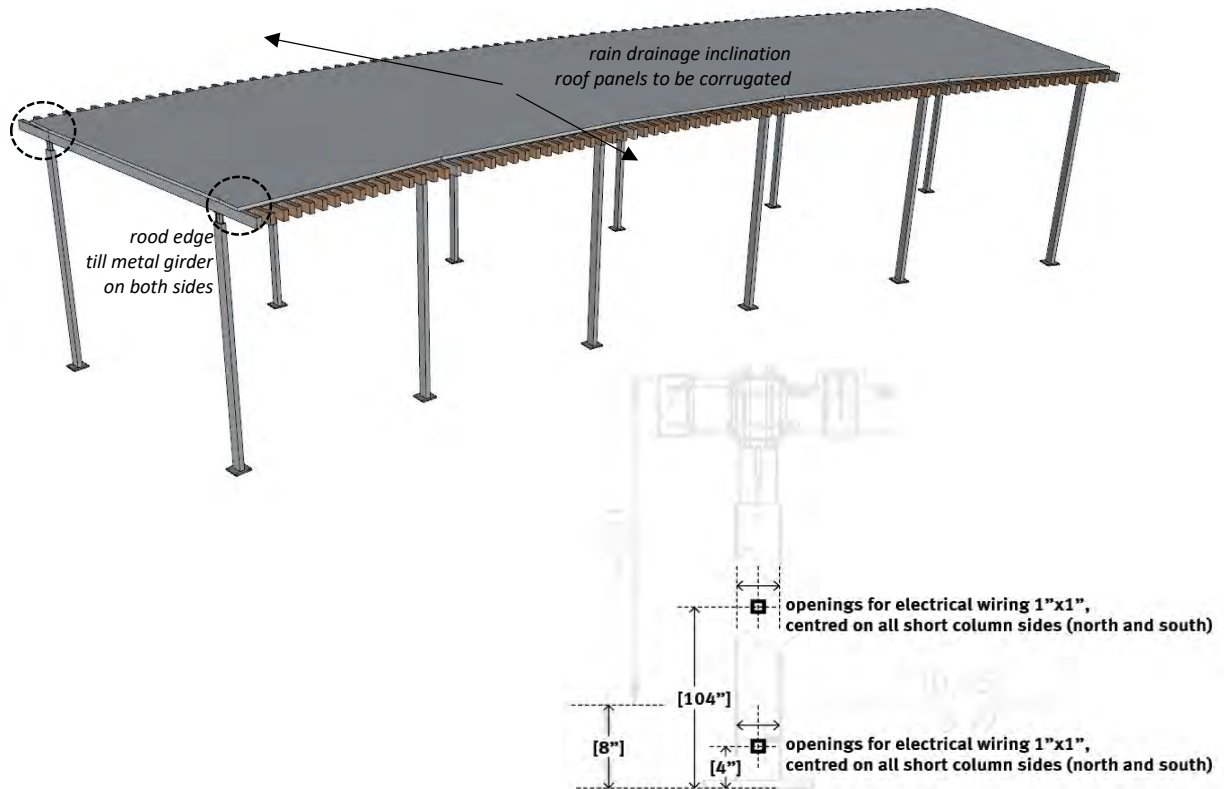


Rough&Ready Shades Curved Quantity Price/unit 2023 Total

R&R-SHA-C-1500-600-PC-AC 1 unit USD 184 658 USD 184 658

approx. 1500×600×400 cm | 590×236×157 inches (l×w×h), inner radius 120 ft
 Curved stand-alone shade structure build up of 2×5 modules (~3×3m)
 12 columns, all modules to be covered by roofing panels
 All wooden slats in Accoya; metal girders, columns in powder coated steel in standard color (color tbd)

*image shows desired scheme;
 shop drawing/engineering coordination remains leading*



SHA-Engineering-Foundation 1 unit USD 1 545 USD 1 545

Foundation advice on the shade structure

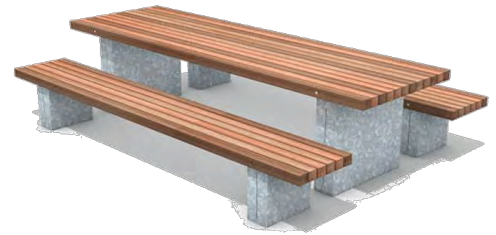
Specifications:

- Material roof slats a -AC: **FSC® Mix 70%** Accoya (modified pine), fades to silver/grey
- Dimension slats 7×15 cm | 2.8×5.9 inches
- All metal parts in powder coated steel -PC in standard color (see doc end)
- No lighting fixture provisions included (pricing/engineering subject to change if added post pre-shop drawing)
- Minimum outer radius 10 m | 394" for all modules
- Delivery: detached parts
- Installation: surface mounted to a concrete foundation, foundations not included

Solid Picnic Sets	Quantity	Price/unit 2023	Total
SOL-PS-L10-234-TH-CU Picnic set with 5 slat benches and 10 slat table ca. 234×170×45/78 cm 92×67×18/31 inches (l×w×h1/h2)	10 sets	USD 6 360 USD	63 600

Specifications:

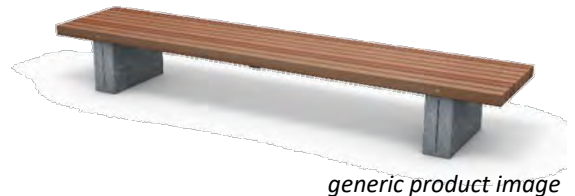
- Material seats and table top: untreated **FSC® 100%** Cumaru hardwood
- Hardwood fading naturally to silver/grey, fully recyclable
- Dimension hardwood slats 7×7 cm | 2.8×2.8"
- Spacing between slats 8 mm | 0.3"
- Support: laser-cut hot dip galvanized steel (TH)
- Tamper-proof Streetlock® system in stainless steel
- A surcharge applies for double powder coating the supports in a standard color
- Delivery: detached parts
- Installation: invisibly surface mounted
- Orders with less than 3 identical units are subject to a surcharge



Solid 6 & 8 Benches	Quantity	Price/unit 2023	Total
SOL-L6-234-TH-CU Bench with 6 slats in Cumaru ca. 234×46×45 cm 92×18×18 inches (l×w×h)	3 units	USD 1 900 USD	5 700

Specifications:

- Material seat: untreated **FSC® 100%** Cumaru hardwood
- Hardwood fading naturally to silver/grey, fully recyclable
- Dimension hardwood slats 7×7 cm | 2.8×2.8"
- Laser cut supports in galvanized steel (TH) or powder coated steel in standard color (PC)
- Tamper-proof Streetlock® system in stainless steel for easy replacement of slats
- Delivery: detached parts
- Installation: invisibly surface mounted
- Orders with less than 5 identical units subject to a surcharge (ignored due to order size)



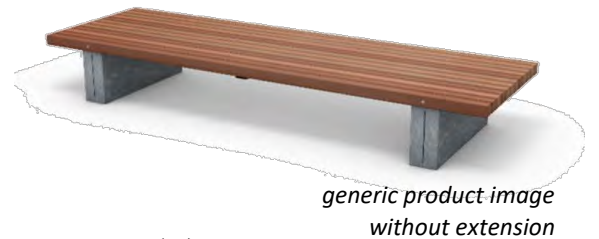
<i>accessory</i> SOL-L-CBR-120-CU Backrest with 6 Solid slats in Cumaru ca. 120×45 cm 47×18 inches (l×h)	2 units	USD 1 335 USD	2 670
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Solid 12 Benches Quantity Price/unit 2023 Total

SOL-L12-234-TH-CU 8 units USD 3 815 USD 30 520
 Bench with 12 slats in Cumaru
 ca. 234×92×45 cm | 92×36×18 inches (l×w×h)

SOL-L12-234-TH-CU-Ext 3 units USD 3 450 USD 10 350
 Extension for bench with 12 slats in Cumaru
 ca. 234×92×45 cm | 92×36×18 inches (l×w×h)



Specifications:

- Material seat: untreated **FSC® 100%** Cumaru hardwood
- Hardwood fading naturally to silver/grey, fully recyclable
- Dimension hardwood slats 7×7 cm | 2.8×2.8"
- Laser cut supports in galvanized steel (TH) or powder coated steel in standard color (PC)
- Tamper-proof Streetlock® comb system in stainless steel
- Delivery: detached parts
- Installation: invisibly surface mounted
- Orders with less than 5 identical units are subject to a surcharge

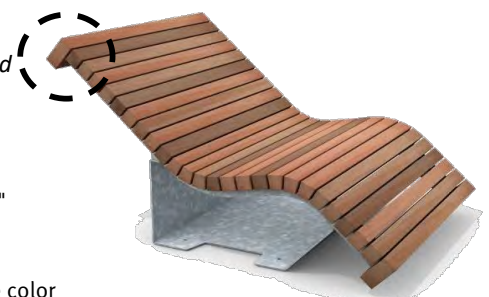
accessory **SOL-L-2CBR-120-CU** 11 units USD 2 420 USD 26 620
 Double sided backrest with 2×6 Solid slats in Cumaru
 ca. 120×45 cm | 47×18 inches (l×h)



Solid Serif Chaise Longue Quantity Price/unit 2023 Total

SER-LNG-120-TH-CU 5 units USD 5 310 USD 26 550
 Lounger bench in Cumaru with galvanized steel base
 ca. 171×120×45/102 cm | 67×47×18/40 inches (l×w×h1/h2)

desired with 2 beam end



Specifications:

- Material seat: untreated **FSC® 100%** Cumaru hardwood
- Hardwood fading naturally to silver/grey, fully recyclable
- Dimension hardwood slats 7×7 cm | 2.8×2.8", end-beams 7×15 cm | 2.8×5.9"
- Tamper-proof Streetlock® system with stainless steel fixings
- Support structure in hot dip galvanized or unweathered Corten steel
- A surcharge applies for double powder coating the Corten steel in a Streetlife color
- Available in two widths: 70 or 120 cm | 28 or 47"
- Delivery: assembled
- Placement: surface mounted
- Orders with less than 3 identical units are subject to a surcharge

Solid Bike Parking	Quantity	Price/unit 2023	Total
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SOL-BP-70-TH-CU-IGM	8 units	USD 720	USD 5 760
Bike rack, galvanized steel and hardwood beam, in-ground mounted ca. 70×7×75/100 cm 28×3×30/39 inches (l×w×h1/h2)			

Specifications:

- Material cover beam -CU: untreated **FSC® 100%** Cumaru hardwood
- Hardwood fading naturally to silver/grey, fully recyclable
- Dimension hardwood slats 7×7 cm | 2.8×2.8"
- Material support: galvanized steel, untreated Corten steel (delivered unweathered) or powder coated steel
- Height above ground: ca. 75 cm | 30", height in ground ca. 30 cm | 12"
- Delivery: assembled
- Installation: below grade as concrete ready or at a surcharge with an optional set of 2 underground linking pieces per rack, creating a spacing of 95 cm | 37"
- Unit price based on a minimum order 10 units (ignored due to order size)



Total product price:		USD	357 973
After quantity discount:	8%	USD	329 335,16
<i>* subject to change, depending on total product price</i>			

Transport*

Cleveland, OH		USD	22 000
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Special unloading facilities like tailgates or forklifts are not included in this transport price.

Total project price:		USD	351 335,16
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Please note:

- Our prices are in USD and are applicable for one month after date of quote.
- All prices are exclusive of Sales Tax.
- Any stocks stored with Streetlife will be charged at min. 5% per annum.
- Tools for assembly and installation manual are enclosed with the delivery.
- Anchoring materials are not provided by Streetlife.
- Streetlife is supply only and does not provide any on-site assembly or installation support.

Delivery:

Ex works. On-site assembly and installation are not included in the price.

Lead time to shipping: 16 - 18 weeks

Transit time: 1 - 2 weeks

minus 2 weeks if powder coated parts deselected

Streetlife Standard Powder Coat Colours

RAL7006



Beige Grey

RAL7010



Tarpaulin Grey

RAL 7016



Anthracite

RAL7022



Umbra Grey

RAL 7030



Stone Grey

RAL 7038



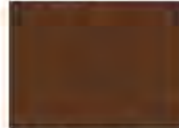
Agate Grey

RAL 7045



Telegrey

RAL 8007



Fawn Brown

RAL 8019



Grey Brown

RAL 8028



Terra Brown

RAL 9005



Jet Black

RAL1013



Oyster White

RAL 3020



Traffic Red

RAL3012



Beige Red

RAL6003



Olive Green

RAL6020



Chrome Green