

PROJECT NUMBER: SP19-7

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER SHEET
2	PAY QUANTITIES AND PAY NOTES
2A	PAY NOTES
3	DEMOLITION PLAN
4	SITE PLAN
5	GRADING PLAN
6	LAYOUT PLAN
7	DRAINAGE PLAN
8	CURB & TURNDOWN EDGE PLAN
9	ELECTRIC PLAN
10	ELECTRIC DETAILS
11	EQUIPMENT SCHEDULE
12	SAFETY SURFACE DETAILS (1)
13	SAFETY SURFACE DETAILS (2)
14	SAFETY SURFACE DETAILS (3)
15	SAFETY SURFACE DETAILS (4)
16	TYPICAL DETAILS (1)
17	TYPICAL DETAILS (2)
18	TYPICAL DETAILS (3)
19	TYPICAL DETAILS (4)
20	TYPICAL DETAILS (5)
21	ROADWAY DETAILS
22	DECK DETAILS (1)
23	DECK DETAILS (2)
24	DECK DETAILS (3)
25	DECK DETAILS (4)



UTILITY COORDINATION BOX		
	NUMBER	
WATER DESIGN	918-596-9566	
WASTEWATER DESIGN	918-596-9564	
TRANSPORTATION DESIGN	918-596-9636	
TRAFFIC ENGINEERING DESIGN	918-596-9744	
STORMWATER DESIGN	918-596-9498	
ONG	918-831-8261	
COX	918-286-4716	
PSO / AEP	918-250-6257	
VERIZON / AT&T	918-576-2142	
PARKS MAINTENANCE	918-596-2486	

The map displays the city limits of Tulsa, Oklahoma, with a grid of streets. Major highways are labeled, including I-44, I-244, and I-188. The Tulsa Zoo is marked with a shaded area and an arrow. The map includes a north arrow and a scale bar.

Streets shown on the map:

- North-South Streets (from West to East):** 65TH W AVE, 49TH W AVE, 33RD W AVE, UNION AVE, ELWOOD AVE, PEGORIA AVE, LEWIS AVE, HARVARD AVE, YALE AVE, SHERIDAN RD, MEMORIAL DR, MINGO RD, CARNETT RD, 129TH E AVE, 145TH E AVE, 161ST E AVE, 177TH E AVE, 193RD E AVE, 209TH E AVE, 225TH E AVE, 241TH E AVE, 257TH E AVE, 273TH E AVE, 289TH E AVE.
- East-West Streets (from North to South):** 56TH ST N, 46TH ST N, 36TH ST N, 26TH ST N, 16TH ST N, 6TH ST N, 56TH ST S, 46TH ST S, 36TH ST S, 26TH ST S, 16TH ST S, 6TH ST S.

Key Features:

- Tulsa Zoo:** Indicated by a shaded area and an arrow in the northern part of the city.
- Highways:** I-44, I-244, I-188, I-189, I-190, I-191, I-192, I-193, I-194, I-195, I-196, I-197, I-198, I-199, I-200, I-201, I-202, I-203, I-204, I-205, I-206, I-207, I-208, I-209, I-210, I-211, I-212, I-213, I-214, I-215, I-216, I-217, I-218, I-219, I-220, I-221, I-222, I-223, I-224, I-225, I-226, I-227, I-228, I-229, I-230, I-231, I-232, I-233, I-234, I-235, I-236, I-237, I-238, I-239, I-240, I-241, I-242, I-243, I-244, I-245, I-246, I-247, I-248, I-249, I-250, I-251, I-252, I-253, I-254, I-255, I-256, I-257, I-258, I-259, I-260, I-261, I-262, I-263, I-264, I-265, I-266, I-267, I-268, I-269, I-270, I-271, I-272, I-273, I-274, I-275, I-276, I-277, I-278, I-279, I-280, I-281, I-282, I-283, I-284, I-285, I-286, I-287, I-288, I-289, I-290, I-291, I-292, I-293, I-294, I-295, I-296, I-297, I-298, I-299, I-300, I-301, I-302, I-303, I-304, I-305, I-306, I-307, I-308, I-309, I-310, I-311, I-312, I-313, I-314, I-315, I-316, I-317, I-318, I-319, I-320, I-321, I-322, I-323, I-324, I-325, I-326, I-327, I-328, I-329, I-330, I-331, I-332, I-333, I-334, I-335, I-336, I-337, I-338, I-339, I-340, I-341, I-342, I-343, I-344, I-345, I-346, I-347, I-348, I-349, I-350, I-351, I-352, I-353, I-354, I-355, I-356, I-357, I-358, I-359, I-360, I-361, I-362, I-363, I-364, I-365, I-366, I-367, I-368, I-369, I-370, I-371, I-372, I-373, I-374, I-375, I-376, I-377, I-378, I-379, I-380, I-381, I-382, I-383, I-384, I-385, I-386, I-387, I-388, I-389, I-390, I-391, I-392, I-393, I-394, I-395, I-396, I-397, I-398, I-399, I-400, I-401, I-402, I-403, I-404, I-405, I-406, I-407, I-408, I-409, I-410, I-411, I-412, I-413, I-414, I-415, I-416, I-417, I-418, I-419, I-420, I-421, I-422, I-423, I-424, I-425, I-426, I-427, I-428, I-429, I-430, I-431, I-432, I-433, I-434, I-435, I-436, I-437, I-438, I-439, I-440, I-441, I-442, I-443, I-444, I-445, I-446, I-447, I-448, I-449, I-450, I-451, I-452, I-453, I-454, I-455, I-456, I-457, I-458, I-459, I-460, I-461, I-462, I-463, I-464, I-465, I-466, I-467, I-468, I-469, I-470, I-471, I-472, I-473, I-474, I-475, I-476, I-477, I-478, I-479, I-480, I-481, I-482, I-483, I-484, I-485, I-486, I-487, I-488, I-489, I-490, I-491, I-492, I-493, I-494, I-495, I-496, I-497, I-498, I-499, I-500, I-501, I-502, I-503, I-504, I-505, I-506, I-507, I-508, I-509, I-510, I-511, I-512, I-513, I-514, I-515, I-516, I-517, I-518, I-519, I-520, I-521, I-522, I-523, I-524, I-525, I-526, I-527, I-528, I-529, I-530, I-531, I-532, I-533, I-534, I-535, I-536, I-537, I-538, I-539, I-540, I-541, I-542, I-543, I-544, I-545, I-546, I-547, I-548, I-549, I-550, I-551, I-552, I-553, I-554, I-555, I-556, I-557, I-558, I-559, I-560, I-561, I-562, I-563, I-564, I-565, I-566, I-567, I-568, I-569, I-570, I-571, I-572, I-573, I-574, I-575, I-576, I-577, I-578, I-579, I-580, I-581, I-582, I-583, I-584, I-585, I-586, I-587, I-588, I-589, I-590, I-591, I-592, I-593, I-594, I-595, I-596, I-597, I-598, I-599, I-600, I-601, I-602, I-603, I-604, I-605, I-606, I-607, I-608, I-609, I-610, I-611, I-612, I-613, I-614, I-615, I-616, I-617, I-618, I-619, I-620, I-621, I-622, I-623, I-624, I-625, I-626, I-627, I-628, I-629, I-630, I-631, I-632, I-633, I-634, I-635, I-636, I-637, I-638, I-639, I-640, I-641, I-642, I-643, I-644, I-645, I-646, I-647, I-648, I-649, I-650, I-651, I-652, I-653, I-654, I-655, I-656, I-657, I-658, I-659, I-660, I-661, I-662, I-663, I-664, I-665, I-666, I-667, I-668, I-669, I-670, I-671, I-672, I-673, I-674, I-675, I-676, I-677, I-678, I-679, I-680, I-681, I-682, I-683, I-684, I-685, I-686, I-687, I-688, I-689, I-690, I-691, I-692, I-693, I-694, I-695, I-696, I-697, I-698, I-699, I-700, I-701, I-702, I-703, I-704, I-705, I-706, I-707, I-708, I-709, I-710, I-711, I-712, I-713, I-714, I-715, I-716, I-717, I-718, I-719, I-720, I-721, I-722, I-723, I-724, I-725, I-726, I-727, I-728, I-729, I-730, I-731, I-732, I-733, I-734, I-735, I-736, I-737, I-738, I-739, I-740, I-741, I-742, I-743, I-744, I-745, I-746, I-747, I-748, I-749, I-750, I-751, I-752, I-753, I-754, I-755, I-756, I-757, I-758, I-759, I-760, I-761, I-762, I-763, I-764, I-765, I-766, I-767, I-768, I-769, I-770, I-771, I-772, I-773, I-774, I-775, I-776, I-777, I-778, I-779, I-

ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH CURRENT CITY OF
TULSA CODES AND ORDINANCES, PUBLIC WORKS STANDARDS, AND TULSA
ENGINEERING SERVICES AND SPECIFICATIONS. (CITY OF TULSA ORDINANCES AND
CODE AMENDMENTS SUPERCEDE NATIONAL CODES.)

CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL STRUCTURES, LANDSCAPING, PAVING, AND ANY OTHER ITEMS LOCATED WITHIN AND OUTSIDE THE WORK AREA. ANY DAMAGE TO PERMANENT ITEMS INCURRED BY THE CONTRACTOR THROUGH HIS WORK IN THIS CONTRACT SHALL BE REPAIRED TO ORIGINAL CONDITION, BY THE CONTRACTOR, AT HIS OWN EXPENSE.

CONTRACTORS WILL COORDINATE WITH IDENTIFIED MAINTENANCE OPERATIONS PERSONNEL FOR APPLICATION, SHUT OFF, AND REMOVAL OF ALL UTILITIES.

#102 - PROJECT SIGN
#126 - SILT FENCE
#730 - STANDARD ASPHALT PAVEMENT
#608B - SIGN POSTS
#601 -PULL BOX INSTALLATION

PLANS PREPARED BY
LANDPLAN CONSULTANTS, INC.
1110 WEST 23RD ST.
TULSA, OK. 74107
(918) 584-6464

BY

Keith Franklin
KEITH R. FRANKLIN ASLA
REGISTERED L.A. NO 94

07/31/19

DATE _____

APPROVED BY

CITY ENGINEER

08.15.19

DATE _____

ADV. DATE 08.16.19

PARKS DIRECTOR

DATE _____

TULSA ZOO PLAYGROUND

ITEM NUM	DESCRIPTION	PAY NOTES	UNITS	QUAN.
1	INSTALLATION OF ZOO PURCHASED PLAYGROUND EQUIPMENT	1, 2, 7, 45	LOT	1
2	PIP SAFETY SURFACING (3'-5" DEPTH)	1, 24	SF	6534
3	ARTIFICIAL TURF SAFETY SURFACING (2"-3" PAD)	1, 22	SF	10504
4	EWV WOOD MULCH SAFETY SURFACING	1, 21	CY	510
5	DRAINAGE SYSTEM (4" FRENCH DRAIN)	1, 7, 17, 37	LF	409
6	DRAINAGE SYSTEM (J-DRAIN W/ FILTER FABRIC)	1, 7, 17	SF	10203
7	STROLLER PARKING SIGN	1, 35, 38	EA	1
8	DELTA FENCE	1, 25	LF	354
9	TRAFFIC STRIPE (WHITE)	30	LF	60
10	UNCLASSIFIED EXCAVATION	4, 7	CY	587
11	UNCLASSIFIED BORROW	5, 7	CY	17
12	AGGREGATE BASE TYPE A (PIP)	31	CY	81
13	AGGREGATE BASE TYPE A (ARTIFICIAL TURF)	31	CY	131
14	AGGREGATE BASE TYPE A (SIDEWALK)	31	CY	58
16	CLASS 'A' CONCRETE SEAT WALL	1, 7, 16	LF	36
17	ACCESSIBLE HANDICAP RAMP - MODIFIED TYPE 'A'	1, 18, 19	EA	7
18	4" CONCRETE SIDEWALK	7, 18, 19, 23	SY	618
19	4" CONCRETE SLAB (PIP)	1, 7, 18	SY	726
20	6" CONCRETE HEADER CURB (PLAYGROUND & TREE RING) (12" OR 14" DEPTH)	1, 7, 18, 19	LF	720
21	6" CONCRETE HEADER CURB (PERIMETER) (14" DEPTH)	1, 7, 18, 19	LF	663
22	CONCRETE AND ARTIFICIAL TURF BERM	1, 36	LOT	1
23	MANHOLES ADJUST TO GRADE	1, 3, 7	EA	1
24	REMOVE INLET & DRAIN LINE	1, 7	EA	1
25	REMOVE AND REPLACE INLET	1, 7	EA	1
26	REMOVAL OF ASPHALT PAVEMENT	1, 40	SY	21
27	WIRELESS SOLAR LIGHTING	1, 12, 13	EA	22
28	1" PVC SHED 40 PLASTIC CONDUIT TRENCHED	1, 7	LF	1730
29	2" PVC SHED 40 PLASTIC CONDUIT TRENCHED	1, 7	LF	860
30	PULL BOX SIZE III	29	EA	7
31	OWNERS ALLOWANCE		ALLOW	1
32	GENERAL CONDITIONS	1, 9, 10, 11, 20, 26, 41	LOT	1

33	PLAYGROUND DECK WITH DELTA FENCE AND PIPE RAILING	1, 7, 8, 25, 32	LOT	1
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34	ASPHALT ROAD	1, 3, 6, 7, 14, 15, 42, 43, 44, R-7, R-9, R-32	LOT	1
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35	ELECTRICAL AND LIGHTING SYSTEM	1, 7, 26, 27, 33, 34	LOT	1
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36	INTEGRAL COLOR ADDITIVE	39	SY	618
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8. Pipe rail shall be primed with a zinc rich primer and finished with TGIC polyester powder coat 2.5-3.0 mls. thick. Surface shall be free of rust, oils, etc. prior to painting. Powder coat color shall be semi-gloss RAL 8019 dark bronze approved by Landscape Architect and owner before application. Submit color chips for dark bronze. Includes the cost of concrete footings where shown, connectors, and all other items shown on the details. Contractor shall submit shop drawings for approval before fabrication begins. See detail sheet 26.
9. Price for General Conditions includes silt fence, placed as directed by the Landscape Architect. All silt fence shall be removed by the contractor at a time specified by the Landscape Architect. No earthwork shall take place prior to the installation of all erosion control devices.
10. Includes furnishing of all materials, equipment, labor & incidentals for installation, maintenance and removal of silt fence along with the dressing of the disturbed areas after removal has taken place. Disposal of excess silt and soil material in silt fence locations shall be considered incidental to the cost of the item.
11. Includes the cost of temporary sediment removal in accordance with COT STD 126 of the Standard Specifications.
12. Cost shall include all materials, shipping, hardware, labor and incidentals as detailed. See Electrical Details (2) sheet for detail. The Contractor shall submit any proposed item substitutions for approval by the engineer prior to purchase. All substitutions must be approved by the Landscape Architect.
13. Bid includes complete installation of the Solaright GF 2" Round Pathway Light (wireless-IP68) in the locations shown on the plans and listed in the summaries. Includes quantities with single color: Blue-22 count; for a total of 22 lights. Contractor shall install all puck lights per the manufacturer's recommendations. Refer to details and site plans for installation locations and construction information. Contact Tyler Burns at Solaright Wireless Lighting - M:405.694.0110 or O:405.673.8689 (tyler@solaright.com) or (www.Solaright.com) for ordering and installation information.
14. Includes the cost of asphalt, tack coat, edge joint seal, screening for blotting, non-woven separator fabric, and all labor associated with placement of these items. Type S3 and S4 asphalt shall be Performance Grade 64-22 or better. Includes the cost of 81 tons of Superpave Type S4, 81 tons of Superpave Type S3, and the adjustment of four (4) manholes to grade.
15. Includes the cost of 107 CY of aggregate base type A. Cost of compaction testing for aggregate base shall NOT be included in the unit price bid for aggregate base type A and will be paid for by the City of Tulsa. Cost of separation fabric between aggregate base and compacted subgrade shall be considered incidental.
16. Unit bid price shall include all materials, equipment, labor and incidentals to fully construct the 12" thick class 'A' concrete seat wall and footing. Includes the preparation of subgrade and the cost of full installation of all items as shown in the details. Includes steel reinforcement and all items as shown in the details. Smooth form finish, no parge coating will be accepted for concrete honeycombing or unsatisfactory workmanship. A sample section of concrete shall be poured and will be required for submittal / approval prior to installation of final seat walls. Wall is to include vertical V-groove tool joints, top champher, and smooth form finish. Wall sample shall be approximately 4' in length. Photos of previous work examples may be submitted in lieu of sample wall for approval.
17. Unit Price Bid shall be full compensation for the complete installation of the drainage system. Includes all materials, labor, equipment and incidentals to fully complete the work. This cost shall include the prefabricated drainage composite and the geotextile fabric on the bottom and top of the drainage composite.
18. Reinforcing steel, expansion joint material, joint sealant, tooled contraction joints and all other related miscellaneous items as shown in the details shall be included in the unit price bid for this item. Refer to details and construction notes for supplemental information on concrete construction.
19. The work shall consist of furnishing and placing concrete conforming to specifications as shown on the plans in close conformity with the lines, grades, and typical sections shown. The construction must comply with all applicable regulations and codes including, but not limited to the Americans with Disabilities Act. The concrete shall have a uniform finish (surface, joints, and color - if applicable) throughout the project. Methods of construction not providing a uniform surface shall be ceased immediately, and construction may resume only upon correction and the approval of the Landscape Architect.
20. Includes all costs to assemble, install, and maintain City of Tulsa construction sign as shown in COT standard detail NO 102. Install sign prior to any construction activities, contractor shall remove sign upon completion of the project.
21. All playground engineered wood fiber safety surfacing material shall be installed per manufacturers written instruction and recommendations. Contractor shall submit samples of the safety surfacing material for approval. The playground surfacing shall be considered random size manufactured wood fiber material, specifically designed to be accessible play area safety surfacing material. The EWFSS shall meet or exceed the current consumer products safety commission 200-G guideline and the ASTM F-2075. Install surfacing to the finished compacted depth of 12". Quantity provided is based on square footage and depth and includes compaction.
22. Unit price bid shall include all materials, labor and equipment to complete artificial turf installation as shown in details sheets. Artificial turf shall be Shaw GB-043 PLA 50 1 1/2" (olive) with 2" or 3" Brock cushion and Shaw GB-043 2" (lime) with 2" or 3" Brock cushion. Contact Richard Shepler w/ Southwest Greens OK 918-272-0100. Artificial turf shall be installed per manufacturer's recommendations. Composite nailer boards shall be used at all edges of artificial turf. Unit price bid is based on plan quantities only and does not include any extra quantity for waste or elevation changes.
23. Unit price bid includes 31 SY for 6" wide and 12" deep concrete turn down edges along PIP areas and 68 SY for 6" wide and 14" deep concrete turn down edges along EWF areas. Item includes all materials labor and incidentals to complete the work as shown in the plans and details.

24. Shall include the cost for materials and installation of 3" to 5" rubber surfacing overlay, depending on location. 4" concrete pad is calculated under 4" concrete slab (PIP). Installation of PIP Rubber safety surface to be completed as indicated in plan and details. Rubber surfacing shall be DuraPlay Inc, 512-847-2473 or "Approved Equal". See 8 1/2"x11" specification section 02806 Playground Surfacing Poured In Place for more detail. A minimum of five (5) colors shall be selected during construction submittals. All colored safety surface areas shall be a mix of 30% black with 70% designated color. Contractor to provide color samples for final approval.
25. Unit bid price shall include all materials, shipping, labor and equipment to complete Delta Fence installation as shown in details. Install 4" diameter pressure treated Eucalyptus posts in concrete footings approximately 4' o.c. with two horizontal timbers. See details on sheets **19 & 20**.
For deck fencing include all attachments and fasteners to attach to deck. See deck details on sheets **22 - 25**.
26. Shall include the cost of 3/8" steel square tubing, access panel, lid, 60 amp Appleton Powertite receptacle (or equal), all electrical wiring and any incidentals to complete installation per details. All steel to be painted dark bronze RAL 8019 to match deck pipe rail and additional accent pieces. Includes (4) dual enclosures and (1) single enclosure Appleton Powertite receptacle (or equal).
27. Cost shall include all materials, shipping, labor and equipment to install the five (5) poles, fixtures, wiring and assuring the lights are completely functional according to code. Concrete footing and rebar is included in this pay item. Cost shall also include time spent after dark to locate lights on site with Landscape Architect using plug and cord for correct lighting placement. Includes the cost of all electrical wiring, connectors, fuses, splices, taps, and incidentals to complete the electrical system as provided on plans and details. Landscape Architect shall approve all light locations prior to drilling. Includes the cost of concrete, correct placement of anchor bolts, conduit and copper ground wire as shown on the plans and details.
28. The contractor will be responsible for all horizontal and vertical construction staking. Contractor shall preserve survey stakes and bench marks and reset if damaged lost or removed. All work by an Oklahoma licensed surveyor. Certificate of assurance shall be supplied by the contractor once staking is complete.
29. Pull box - Shall be concrete box with cast iron lid. See COT STD. 601. Includes the cost of excavation, bedding materials, compaction, and all labor necessary for proper installation.
30. Pavement Markings Paint: provide and place white stripes, arrows, words or symbols applied by the drop-on method. Provide materials in accordance with City Of Tulsa Specification 02516 Pavement Markings Paint. Equipment must be capable of producing a clean-cut line, uniformly dimensioned.
31. Estimated raw quantities of aggregate base for construction are as follows: **58 CY** of 4" Aggregate Base type A for concrete sidewalks; **81 CY** of 4" Aggregate Base type A for PIP safety surfacing; and **114 CY** of washed or drainable 4" Aggregate Base for flat areas of artificial turf and and **17 CY** of 4" Aggregate Base type A for the sloped areas of artificial turf. Raw quantities do not account for increased depth around 4" PVC pipe. See detail sheets. Unit price bid shall include the cost of placement and compaction of aggregate base.
32. Price shall include construction of deck framework, decking, stairs, and Titan Deck Foot Anchors. Cost shall also include installation of all fasteners, hardware, and incidentals required to complete installation as shown on plans and details. All lumber shall be pressure treated Southern Yellow Pine. All decking completed with CAMO Edge Deck Fasteners or "Approved Equal". See details for additional specifications.
33. See lighting schedule and notes on Electrical Details sheet for more information.
34. All wiring and electric control panel work shall be performed by a licensed electrician.
35. Sign locations are diagrammatic only and locations shall be adjusted for existing field conditions as necessary. Sign locations shall be marked and approved in the field prior to permanent installation.
36. Concrete and artificial turf berm includes: 4" thick Aggregate Base type A, 4" thick Class A Concrete slab, and artificial turf. Artificial turf shall be Shaw GB-043 PLA 50 1 1/2" (olive) without cushion.
37. Unit price bid for drainage system includes cost of trench excavation, bedding material, any necessary dewatering, labor and any other material necessary to complete the work. Unit price bid includes estimated **256 LF** 4" corrugated/perforated collection pipe, all fittings and tees, estimated **153 LF** 4" non perforated (solid) corrugated drain pipe, "T" connections, all miscellaneous fittings needed to install drain lines, polyolefin grate at existing block wall, and excavation to connect to existing drain inlet in pavement by the Jaguar Junction. Unit price bid also includes all sleeves through concrete curbs and turndown edges.
38. Unit bid price shall include the cost of all materials, equipment, labor and incidentals to construct and install sign panel and frame. See details. Provide shop drawings of frame and sign panels for approval before fabrication. Includes cost of sign footing and finish grading after construction of signage is complete.
39. Concrete additive shall be Solomon ColorFlo Liquid Color or pre-approved equal. Color to be 242 Sandstone (SRI 36). Sealer shall be Nox-Crete Stifel GC or approved equal and applied per manufacturers specifications. Allow a minimum of 28 days for concrete cure time. Color samples shall be submitted for approval prior to commencing construction.
40. Unit price bid includes full depth sawcutting and all other miscellaneous work needed to remove the asphalt pavement and underlying base in order to install 6" concrete header perimeter curb. Removed asphalt pavement to become the property of and disposed of by the contractor in a manner approved by the Landscape Architect.
41. Includes requirements in section 01500 Temporary Facilities & Controls

42. **10 CY** topsoil is needed for the placement of sod at the graded swale along the southwest edge of the road. Price shall be full compensation for furnishing all materials, equipment, labor and incidentals to salvage, transport, stockpile and otherwise handle the materials as shown on the plans. Topsoil shall be placed at 2" depth in all areas requiring the establishment of sod. All areas receiving topsoil shall be fine graded and smooth prior to placement of sod.
43. Total area for solid slab sodding shall be **190 SY** in graded areas for Add Alt #2. Total quantity includes an additional **17 SY** to be used at the discretion of the Landscape Architect only. Contractor will provide **US bermuda** sod for placement in all disturbed areas within the grading. All other disturbed areas outside the cut/fill catchlines shall be returned to their original condition at Contractor's expense.
44. Contractor shall refer to the City of Tulsa sod specifications for supplemental information on sod installation. Remove synthetic backing prior to installation.
45. All **KOMPAN** equipment shall be installed by a certified **KOMPAN** installation team or approved equal. **KOMPAN** Playgrounds contacts:
Kristin Seifried (405) 226-7467
Todd Adams (512) 699-1915

Installer's Qualifications:

1. Minimum of three years' experience installing play equipment of comparable size and type.
2. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the requirements and the methods needed for proper performance of the work of this section.

Following completion of playground equipment installation, the playground shall be inspected by a playground Safety Inspector certified by National Recreation and Park Association and a report filed to the Owner and Contractor. The Contractor prior to final acceptance shall address safety concerns noted in the report.

Playground equipment concrete footing sizes to be installed per Manufacturer's recommendations.

Slide beds shall be oriented in accordance with the Consumer Product Safety Commission Guidelines, generally northeast facing unless otherwise approved by the owner's Representative.

Playground surfacing materials and construction shall conform to the most current U.S. Consumer Products Safety Commission Guidelines.

Contractor's option to surface-mount playground equipment to yield best results. Warranties, equipment integrity, and performance shall be equal to or greater than embedded installation. Install per manufacturer's requirements.

07/31/19

PAY QUANTITIES AND SAY NOTES

PROJECT # SP197

TULSA ZOO PLAYGROUND

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY

LANDPLAN CONSULTANTS

1119 WEST 23rd

TULSA, OK 74107

(918) 584-6464

REVISION

BY

DATE

PLAN SCALE:

DRAWN

MP/MB

APPROVED:

N/A

DESIGNED

MB

SURVEY

AAB

PROFILE SCALE:

PROJ. MGR.

MB 8/19

HORIZONTAL:

LEAD ENGR.

MB 8/19

N/A

FIELD MGR.

MB 8/19

VERTICAL:

RECOMMENDED

N/A

DESIGN MANAGER

MB 8/19

CITY ENGINEER

FILE

DRAWING:

DATE:

8-23-19

ATLAS PAGE NO:

SHEET 2 OF 25 SHEETS

R-32 Est. At 112 pounds/square yard per 1" thickness. Includes asphalt and aggregate and other ingredients as specified in the job mix formula.

R-7 For solid slab sodding, price bid to include cost of 10-20-10 fertilizer, estimated at 200 pounds per 1000 sq. yds.

R-9 Watering estimated at 40 gallons per square yard of sodding and/or sprigging.

- * All construction shall be in accordance with the City of Tulsa Construction Standards.
- * All features of this project including, but not limited to sidewalks and playground shall comply with The Americans with Disabilities Act, accessibility guidelines, and the interim final rules for public right-of-way, published in The Federal Register, July 26, 2011. Where spatial limitations or existing features within the limits of the project prevent full compliance with this act, the contractor shall immediately notify the Landscape Architect upon discovery of such features. The contractor shall not proceed with any aspect of the work, which is not in full compliance with the ADA without prior written approval. Any work, which is not performed within the guidelines of the ADA, for which the contractor does not have written approval, shall be corrected at the contractor's expense.
- * Areas disturbed by construction traffic outside the limits of construction shall be returned to their previous condition at contractor's expense, as directed by the Landscape Architect. All areas disturbed between the cut & fill catchlines and the limits of work line shall be revegetated by sodding. Cost shall be considered incidental and included in other items. Includes haul roads and construction entrances.
- * In order to alleviate dust conditions during grading operations and before pavement work is completed, the contractor shall sprinkle grading at intervals approved by the Engineer. Cost of sprinkling to be included in price bid for other items of work.
- * Placement of signs, symbols, words and arrows shall conform to standards set forth in the Manual on Uniform Traffic Control Devices.
- * Ramp slopes shall not exceed 12:1.
- * The contractor shall be responsible for locating all underground utilities prior to construction. Contractor shall be responsible for repair or replacement of all damaged utilities.
- * The contractor shall be responsible for meeting all Environmental Protection Agency (EPA) and OK Department of Environmental Quality (ODEQ) requirements for storm water management for this project. All cost to be included in other items of work. The Consultant shall include an erosion control plan within the plan set (demolition or grading plan sheet).
- * The cross slope for the sidewalk shall not exceed 50:1 (2%). The longitudinal slope for the sidewalk shall not exceed 20:1 (5%) unless otherwise shown.
- * No fly ash allowed in concrete mix.
- * Unit Price Bid shall be full compensation for furnishing all materials, equipment, labor & incidentals required to complete the work as shown in the plans and details. Items listed on drawings and not included as a separate pay quantity shall be considered incidental and the cost shall be included in the price bid for other items.
- * Contractor shall coordinate with Tulsa Zoo for proper staging location and stabilized entrance locations for access through the project site. The cost for stabilized construction entrances shall be considered in General Conditions.
- * The Contractor shall not waste any excess excavation until all planned embankments and backfills are completed. Excess unclassified excavation material determined by the Landscape Architect to be suitable for backfill or topsoil material shall be utilized in lieu of unclassified borrow. Cost of second handling shall be included in other items of work. Any remaining excess excavation shall become the property of the Contractor and be disposed of in a manner approved by the Landscape Architect.
- * In accordance with the OK Underground Facilities Damage Prevention Act the Contractor shall notify the OK One-Call System, Inc. 48 hours prior to beginning excavation. OK One-Call System, Inc. "Call Okie" 1-800-522-6543 or 811
- * Contractor shall not utilize or request payment for any item listed as "contingency only" in the pay notes without written approval. The Contractor shall utilize an RF form to communicate or request the use of a contingency item and must receive written approval prior to commencing work.





07/31/19

PAY NOTES

PROJECT # SP19-7

TULSA ZOO PLAYGROUND

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
LANDPLAN CONSULTANTS
 1110 WEST 23rd
 TULSA, OK 74107

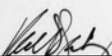
918-594-6464



REVISION	BY	DATE

PLAN SCALE:	DRAWN	MM-BB	
N/A	DESIGNED	MH	
	SURVEY	AAB	
PROFILE SCALE:	PROJ. MNGR.	SP 8/19	
HORIZONTAL:	LEAD ENGR.	2/20 8/19	
	FIELD MNGR.	EW 8/19	
VERTICAL:	RECOMMENDED	HHS 8/19	
	DESIGN MANAGER		

APPROVED:



CITY ENGINEER

FILE: _____

DATE: 8-23-19

DRAWING: _____

SHEET 2A OF 25 SHEETS

TREE PRESERVATION NOTES

OWNERS REPRESENTATIVE WILL INSPECT AND APPROVE TREE PROTECTION BEFORE WORK BEGINS. EXISTING TREES TO BE PRESERVED WITHIN THE PROJECT LIMITS SHALL BE PROTECTED AGAINST DAMAGE DURING CONSTRUCTION OPERATION.

DO NOT STORE EQUIPMENT, MATERIALS, OR VEHICLES UNDER THE TREE CANOPIES.

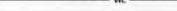
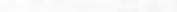
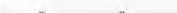
DO NOT TRENCH UTILITIES THROUGH DRIPLINES WITHOUT OWNERS REPRESENTATIVE'S APPROVAL.

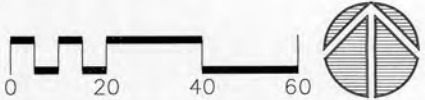
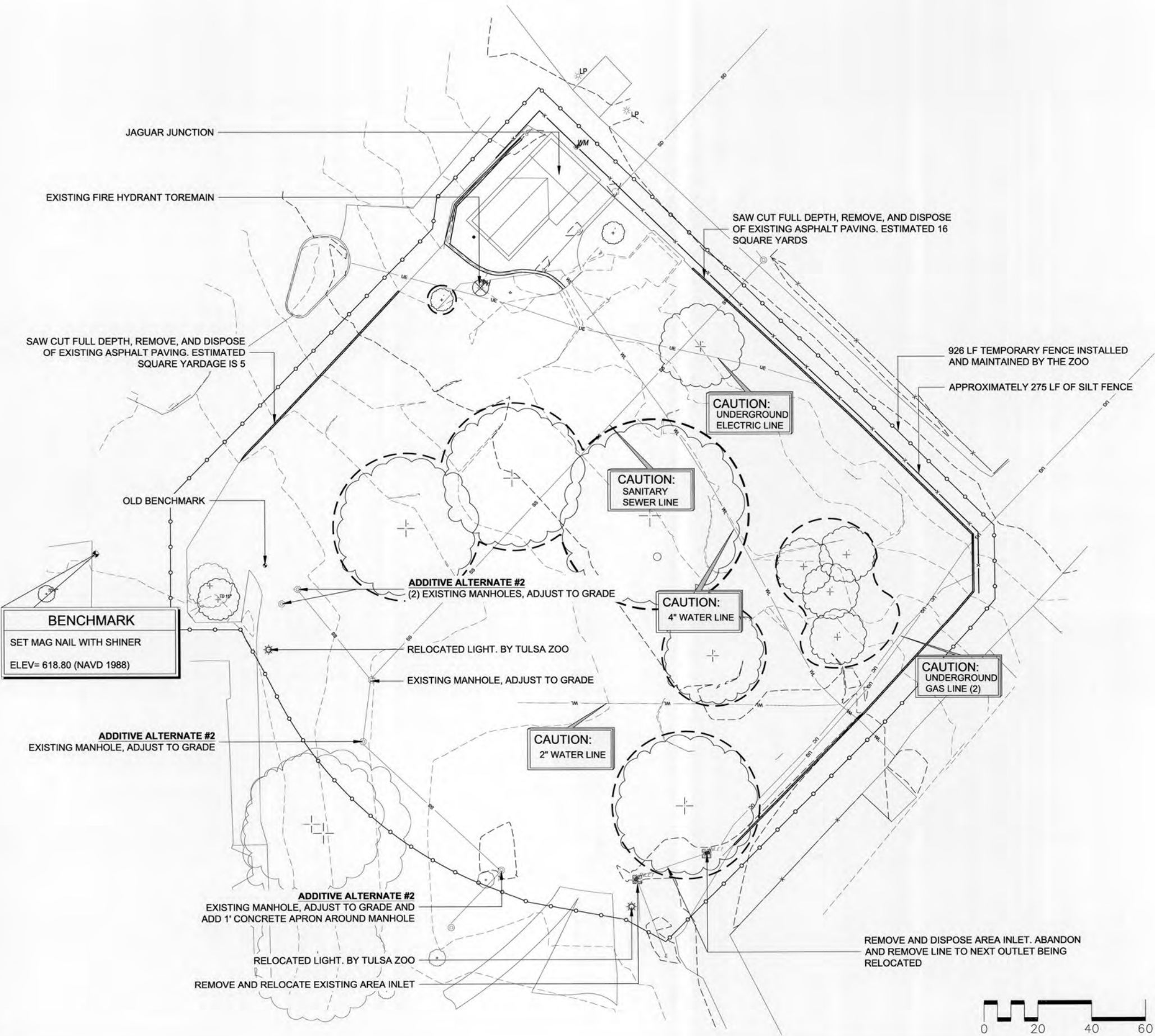
ANY DAMAGE DONE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE REPAIRED IMMEDIATELY BY AN APPROVED ARBORIST. ROOTS EXPOSED AND/OR DAMAGED DURING GRADING OPERATIONS SHALL BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA AND HAVE TOPSOIL AND MULCH PLACED OVER THE EXPOSED ROOT AREA IMMEDIATELY.

ANY TREES DESIGNATED TO REMAIN SHALL BE PROTECTED AS DESCRIBED HERIN. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH THESE REQUIREMENTS AS STATED.

NO SOIL SHALL BE SPREAD, SPOILED, OR OTHERWISE DISPOSED OF UNDER ANY TREE WITHIN THE DRIPLINE UNLESS OTHERWISE DESIGNATED OR APPROVED.

LEGEND

	DEMOLITION AREA		EXISTING TREES
	TREE PRESERVATION		SANITARY SEWER MANHOLE
	WATER LINE		PICNIC TABLE
	UNDERGROUND GAS		BENCHMARK
	UNDERGROUND ELECTRIC		BENCH
	SANITARY SEWER		LITTER RECEPTACLE
	CONTOUR MAJOR		ELECTRIC POLE
	CONTOUR MINOR		LANDSCAPE BOULDER
	TEMPORARY FENCE		LIGHT POLE
	SILT FENCE		



DEMOLITION PLAN (2)			
PROJECT # SP19-7			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23rd TULSA, OK 74107 918-584-6464			
PLAN SCALE:	DRAWN	MHBB	APPROVED:
N/A	DESIGNED	MH	
	SURVEY	AAB	
PROFILE SCALE:	PROJ. MNGR	ASB	
N/A	LEAD ENGR	8/1/19	
HORIZONTAL:	FIELD MNGR	8/1/19	
N/A	RECOMMENDED	8/1/19	
VERTICAL:	DESIGN MANAGER	8/1/19	
N/A			
FILE:	DRAWING:	DATE	
		8-23-19	
ATLAS PAGE NO:		SHEET	3 OF 25 SHEETS

NOTES:

1. SEE PLAYGROUND DETAIL SHEET FOR COMPLETE EQUIPMENT SCHEDULE
2. ALL KOMPAN EQUIPMENT SHALL BE INSTALLED BY A CERTIFIED KOMPAN INSTALLATION TEAM OR APPROVED EQUAL

LEGEND

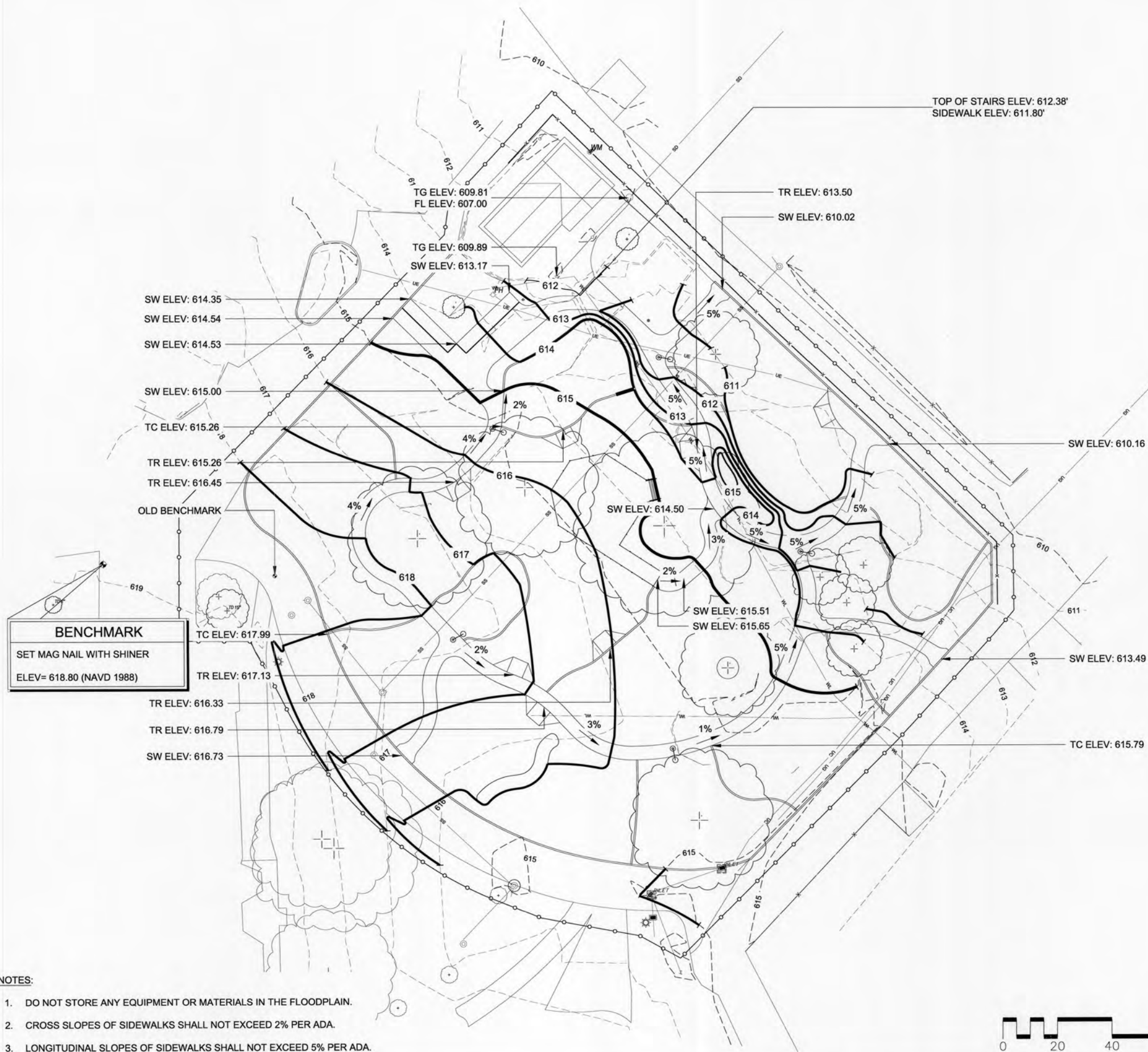
	POUR IN PLACE SURFACING		EXISTING TREES
	ARTIFICIAL TURF SURFACING		SANITARY SEWER MANHOLE
	LOOSE FILL MULCH SURFACING		WATER METER
	CONCRETE WALK		BENCHMARK
	TREE MULCH		
	HANDICAP RAMP		
	SIDEWALK LIGHT		
	645		CONTOUR MAJOR
	649		CONTOUR MINOR
			DELTA FENCE
			EXPANSION JOINT
			HAND TOOLED CONTROL JOINT



SITE PLAN	
PROJECT # SP19-7	
TULSA ZOO PLAYGROUND	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23RD TULSA, OK 74107 915-584-5454	
REVISION	BY DATE
PLAN SCALE:	DRAWN: MH/BB
N/A	DESIGNED: MH
	SURVEY: AAB
PROFILE SCALE:	PROJ. MNGR. EP 8/19
HORIZONTAL:	LEAD ENGR. MCH 8/19
N/A	FIELD MNGR. KSF 8/19
VERTICAL:	RECOMMENDED: HAS 8/19
N/A	DESIGN MANAGER
FILE:	DRAWING:
ATLAS PAGE NO:	DATE: 7/22/19
	SHEET 4 OF 25 SHEETS

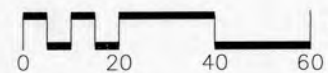
LEGEND

	PROPOSED CONTOUR
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	SANITARY SEWER
	CONTOUR MAJOR (EXISTING)
	CONTOUR MINOR (EXISTING)
	TEMPORARY CONST FENCE
	SILT FENCE
	EXISTING TREES
	SANITARY SEWER MANHOLE
	WATER METER
	BENCHMARK
TR ELEV:	TOP OF RAMP ELEVATION
SW ELEV:	SIDEWALK ELEVATION
TC ELEV:	TOP OF CURB ELEVATION
TG ELEV:	TOP OF GRATE ELEVATION
FL ELEV:	FLOWLINE ELEVATION



NOTES:

- DO NOT STORE ANY EQUIPMENT OR MATERIALS IN THE FLOODPLAIN.
- CROSS SLOPES OF SIDEWALKS SHALL NOT EXCEED 2% PER ADA.
- LONGITUDINAL SLOPES OF SIDEWALKS SHALL NOT EXCEED 5% PER ADA.

FINISH SURFACE GRADING PLAN
PROJECT # SP19-7

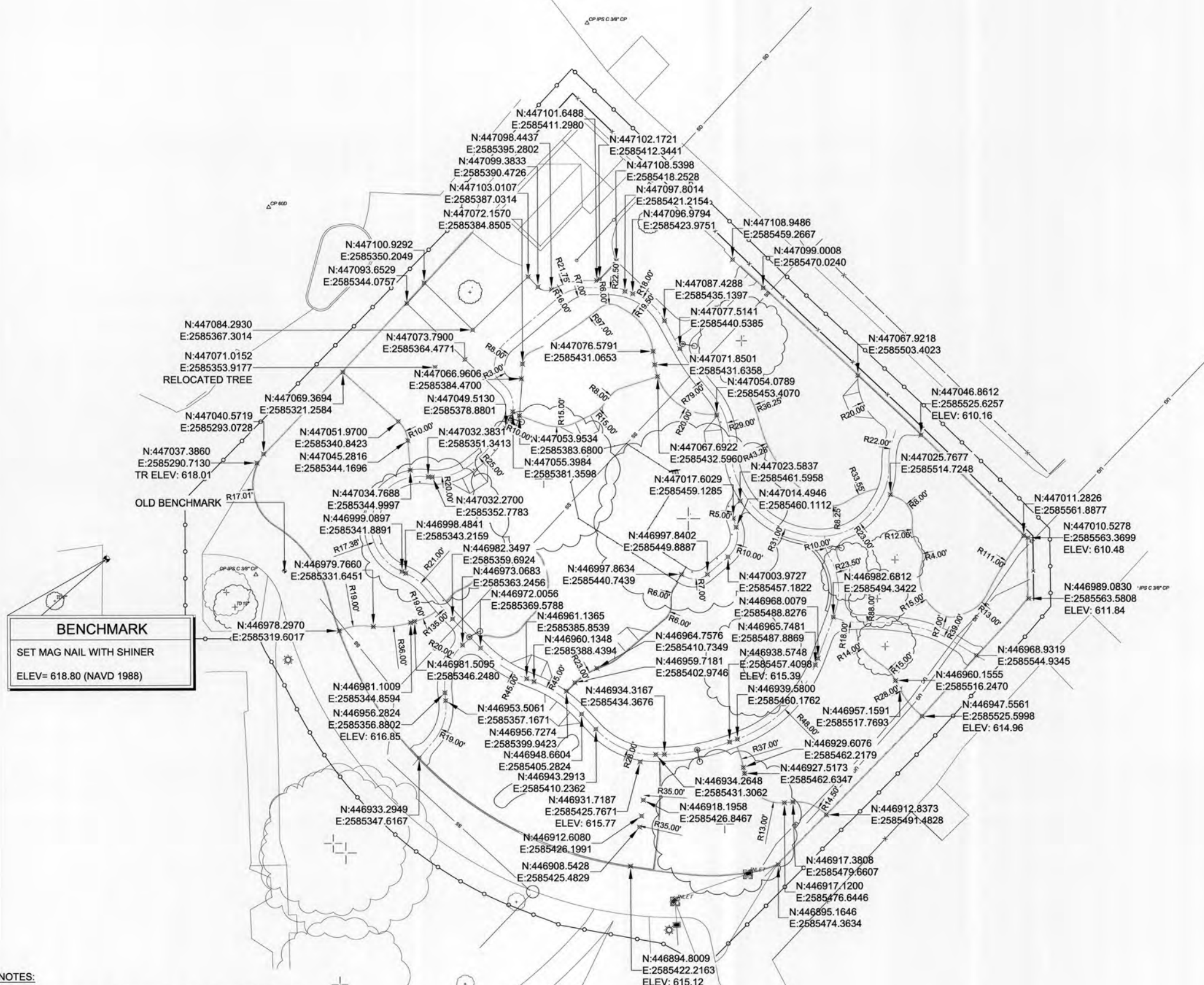
TULSA ZOO PLAYGROUND

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENTPLANS AND ESTIMATES PREPARED BY:
LANDPLAN CONSULTANTS
1110 WEST 23rd TULSA, OK 74107 918-584-6464

REVISION	BY	DATE	PLAN SCALE:	DRAWN	MRBB	APPROVED:
			N/A	DESIGNED	MH	
				SURVEY	AAB	
			PROFILE SCALE:	PROJ. MNGR.	08/01/19	
			HORIZONTAL:	LEAD ENGR.	08/01/19	
				FIELD MNGR.	08/01/19	
			VERTICAL:	RECOMMENDED	08/01/19	
				DESIGN MANAGER	08/01/19	
			FILE:	DRAWING:	DATE	08/23/19
			ATLAS PAGE NO:		SHEET	5 OF 25 SHEETS

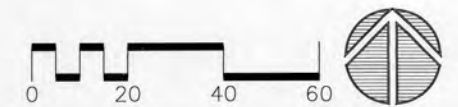
LEGEND

— OE —	OVERHEAD ELECTRIC
— UE —	UNDERGROUND ELECTRIC
— SS —	SANITARY SEWER
- - - 615 - - -	CONTOUR MAJOR (EXISTING)
- - - 614 - - -	CONTOUR MINOR (EXISTING)
— x — x — x —	TEMPORARY CONST FENCE
— x — x — x —	SILT FENCE
	EXISTING TREES
	SANITARY SEWER MANHOLE
	WATER METER
	BENCHMARK
	BENCH
	LITTER RECEPTACLE
	ELECTRIC POLE
	LANDSCAPE BOULDER
	LIGHT POLE
N:	NORTHING
E:	EASTING
R	RADIUS



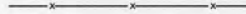
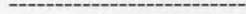
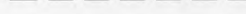
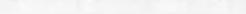
BENCHMARK
SET MAG NAIL WITH SHINER
ELEV= 618.80 (NAVD 1988)

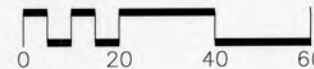
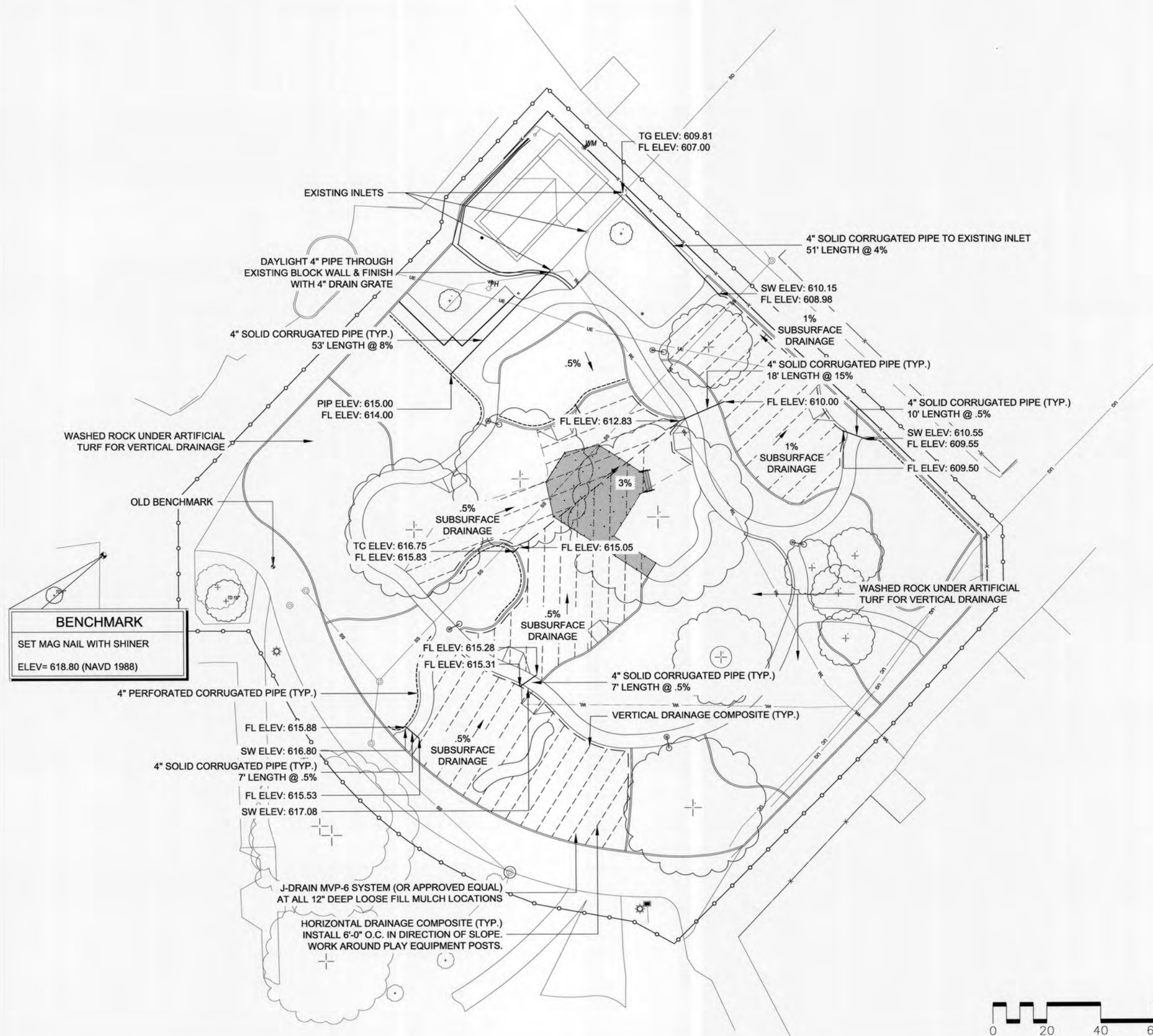
- NOTES:**
- DIGITAL FILES WILL BE PROVIDED TO THE AWARDED BIDDER.
 - ALL CONSTRUCTION STAKING SHALL BE PROVIDED BY PROFESSIONALLY QUALIFIED PERSONNEL AND SHALL BE LICENSED BY THE STATE OF OKLAHOMA. CERTIFICATE OF ASSURANCE SHALL BE SUPPLIED BY THE CONTRACTOR.



LAYOUT PLAN			
PROJECT # SP197			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS			
1110 WEST 23rd TULSA, OK 74107 918-584-6464			
REVISION	BY	DATE	APPROVED:
N/A	DRAWN	MHB	
N/A	DESIGNED	MH	
N/A	SURVEY	AAB	
PROFILE SCALE:	PROJ. MNGR.	CP 8/19	
HORIZONTAL:	LEAD ENGR.	MMH 8/19	
VERTICAL:	FIELD MNGR.	CP 8/19	
	RECOMMENDED	MMH 8/19	
	DESIGN MANAGER	MMH 8/19	
FILE:	DRAWING:	DATE	8.23.19
ATLAS PAGE NO:		SHEET	6 OF 25 SHEETS

LEGEND

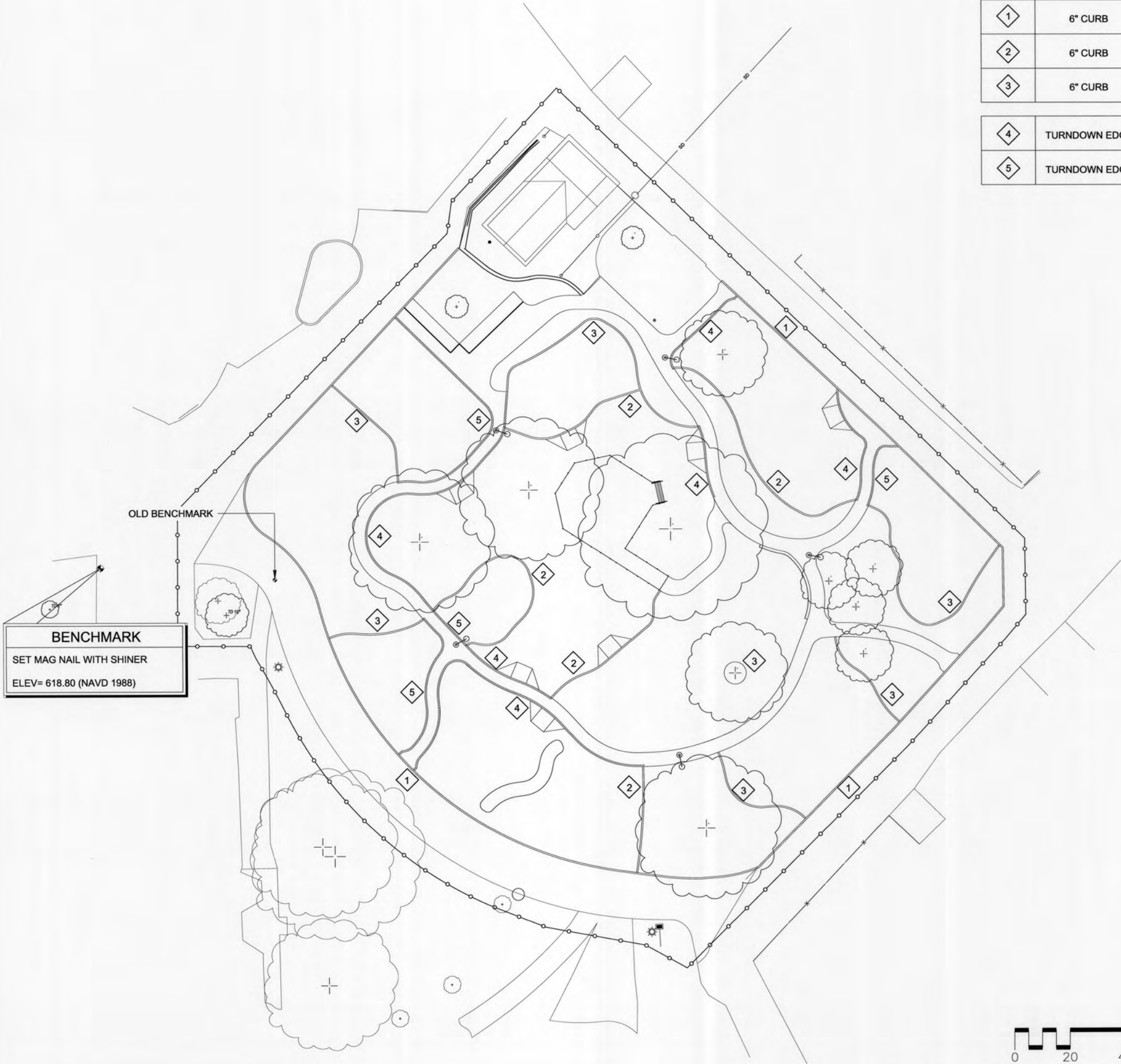
-  TEMPORARY CONST FENCE
-  SILT FENCE
-  4" PERFORATED CORRUGATED PIPE
-  4" SOLID CORRUGATED PIPE
-  VERTICAL COLLECTOR
-  HORIZONTAL DRAINAGE COMPOSITE
-  EXISTING TREES
-  SANITARY SEWER MANHOLE
-  BENCHMARK
-  INLET



DRAINAGE SUBSURFACE PLAN			
PROJECT # SP19-7			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23rd TULSA, OK 74107 918-584-6404			
PLAN SCALE:	DRAWN: MHB	DESIGNED: MH	APPROVED:
N/A	SURVEY: AAB	PROJ. MGR: <i>[Signature]</i>	<i>[Signature]</i> CITY ENGINEER
PROFILE SCALE:	LEAD ENGR: <i>[Signature]</i>	RECOMMENDED: <i>[Signature]</i>	
HORIZONTAL: N/A	FIELD MGR: <i>[Signature]</i>	DESIGN MANAGER: <i>[Signature]</i>	
VERTICAL: N/A	DATE: 8/23/19	SHEET 7 OF 25 SHEETS	
FILE:	DRAWING:		
ATLAS PAGE NO:			

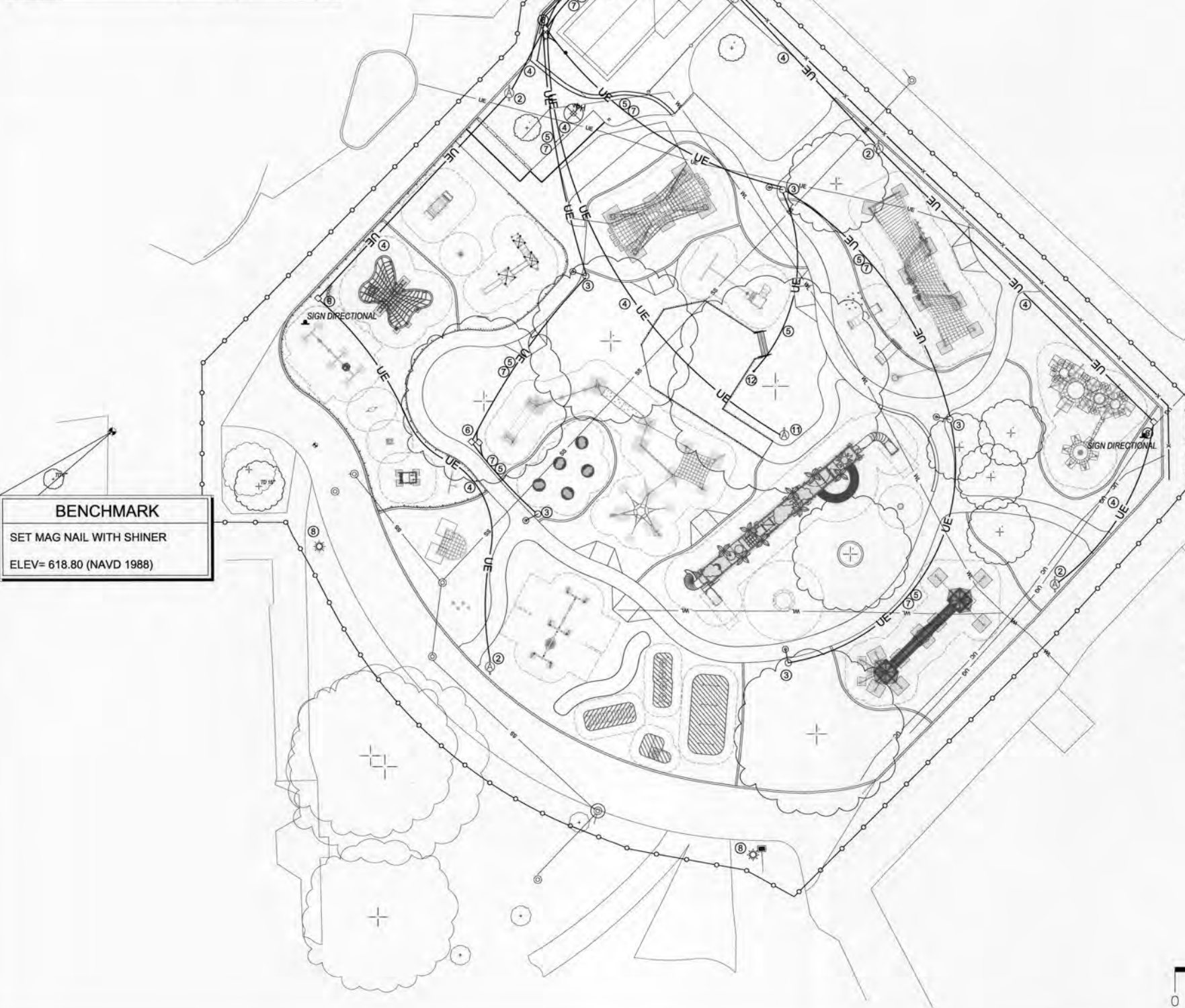
CURB & TURNDOWN EDGE SCHEDULE

ITEM #	ITEM	DESCRIPTION	QUANTITY	
1	6" CURB	6" X 14" PERIMETER CURB	663 LF	
2	6" CURB	6" X 14" PLAYGROUND CURB	360 LF	
3	6" CURB	6" X 12" PLAYGROUND CURB	336 LF	
4	TURNDOWN EDGE	6" X 14" TURNDOWN EDGE	352 LF	
5	TURNDOWN EDGE	6" X 12" TURNDOWN EDGE	184 LF	



CURB & TURNDOWN EDGE PLAN			
PROJECT # SP19-1			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23rd TULSA, OK 74107 918-584-6464			
PLAN SCALE:	DRAWN	MHBB	APPROVED:
N/A	DESIGNED	MH	
	SURVEY	AAB	
PROFILE SCALE:	PROJ. MNGR	SPB/19	
HORIZONTAL:	LEAD ENGR	8/1/19	
N/A	FIELD MNGR	8/1/19	
VERTICAL:	RECOMMENDED	8/1/19	
N/A	DESIGN MANAGER		
FILE:	DRAWING:	DATE	8/23/19
ATLAS PAGE NO:		SHEET 8 OF 25 SHEETS	

PANELBOARD		240/120V-1PH-3W	
NEMA 3R		300A - MCB	
DESCRIPTION	CB	Ph	DESCRIPTION
1 KOI POND (EXIST)	20/1	A	50/2 ??? (EXIST)
3 ---	20/1	B	---
5 ??? (EXIST)	20/1	A	40/2 BUILDING (EXIST)
7 IRRIGATION (EXIST)	20/1	B	---
9 PLAYGROUND LIGHTS	20/1	A	40/2 BUILDING (EXIST)
11 LIGHT POLE RECEP	20/1	B	---
13 LIGHT POLE RECEP	20/1	A	100/2 APPLETON RECEPT
15 SPARE	20/1	B	--- ON BUILDING (EXIST)
17 POWER PEDESTAL	100/2	A	100/2 ??? (EXIST)
19 ---	---	B	---
21 POWER PEDESTAL	100/2	A	20/1 SPARE
23 ---	---	B	20/1 SPARE
25 POWER PEDESTAL	100/2	A	20/1 SPARE
27 ---	---	B	20/1 SPARE
29 POWER PEDESTAL	100/2	A	20/1 SPARE
31 ---	---	B	20/1 SPARE
33 POWER PEDESTAL	100/2	A	20/1 SPARE
35 (DECK)	---	B	20/1 SPARE
37 SPACE	---	A	SPACE
39 SPACE	---	B	SPACE
41 SPACE	---	A	SPACE



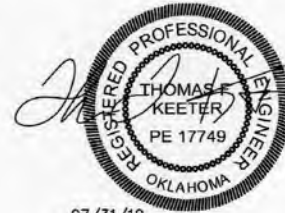
BENCHMARK
SET MAG NAIL WITH SHINER
ELEV= 618.80 (NAVD 1988)

ELECTRICAL GENERAL NOTES

1. PRIOR TO BID AND CONSTRUCTION SURVEY THE SITE TO DETERMINE ALL EXISTING CONDITIONS RELATED TO THE WORK. THIS INCLUDES ALL EXISTING UTILITIES.
2. THE DRAWINGS ARE INTENDED TO COVER THE LAYOUT AND DESIGN OF THE WORK AND ARE NOT TO BE SCALED FOR MEASUREMENTS.
3. ANY CONNECTION TO OR RELOCATION OF EXISTING UTILITIES REQUIRING DISCONNECTION OF NORMAL UTILITY SERVICES SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER OR HIS REPRESENTATIVE. ~~PREMIUM TIME SHALL BE INCLUDED.~~
4. IN NO CASE SHALL THE UTILITIES BE LEFT DISCONNECTED AT THE END OF A WORKDAY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER.
5. PROVIDE ALL EXCAVATION NECESSARY FOR INSTALLATION OF THE WORK INCLUDED. COMPLY WITH ALL APPLICABLE AND GOVERNING SAFETY REGULATIONS INCLUDING OSHA.
6. CONTRACTOR SHALL REPAIR ANY EXISTING FACILITIES DAMAGED DUE TO THE OPERATIONS OF THE CONTRACTOR.
7. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS OF ALL GOVERNING CODES, RULES AND REGULATIONS, INCLUDING THE FOLLOWING MINIMUM STANDARDS, WHETHER STATUTORY OR NOT: NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), INTERNATIONAL BUILDING CODE (IBC), AMERICANS WITH DISABILITIES ACT (ADA).
8. GUARANTEE EACH NEW SYSTEM AND EACH ELEMENT THEREOF AGAINST ANY DEFECT DUE TO FAULTY WORKMANSHIP, DESIGN OR MATERIAL FOR A PERIOD OF ONE YEAR.
9. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.
10. THE CONTRACTOR SHALL SHOW, ON PRINTS, ANY CHANGES FROM THE ORIGINAL DRAWINGS MADE DURING INSTALLATION DELIVER TO THE ARCHITECT WHEN THE WORK IS COMPLETED.
11. STORE EQUIPMENT AND MATERIAL TO PREVENT DAMAGE. DAMAGED EQUIPMENT SHALL BE REPLACED OR RESTORED TO A CONDITION ACCEPTABLE TO THE OWNER.
12. TEST ALL DEVICES, PERFORM EQUIPMENT START-UP, AND MAKE ANY ADJUSTMENTS REQUIRED TO MAKE THE EQUIPMENT FULLY OPERATIONS PER THE MANUFACTURER'S INSTRUCTIONS.
13. THE "ELECTRICAL" DOCUMENTS ARE STAND ALONE DOCUMENTS BUT ARE A PORTION OF A LARGER SET OF CONSTRUCTION DOCUMENTS. REFER TO ALL DOCUMENTS FOR WORK.

ELECTRICAL PLAN KEYED NOTES

- ① DEMOLISH/REMOVE EXISTING ELECTRICAL PANEL ON EXTERIOR WALL. PROVIDE NEW PANEL, CONFIGURED PER SCHEDULE. RECONNECT EXISTING CIRCUITS WHICH REMAIN IN USE. ROUTE NEW LIGHTING CIRCUIT THROUGH EXISTING CONTACTOR.
- ② POWER PEDESTAL WITH DUAL APPLETON ACR PIN AND SLEEVE RECEPTACLE. 240/12V 100 AMP 2 HOT, NEUTRAL, GROUND, WITH SCREW CAP. PROVIDE PIN PLUG FOR OWNERS USE. BOTH RECEPTACLES ON PEDESTAL ON ONE CIRCUIT.
- ③ NEW LIGHT POLE ON CONCRETE BASE WITH WP/GFI RECEPTACLES. RECEPTACLE ON SEPARATE CIRCUIT FROM LIGHT. RECEPTACLE TO BE TWO DUPLEX RECEPTACLES TAMPER RESISTANT STYLE. ONE MOUNTED AT ON POLE OPPOSITE SIDE FROM HAND HOLE, SECOND MOUNTED 12" ABOVE FIRST.
- ④ 2" PVC WITH CONDUCTORS FOR POWER PEDESTAL. 2-#1, 1-#1NEUTRAL, 1-#6GRD FROM PANEL BREAKER TO EACH POWER PEDESTAL. (PVC CONDUIT IS PART OF BASE BID - SHALL INCLUDE ALL TERMINATIONS, CONNECTIONS, AND ALL ACCESSORIES NECESSARY FOR PROPER INSTALLATION)
- ⑤ 1" PVC WITH CONDUCTORS TO LIGHT POLE. 2-#8 (LIGHT POWER) 2-#8 (RECEPTACLE) 1-#10GRD (SHARED). LIGHT CIRCUIT ROUTE THROUGH EXISTING TIMECLOCK ADJACENT TO PANEL. (PVC CONDUIT IS PART OF BASE BID - SHALL INCLUDE ALL TERMINATIONS, CONNECTIONS, AND ALL ACCESSORIES NECESSARY FOR PROPER INSTALLATION)
- ⑥ GRADE BOX, FLUSH WITH GRADE. QUAZITE GRADE BOX, PC STYLE, 12"x12", FLUSH WITH GRADE, TIER 15 RATED. WHERE TWO BOXES ARE COLOCATED, ONE BOX FOR POWER AND ONE FOR CAMERA CONDUIT. (GRADE/PULL BOXES ARE PART OF BASE BID)
- ⑦ 1"C (WITH PULL STRING) BETWEEN LIGHT POLES FOR OWNERS CAMERA. STUB UP NEXT TO NEW PANEL. SEPARATE CONDUIT FROM POWER CONDUIT.
- ⑧ EXISTING LIGHT POLE, RELOCATED BY TULSA ZOO.
- ⑨ EXISTING SERVICE FROM METER ON POLE TO PANEL. REMOVE EXISTING CONDUCTORS IN EXISTING 2 1/2" PVC CONDUIT BETWEEN PANEL AND METER. INSTALL NEW 3-350 KCMIL CONDUCTORS. RECONNECT AT METER AND AT NEW PANEL. COORDINATE WITH UTILITY AND REPLACE METER SOCKET IF REQUIRED FOR NEW CONDUCTOR SIZES.
- ⑩ PROVIDE 12"x12" WEATHERPROOF BOX ON BUILDING. STUB UP CAMERA CONDUITS INTO BOX. OWNER TO EXTEND FROM BOX.
- ⑪ POWER PEDESTAL WITH SINGLE APPLETON ACR PIN AND SLEEVE RECEPTACLE. 240/12V 100 AMP 2 HOT, NEUTRAL, GROUND, WITH SCREW CAP. PROVIDE PIN PLUG FOR OWNERS USE.
- ⑫ GFI QUAD RECEPTACLE AT DECK FOR POWER TO TREE MOUNTED LIGHTS. POWERED FROM SITE LIGHT CIRCUIT. MOUNT ON DECK IN WEATHERPROOF ENCLOSURE. PROVIDE TWO 1"C FROM ENCLOSURE TO TREE AND ROUTE UP TO 7FT. PAINT ANY EXPOSED BOX AND RACEWAY, COLOR AS APPROVED BY OWNER. IN ENCLOSURE PROVIDE TWO NEWHOUSE ELECTRIC WIRELESS REMOTE CONTROL OUTDOOR LED STRING LIGHT DIMMERS, 265 WATT.



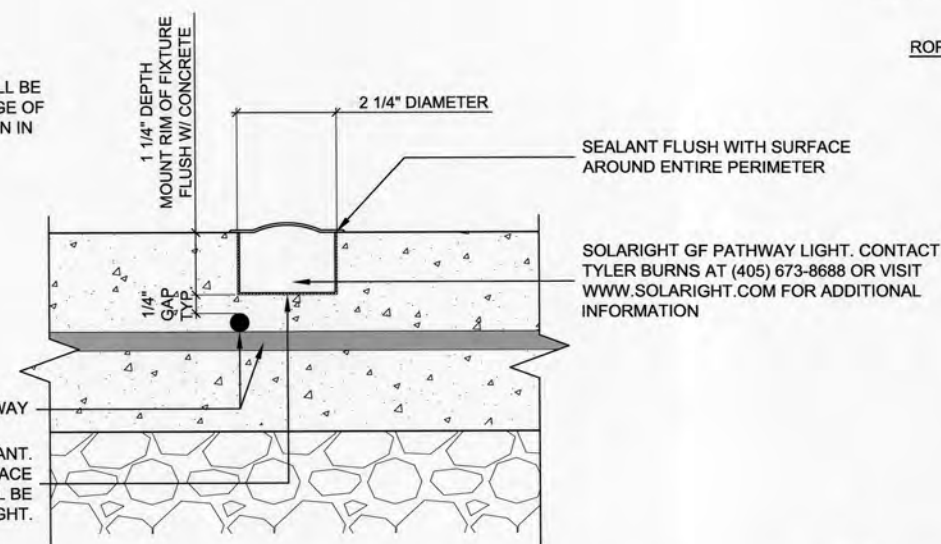
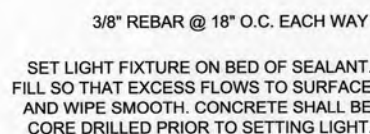
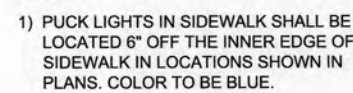
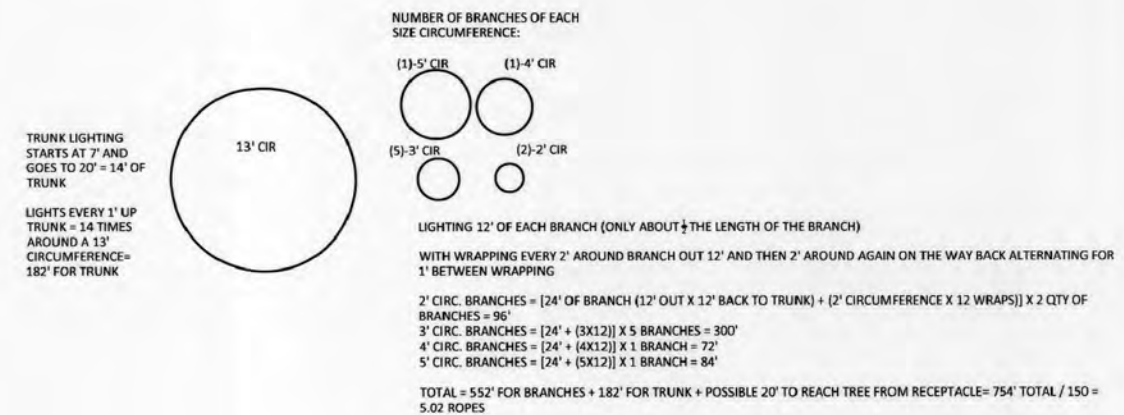
THOMAS F. KEETER, PE #17749
TFK ENGINEERING, INC.
COFA #5206 EXPIRES 06/2021

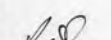


ELECTRIC PLAN			
PROJECT # SP19-4			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS			
1110 WEST 23rd TULSA, OK 74107 918-584-6484	APPROVED:		
PLAN SCALE:	DRAWN	DESIGNED	DATE
N/A	MBB	MB	
PROFILE SCALE:	SURVEY	AAS	
PROJ. MGR.	PROJ. MGR.	PROJ. MGR.	
LEAD ENGR.	LEAD ENGR.	LEAD ENGR.	
FIELD MGR.	FIELD MGR.	FIELD MGR.	
RECOMMENDED	RECOMMENDED	RECOMMENDED	
DESIGN MANAGER	DESIGN MANAGER	DESIGN MANAGER	
FILE:	DRAWING:	DATE	
ATLAS PAGE NO:		8.23.19	
		SHEET 9 OF 25 SHEETS	

ITEM	DESCRIPTION	MANUFACTURER	CONTACT	MODEL #	NOTES	QTY.
1	POLE	US ARCHITECTURAL LIGHTING	SMITH LIGHTING SALES INC	DSCP1-VLED-VSQ-80LED(525MA) -NW(4000K)-120-XPD-1-RAL8019	SIDEWALK LAMPS	5
2	LIGHT FIXTURE	US ARCHITECTURAL LIGHTING	SMITH LIGHTING SALES INC	RNTS-164-11-PT27-1-RAL8019S-GFI	SIDEWALK LAMP POST	5
3	BANNER ARM	US ARCHITECTURAL LIGHTING	SMITH LIGHTING SALES INC	RBA-RAL8019	SIDEWALK POST	5
4	ROPE LIGHTING (150' LENGTHS)	AMERICAN LIGHTING	SMITH LIGHTING SALES INC	ULRL-LED-AM-150 RL-END RL-CLIP/SCREW RL-INV SPL--SPLICER	LARGE TREE	5
5	TREE MOUNTED LED SPOT LIGHT & MOUNTING BAND	ABL-HYDREL	SMITH LIGHTING SALES INC	TRBS 12B 12C BZ PINE 9LED38 27K 120 FL FLC KM C3 BRS	LARGE TREE	1 EA

1. FOLLOW ALL MANUFACTURERS RECOMMENDED INSTALLATION METHODS AND GUIDELINES
2. WP/GFI RECEPTACLE SHALL BE INSTALLED IN A MANNER THAT IS TAMPER RESISTANT
3. INSTALLATION OF TREE MOUNTED SPOT LIGHT AND ROPE LIGHTING SHALL INCLUDE THE COST OF ALL CONNECTIONS, HARDWARE, LABOR, AND INCIDENTALS
4. INSTALLATION OF TREE LIGHTING SHALL INCLUDE A NIGHT VISIT WITH THE OWNER TO CONFIRM LIGHT SPACING AND ORIENTATION OF THE SPOT LIGHT
5. CONTRACTOR SHALL PROVIDE A MOUNTABLE AND LOCKABLE BOX TO HOUSE THE WP/GFI RECEPTACLE ALONG WITH TWO DIMMER SWITCHES FOR THE ROPE LIGHTS AND THE SPOT LIGHT EXTENSION CABLES. THE BOX SHALL BE MOUNTED TO THE DECK
6. CONDUIT SHALL BE USED TO RUN THE OUTDOOR RATED EXTENSION CABLES FROM THE BOX TO A CLOSE PROXIMITY TO THE TREE. ONCE RIGID CONDUIT IS NOT VIABLE DUE TO PROXIMITY TO TREE ROOTS, A PLIABLE EXTENSION CABLE COVER SHALL BE USED AND SHALL EXTEND UPWARD INTO THE TREE. CABLE COVER SHALL BE PAINTED OR SPECIFIED A COLOR TO BLEND INTO THE TREE



REVISION		BY	DATE	1110 WEST 23rd PLAN SCALE:		TULSA, OK 74107 DRAWN: MH/BS DESIGNED: MH SURVEY: AAB	916-584-5491 APPROVED:
				N/A			
				PROFILE SCALE:		PROJ. MNGR. <i>BS 8/19</i> LEAD ENGR. <i>BS 8/19</i> FIELD MNGR. <i>BS 8/19</i>	
				HORIZONTAL: N/A			
				VERTICAL: N/A		RECOMMENDED: <i>BS 8/19</i> DESIGN MANAGER	 CITY ENGINEER
				FILE:		DRAWING:	DATE: <i>8-28-19</i>
ATLAS PAGE NO:				SHEET 10 OF 25 SHEETS			



PLAYGROUND EQUIPMENT PLAN VIEW

PLAYGROUND EQUIPMENT SCHEDULE

PLAYGROUND EQUIPMENT SCHEDULE CONTINUED

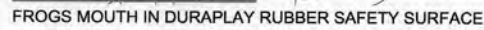
NOTES:

EQUIPMENT SCHEDULE

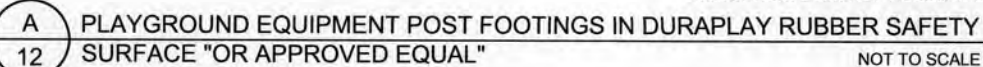


REVISION	BY	DATE	PLAN SCALE:	DRAWN	MS/BS	APPROVED: <
----------	----	------	-------------	-------	-------	--

4" ROUND COLOR SAMPLES SHALL BE SUBMITTED FOR COLOR MIX APPROVAL PRIOR TO INSTALLATION.

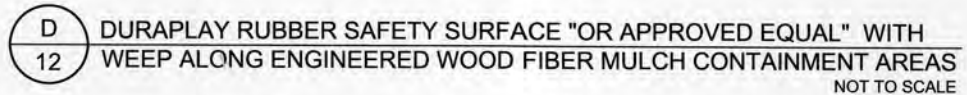
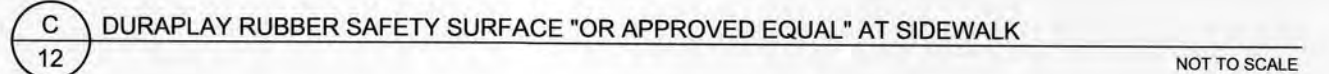
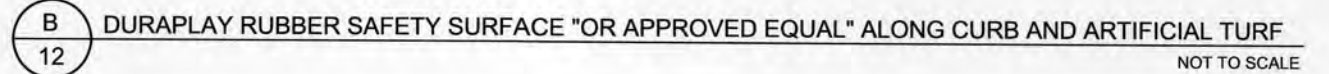


SAFETY SURFACE PLAN VIEW

ALUMINUM POST OR STEEL UPRIGHT

ITEM	DEPTH	SQUARE FOOTAGE
1	3"	1,831
2	4"	3,397
3	5"	1,306
	TOTAL	6,534

*COLOR SELECTION AND LAYOUT OF RUBBER SAFETY SURFACE TO BE DETERMINED DURING SUBMITTAL PROCESS



PLAN SCALE:	DRAWN	MHEB	APPROVED:
N/A	DESIGNED	MH	
	SURVEY	AAB	
PROFILE SCALE:	PROJ. MNGR.	<i>HS 8/19</i>	
HORIZONTAL:	LEAD ENGR.	<i>HS 8/19</i>	 CITY ENGINEER
N/A	FIELD MNGR.	<i>HS 8/19</i>	
VERTICAL	RECOMMENDED	<i>HS 8/19</i>	
N/A	DESIGN MANAGER		
FILE:	DRAWING:	DATE:	<i>8.23.19</i>
ATLAS PAGE NO:		SHEET 12 OF 25 SHEETS	





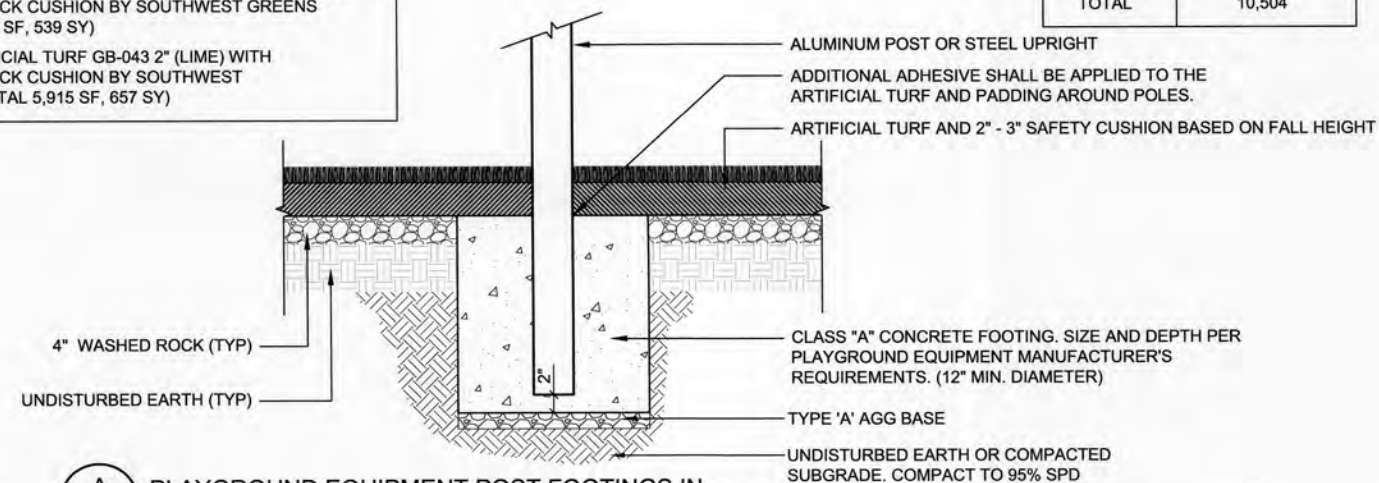
KEY

-----	CHANGE IN SURFACE MATERIAL
	SHAW ARTIFICIAL TURF GB-043 PLA 50 1 1/2\"/>
	SHAW ARTIFICIAL TURF GB-043 2\"/>

SAFETY SURFACE PLAN VIEW

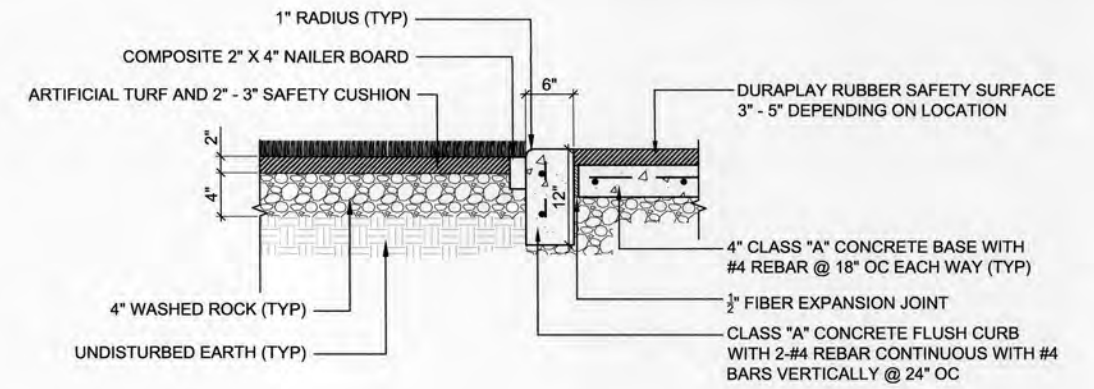
ARTIFICIAL TURF PAD SCHEDULE

ITEM	DEPTH	SQUARE FOOTAGE
1	2"	6,505
2	3"	3,999
TOTAL		10,504



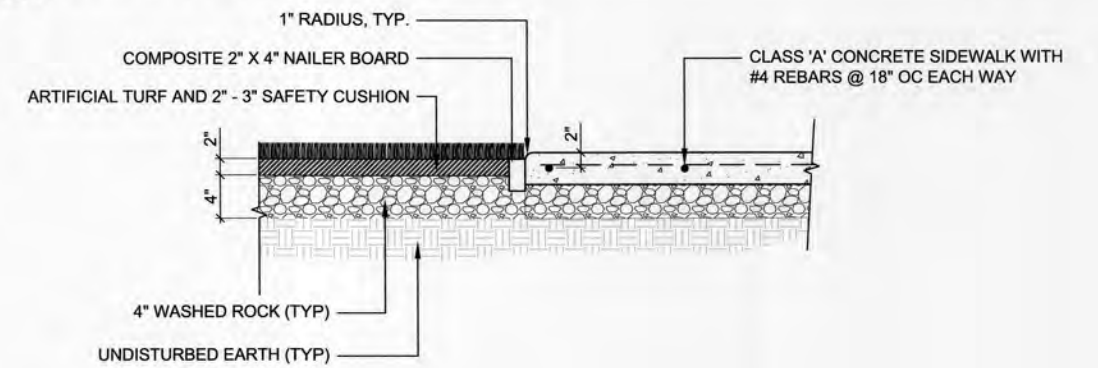
A
13
PLAYGROUND EQUIPMENT POST FOOTINGS IN
ARTIFICIAL TURF SAFETY SURFACE

NOT TO SCALE



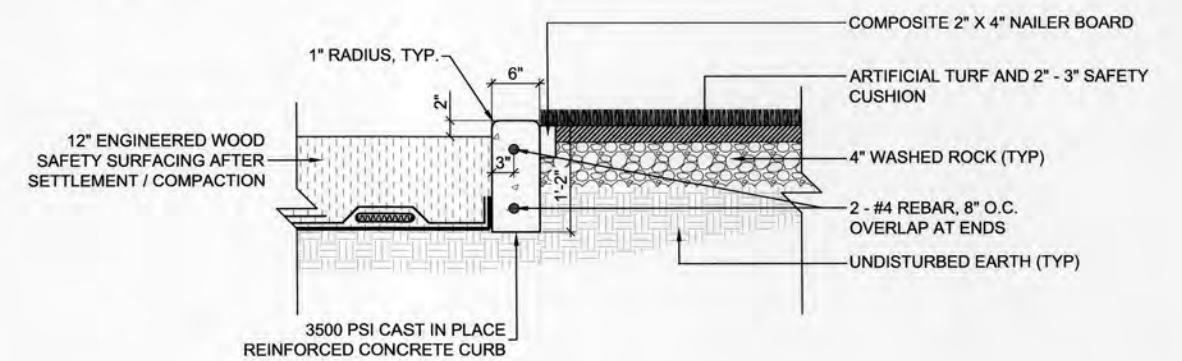
B
13
ARTIFICIAL TURF SAFETY SURFACE ALONG
CURB AND RUBBER SAFETY SURFACE

NOT TO SCALE



C
13
ARTIFICIAL TURF SAFETY SURFACE ALONG SIDEWALKS

NOT TO SCALE



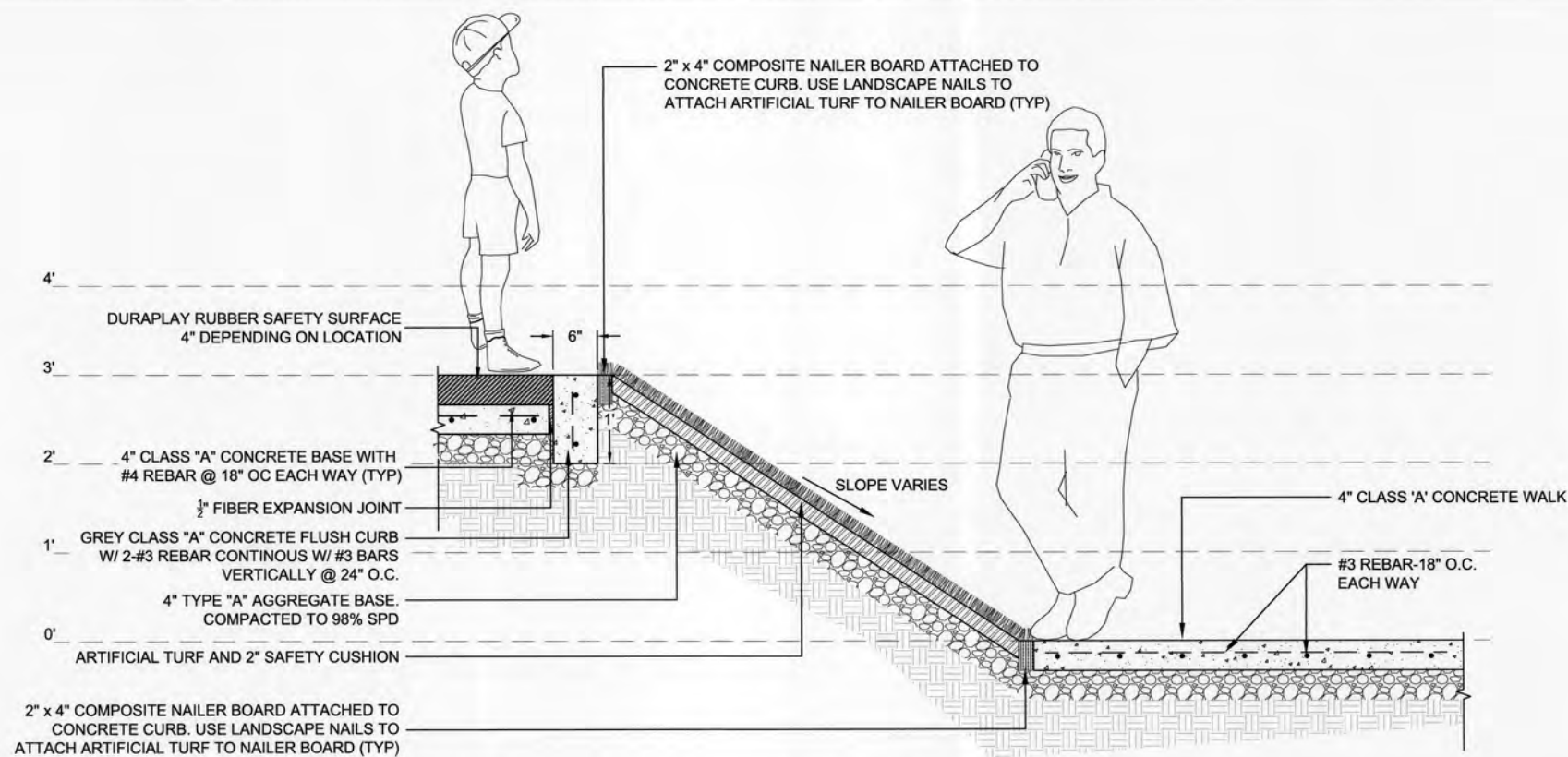
D
13
ARTIFICIAL TURF SAFETY SURFACE ALONG ENGINEERED WOOD FIBER
MULCH CONTAINMENT AREAS

NOT TO SCALE



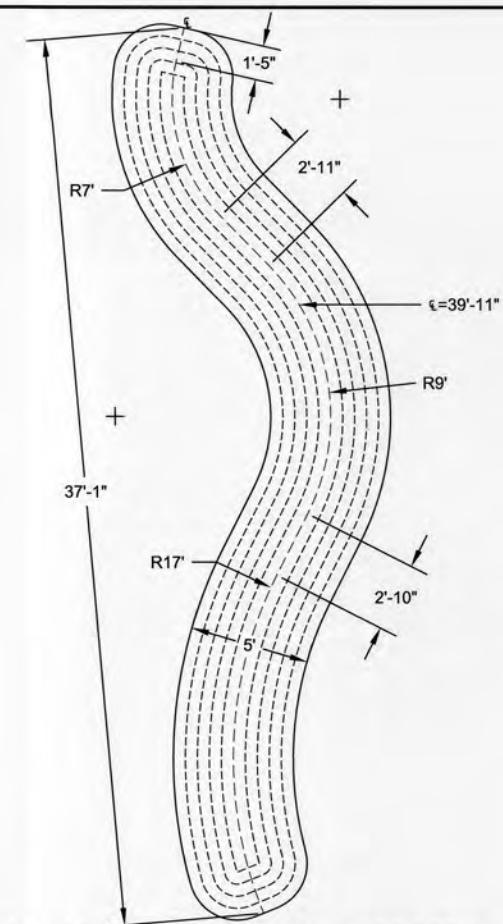
SAFETY SURFACE DETAILS (2)			
PROJECT # SP19-1			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23rd TULSA, OK 74107 919-584-6454			
REVISION	BY	DATE	APPROVED
PLAN SCALE:	DRAWN	DATE	
N/A	DESIGNED	DATE	
	SURVEY	DATE	
PROFILE SCALE:	PROJ. MGR.	DATE	
N/A	LEAD ENGR.	DATE	
HORIZONTAL:	FIELD MGR.	DATE	
N/A	RECOMMENDED	DATE	
VERTICAL:	DESIGN MANAGER	DATE	
N/A		DATE	
FILE:	DRAWING:	DATE	
ATLAS PAGE NO:			

F:\634 Tulsa Zoo Playground\Final\634-TULSA ZOO PLAYGROUND 2017 DETAILS.dwg, 7/30/2019 4:29:25 PM

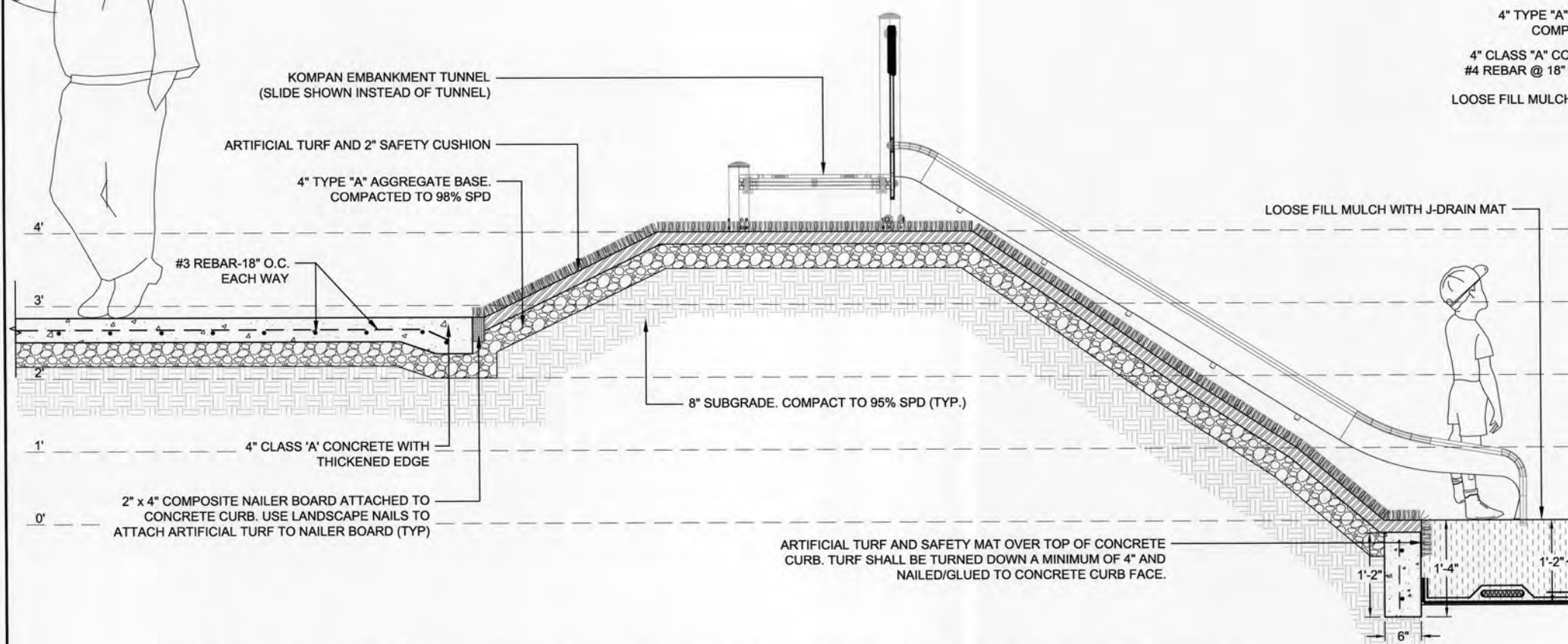


A
14 SECTION: ARTIFICIAL TURF SAFETY SURFACE ON SLOPE FROM DURAPLAY RUBBER SAFETY SURFACE
"OR APPROVED EQUAL" TO CONCRETE SIDEWALK

NOT TO SCALE

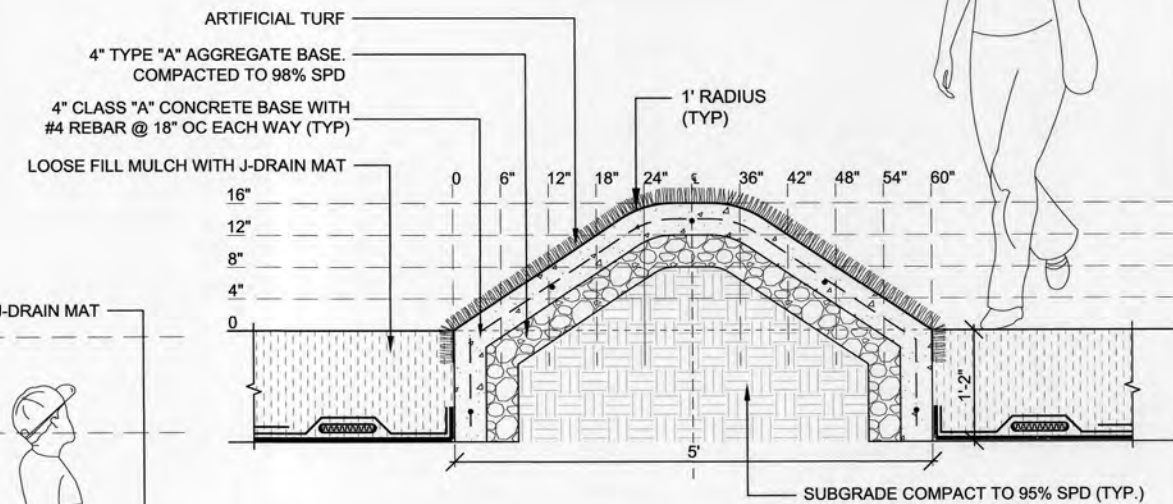


LAYOUT CONCRETE AND ARTIFICIAL TURF BERM



B
14 SECTION: ARTIFICIAL TURF SLOPE BETWEEN RUBBERIZED POUR IN PLACE SURFACE TO CONCRETE SIDEWALK

NOT TO SCALE



C
14 SECTION: CONCRETE AND ARTIFICIAL TURF BERM (TYP)

NOT TO SCALE



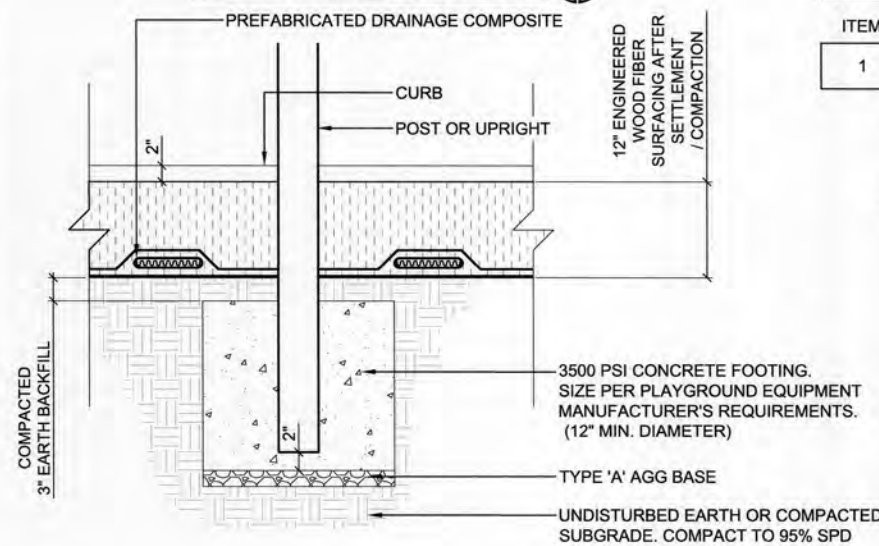
SAFETY SURFACE DETAILS (3)				
PROJECT # SP19-7				
TULSA ZOO PLAYGROUND				
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT				
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23rd TULSA, OK 74107 918-584-6464				
PLAN SCALE:	DRAWN	MHB	APPROVED:	
N/A	DESIGNED	MH		
	SURVEY	AAB		
PROFILE SCALE:	PROJ. MGR.	APB		
HORIZONTAL:	LEAD ENGR.	APB		
N/A	FIELD MGR.	APB		
VERTICAL:	RECOMMENDED	APB		
N/A	DESIGN MANAGER	APB		
FILE:	DRAWING:		DATE	8.23.19
ATLAS PAGE NO:			SHEET 14	OF 25 SHEETS



KEY

	CURB IN SAFETY SURFACE
	DURAPLAY RUBBER SAFETY SURFACE
	ARTIFICIAL TURF SAFETY SURFACE
	ENGINEERED WOOD FIBER MULCH SAFETY SURFACE
	3" TREE MULCH

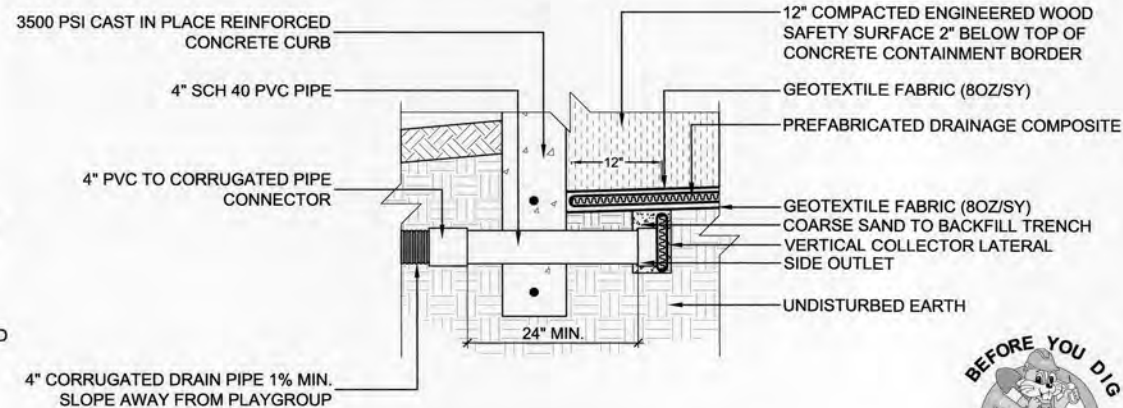
SAFETY SURFACE PLAN VIEW



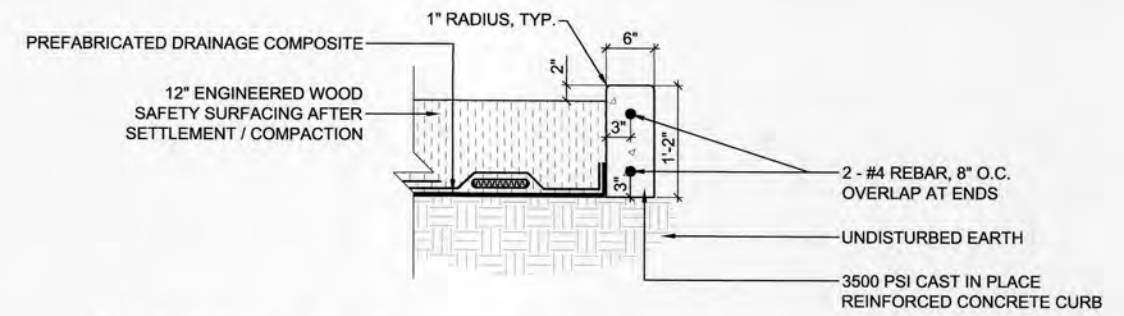
A 15 PLAYGROUND EQUIPMENT POST FOOTINGS
NOT TO SCALE

EWF MULCH SAFETY SCHEDULE

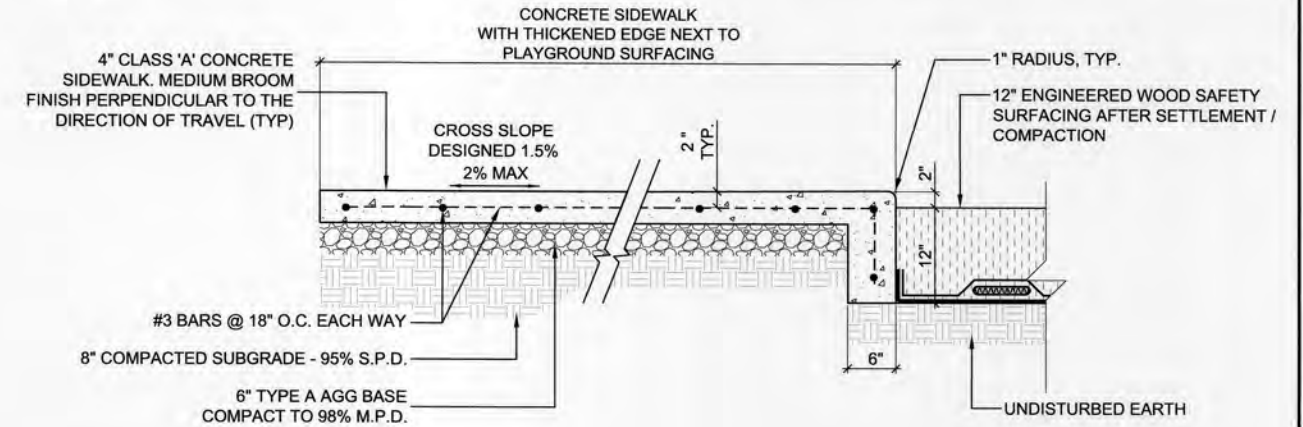
ITEM	DEPTH	SQUARE FOOTAGE
1	12"	12,340
TOTAL		12,340



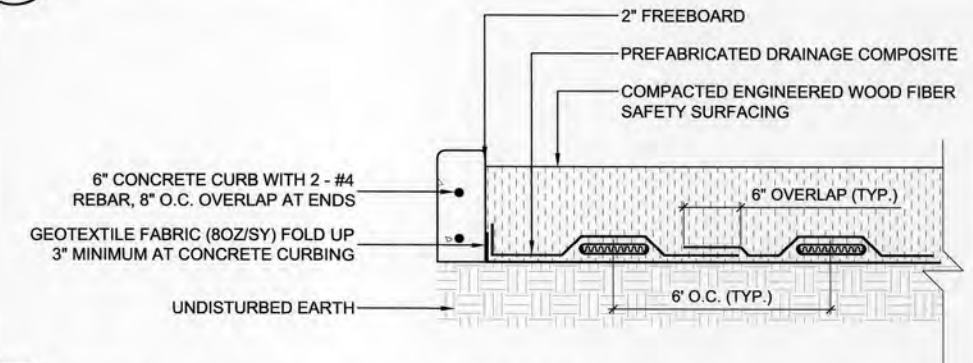
E 15 DRAINAGE OUTFLOW THROUGH CURB / WALL
NOT TO SCALE



B 15 SECTION - CONCRETE CURB ADJACENT TO ENGINEERED WOOD FIBER SAFETY SURFACE
NOT TO SCALE



C 15 SECTION - SIDEWALK TURN-DOWN ADJACENT TO ENGINEERED WOOD FIBER SAFETY SURFACE
NOT TO SCALE

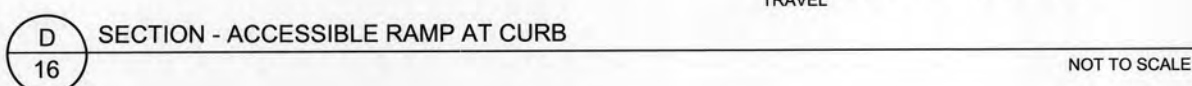
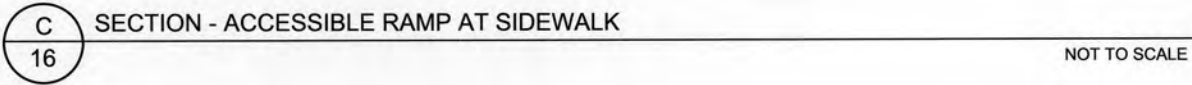
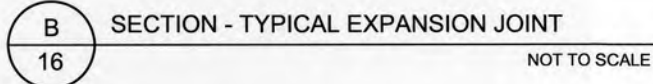
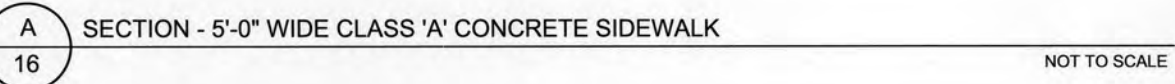


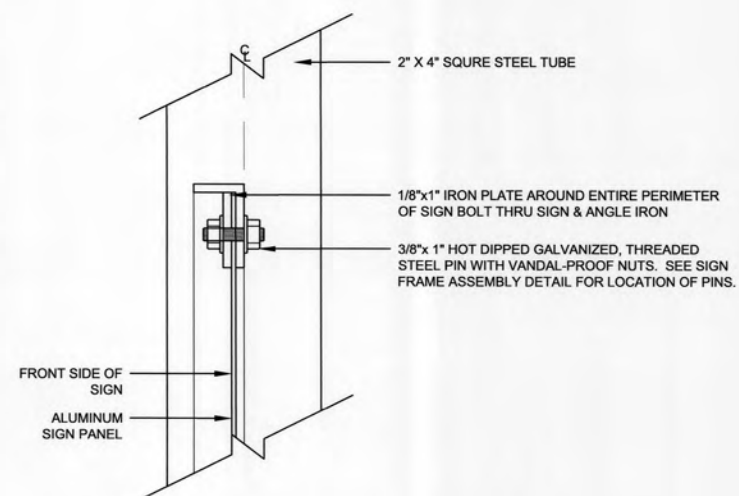
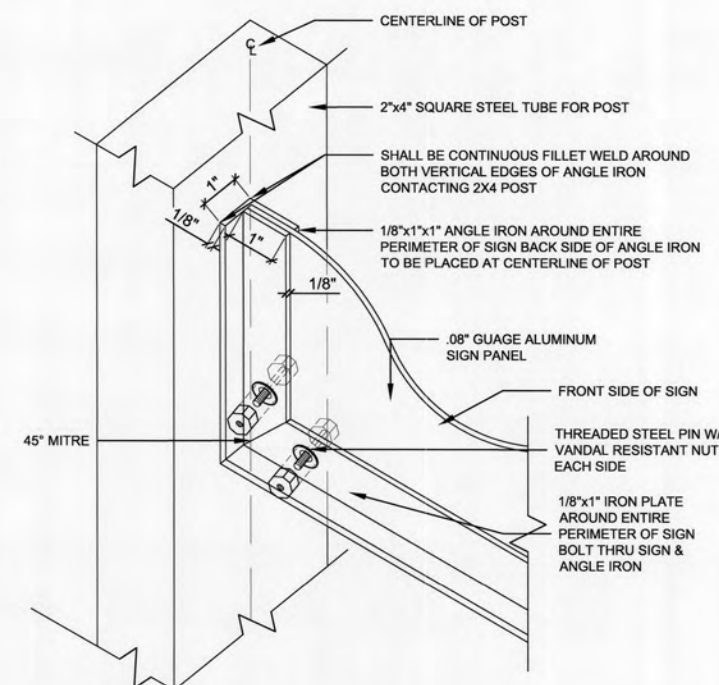
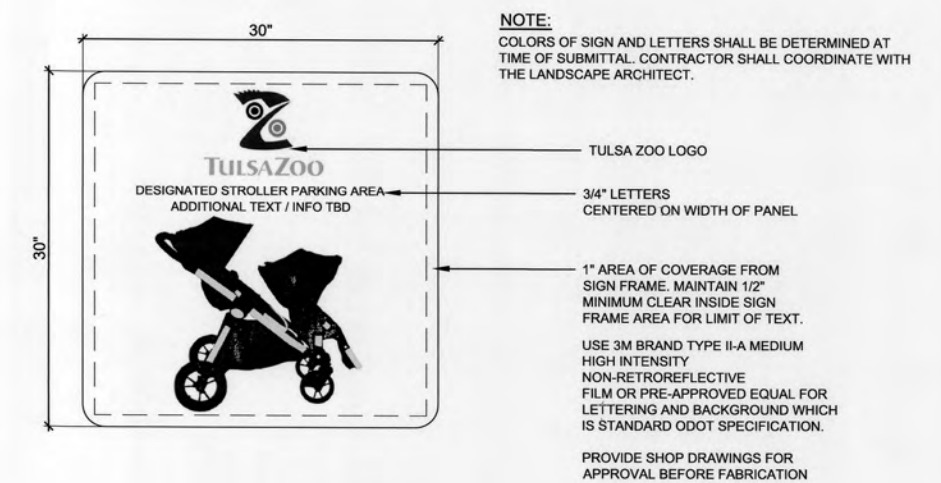
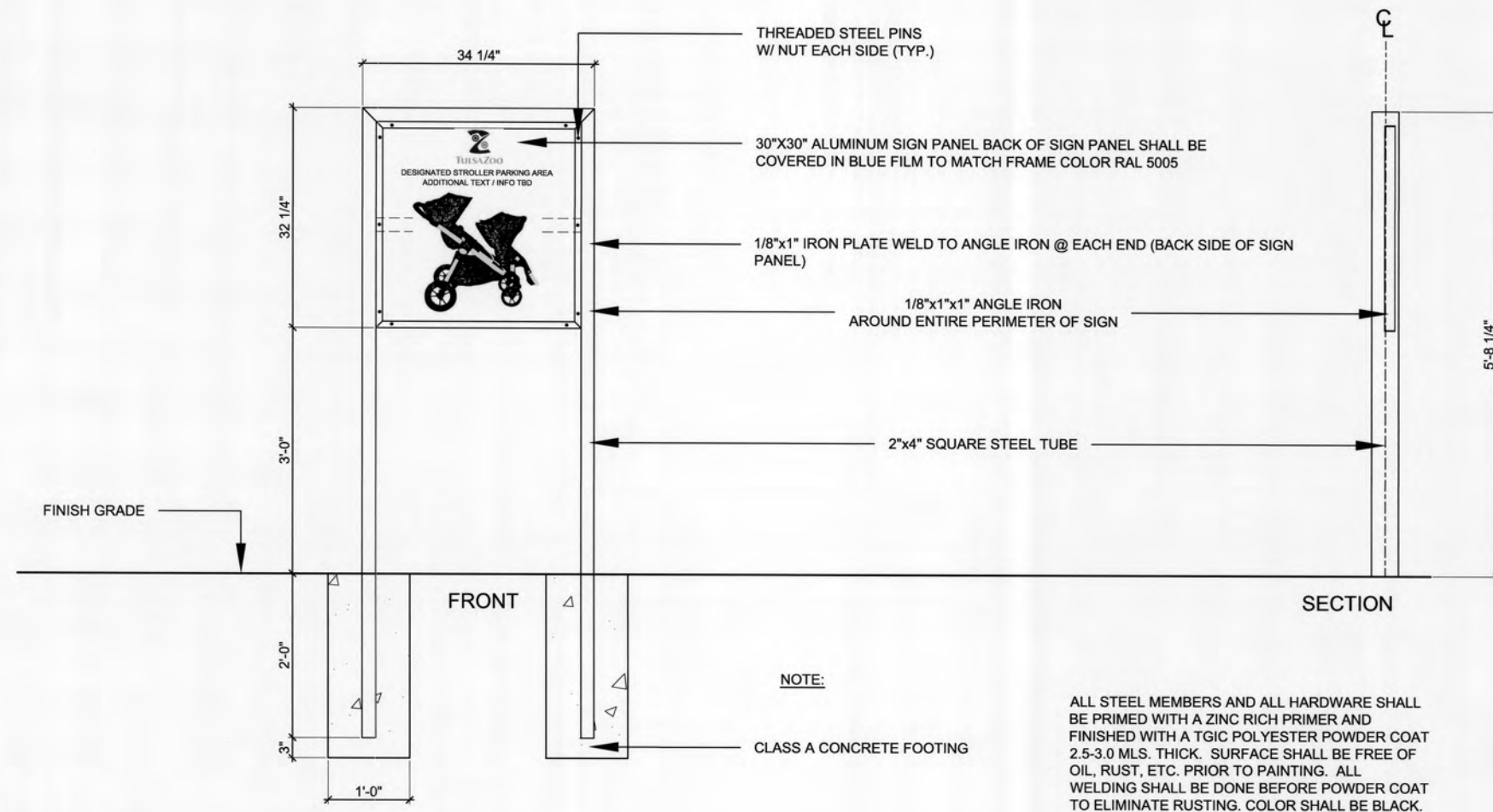
D 15 SECTION - PREFABRICATED DRAINAGE COMPOSITE LAYOUT J-DRAIN MVP6
NOT TO SCALE

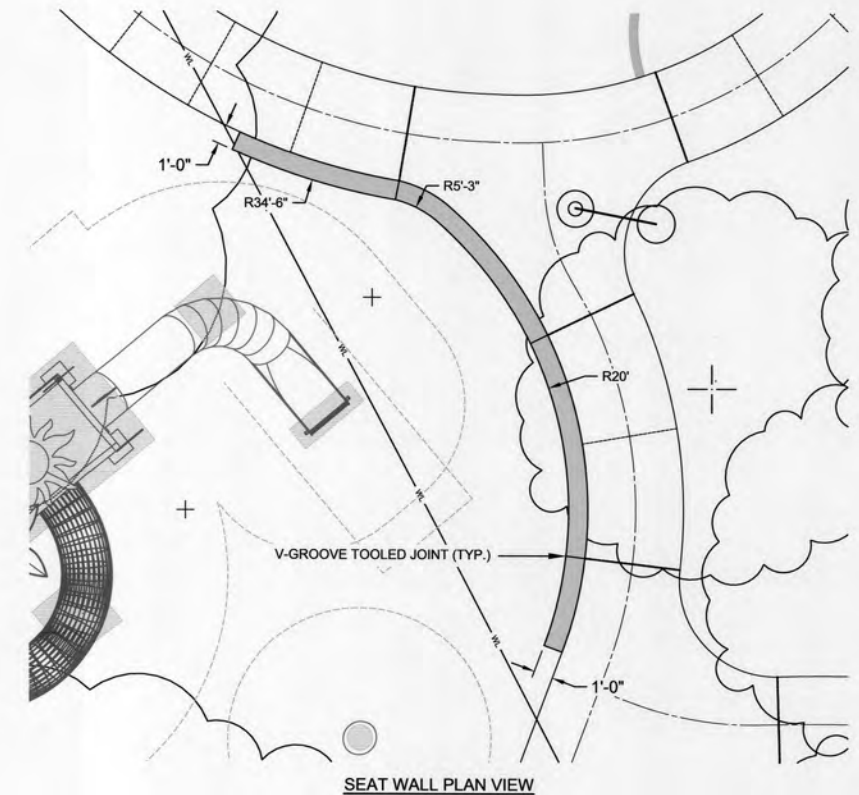
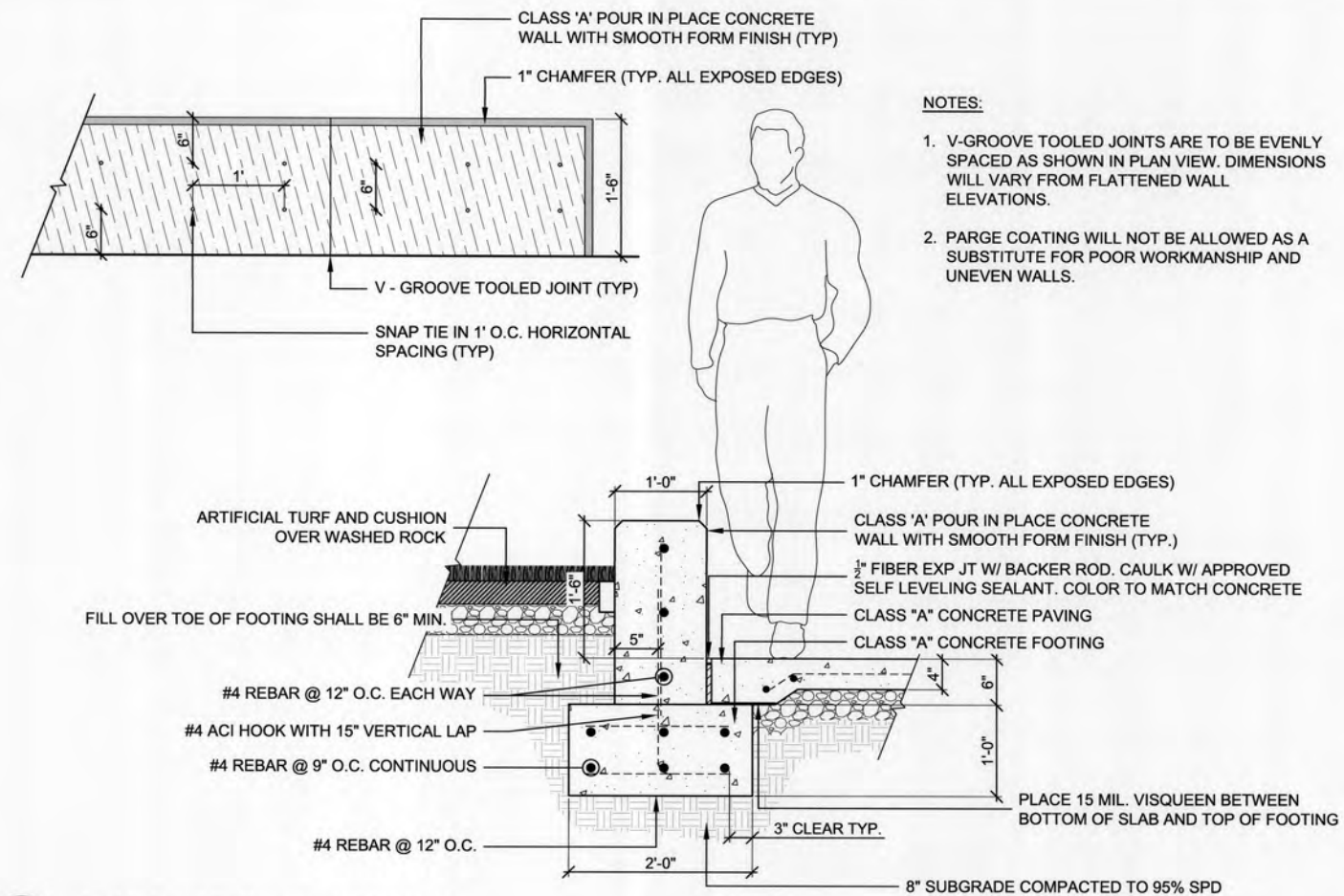


SAFETY SURFACE DETAILS (4)			
PROJECT # SP19-4			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23RD TULSA, OK 74107 918-584-6464			
REVISION	BY	DATE	APPROVED
N/A	DESIGNED	MM	
	SURVEY	AAS	
PROFILE SCALE:	PROJ. MNGR.	8/8/19	
HORIZONTAL:	LEAD ENGR.	8/8/19	
N/A	FIELD MNGR.	8/8/19	
VERTICAL:	RECOMMENDED	8/8/19	
N/A	DESIGN MANAGER		
FILE:	DRAWING:		
ATLAS PAGE NO:			
		DATE: 8.23.19	
		SHEET 15 OF 25 SHEETS	

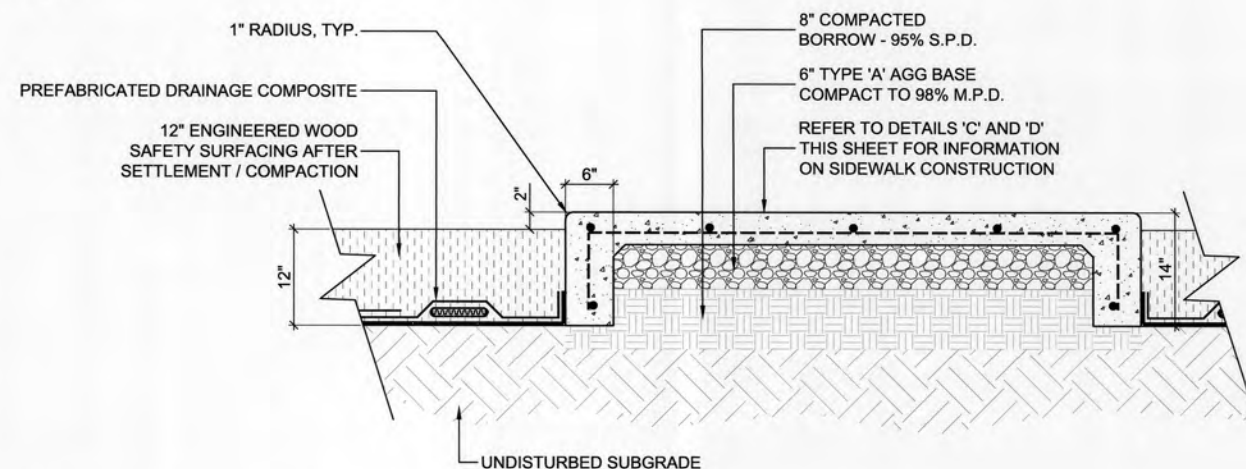
- 1) CONSTRUCT 2% MAX. CROSS SLOPE IN SAME DIRECTION AS EXISTING GRADE UNLESS OTHERWISE DESIGNATED. MINIMUM CROSS SLOPE SHALL BE 1.5%.
- 2) LONGITUDINAL GRADE SHALL NOT EXCEED 5% UNLESS OTHERWISE DESIGNATED.
- 3) WHEN SETTING GRADES FOR SIDEWALK, CONTRACTOR SHALL FIELD VERIFY THAT PAVING ELEVATION WILL NOT TRAP WATER ON EITHER SIDE OF SIDEWALK OR TRAIL AND WILL ALLOW WATER TO FLOW FREELY TO DRAIN AWAY FROM AREA.
- 4) PROVIDE CONTROL JOINTS IN THE 5' WIDE CONCRETE SIDEWALK EVERY 5' AND SEALED EXPANSION JOINTS EVERY 25' ALONG THE ENTIRE LENGTH OF ALL 5'-0" WIDE CONCRETE SIDEWALK SEGMENTS. SEALED EXPANSION JOINTS SHALL BE CONSTRUCTED PER CITY OF TULSA STANDARDS. SMOOTH EXPANSION JOINT DOWELS SHALL BE ½" X 10" UNLESS OTHERWISE SHOWN IN PLANS. GREASE CAPPED END OF DOWEL AS SHOWN IN DETAILS. DOWELS SHALL BE 18" IN LENGTH AT PLAY AREA RAMP. REFER TO DETAILS.
- 5) PROVIDE DOWELED EXPANSION JOINT AS SHOWN BETWEEN ALL EXISTING & PREVIOUSLY POURED CONCRETE AND NEWLY POURED CONCRETE. SLAB SHALL BE THICKENED TO 6" AT ALL EXPANSION JOINT DOWEL LOCATIONS.

[illegible]

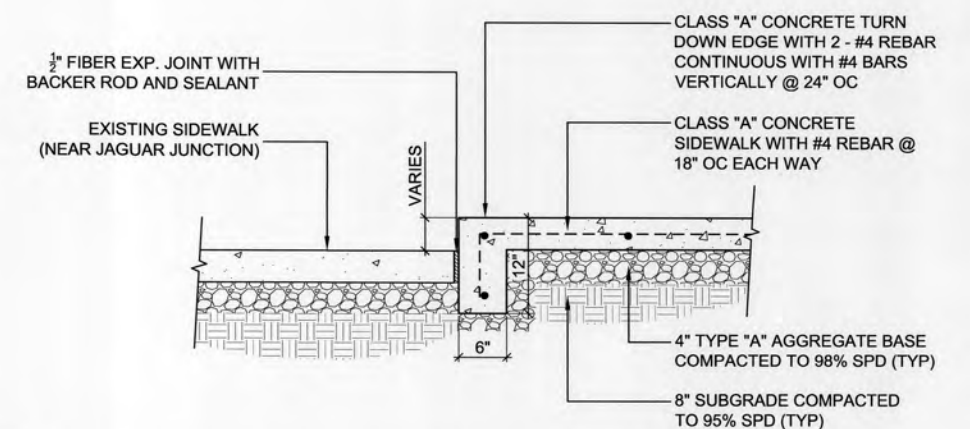
[illegible]



A SECTION: SEAT WALL & FOOTING



B	SECTION - SIDEWALK WITH TURN-DOWN EDGE ON BOTH SIDES
18	

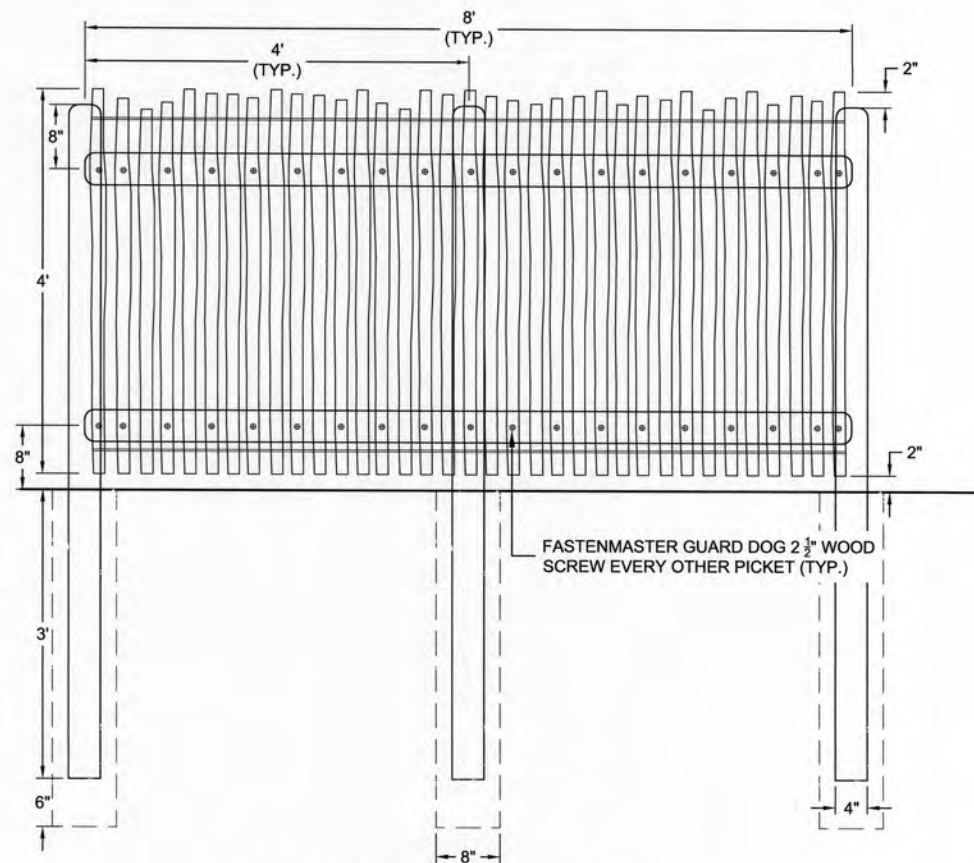


C STEP AT EXISTING CONCRETE SIDEWALK (NEAR JAGUAR JUNCTION)
18 NOT T

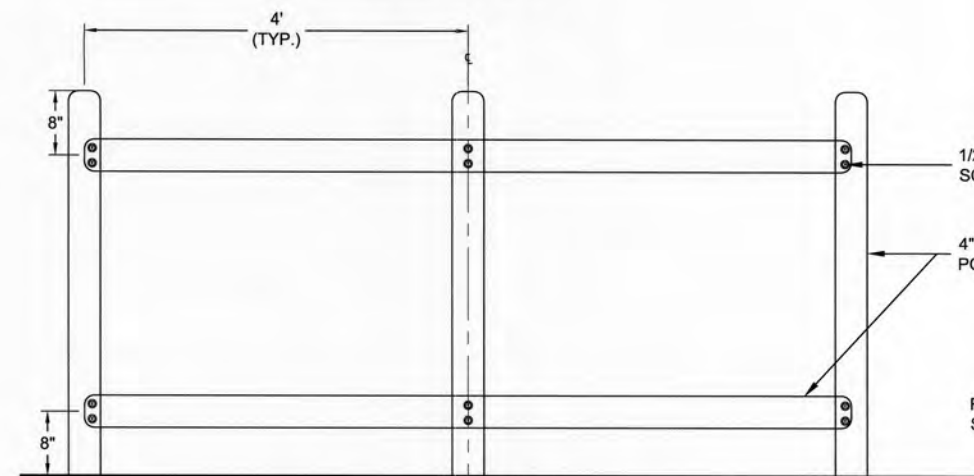


TYPICAL DETAILS (3)			
PROJECT # SP19-7			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1119 WEST 23rd TULSA, OK 74107 918-584-6464			
	DRAWN:	MH/BB	APPROVED:  CITY ENGINEER
	N/A	DESIGNED MH SURVEY AAB	
	PROFILE SCALE:	PROJ. MINGR. 2" = 8' 1/4"	
	HORIZONTAL:	LEAD ENGR. 2" = 8' 1/4"	
	N/A	FIELD MINGR. 2" = 8' 1/4"	
	VERTICAL	RECOMMENDED 2" = 8' 1/4"	
	N/A	DESIGN MANAGER	
	FILE:	DRAWING:	DATE: 8.22.19
	ATLAS PAGE NO.	SHEET 18 OF 25 SHEET	

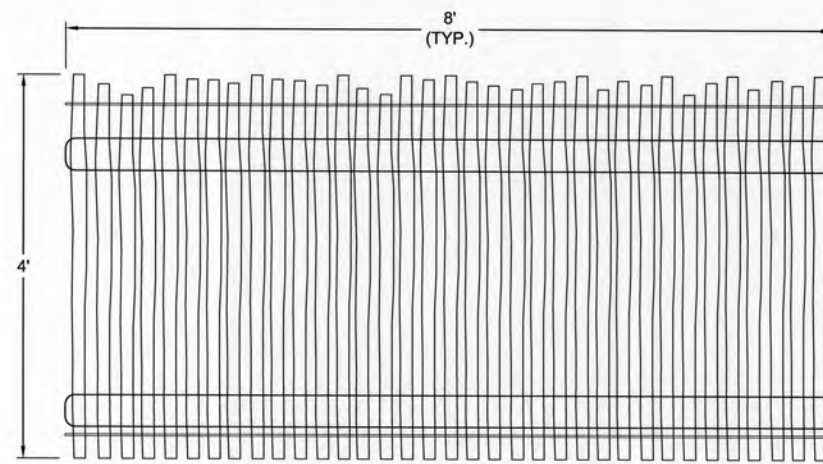
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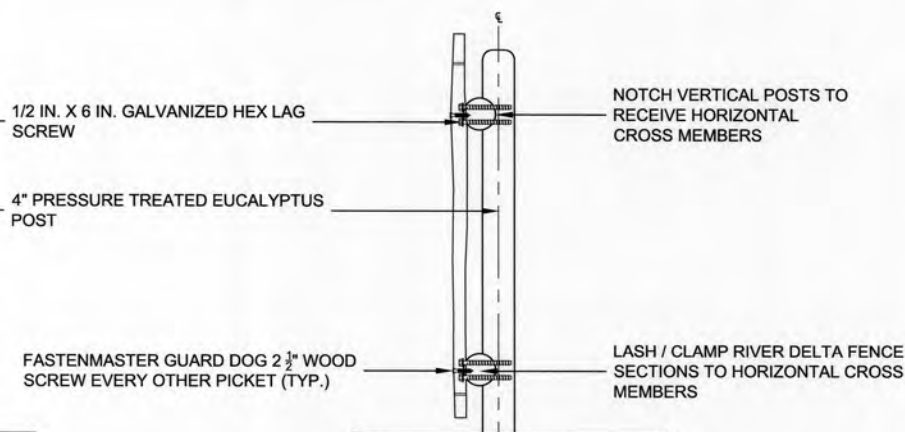
SECTION: FOOTING AND ASSEMBLY



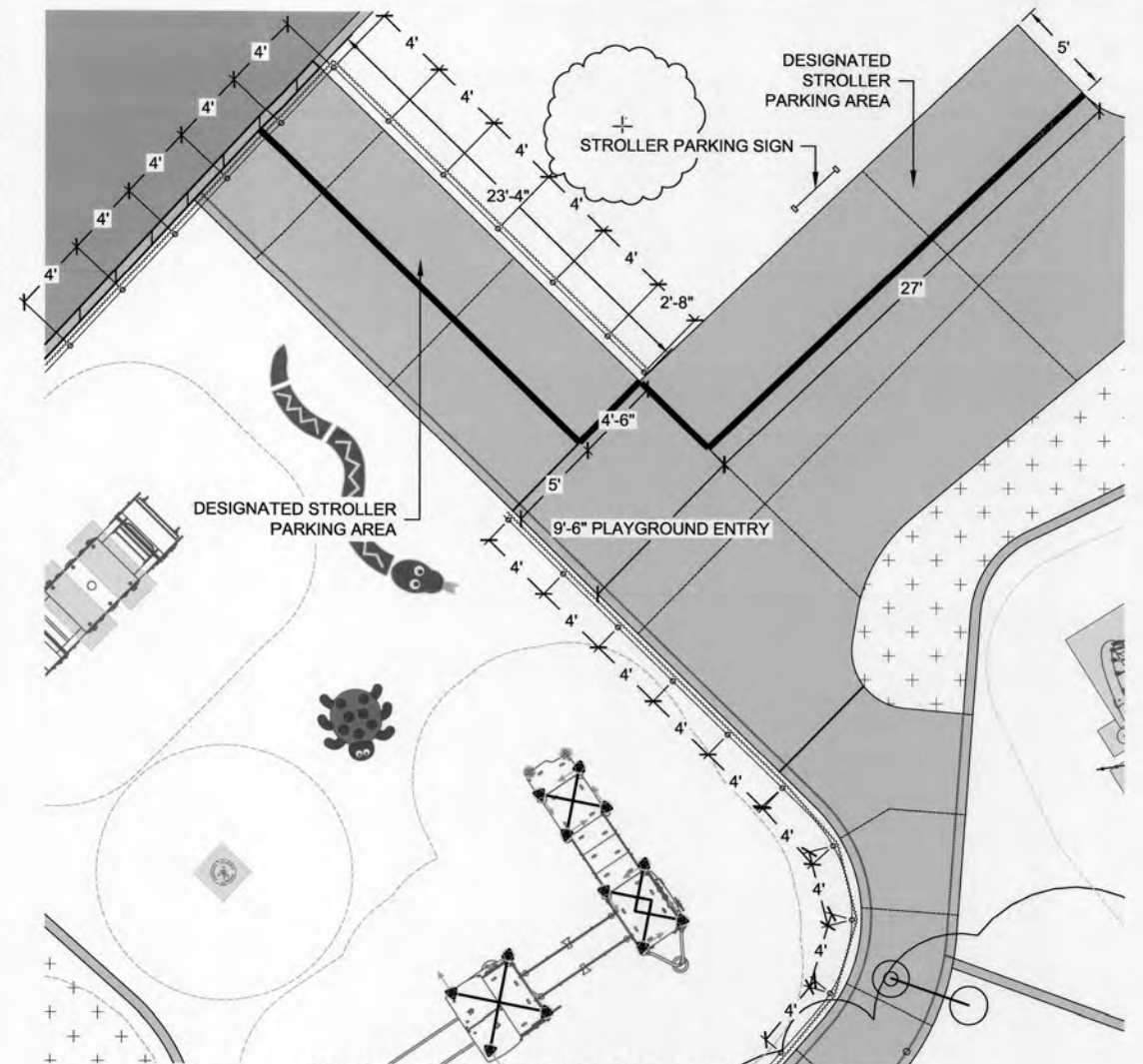
SECTION: FRAMING



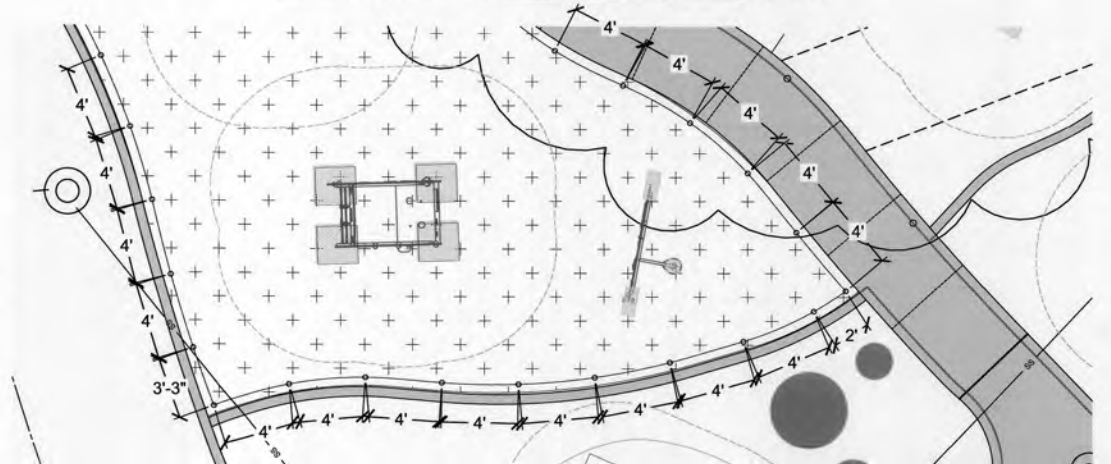
SECTION: RIVER DELTA FENCE PANEL



SECTION: ASSEMBLY



PLAN: POST LAYOUT @ ENTRY



PLAN: POST LAYOUT

TYPICAL DETAILS (4)			
PROJECT # SP19-7			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23RD TULSA, OK 74107 918-584-5454			
APPROVED:		DATE: 9-23-19	
SHEET 19 OF 25 SHEETS		SHEET 19 OF 25 SHEETS	

A
19

RUSTIC RIVER DELTA FENCING

NOT TO SCALE

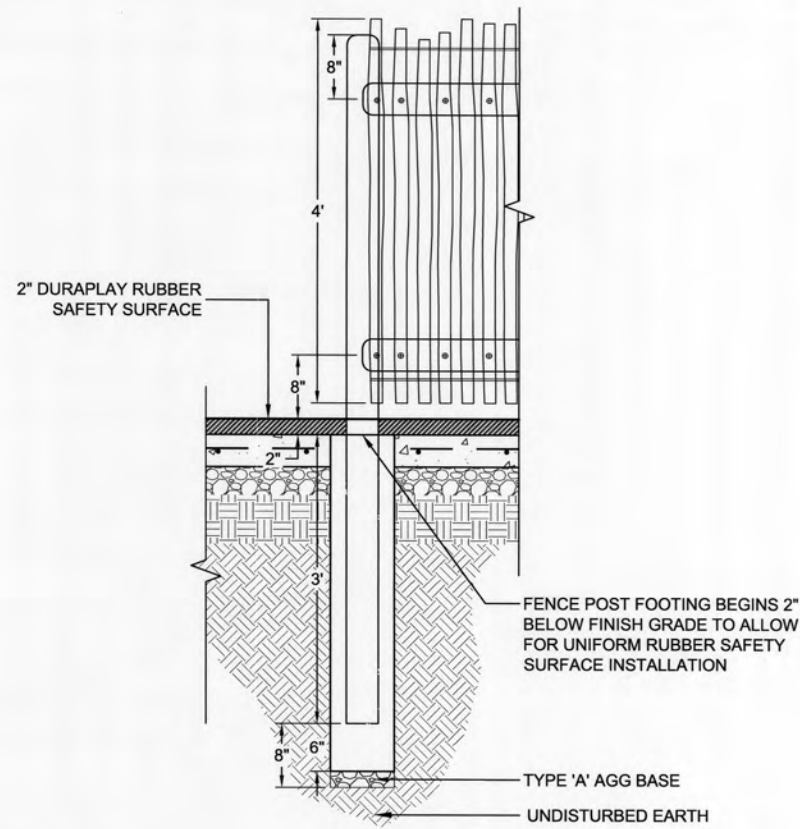


HEAD OFFICE
7040 S.W. 21ST PLACE
DAVIE FL. 33317

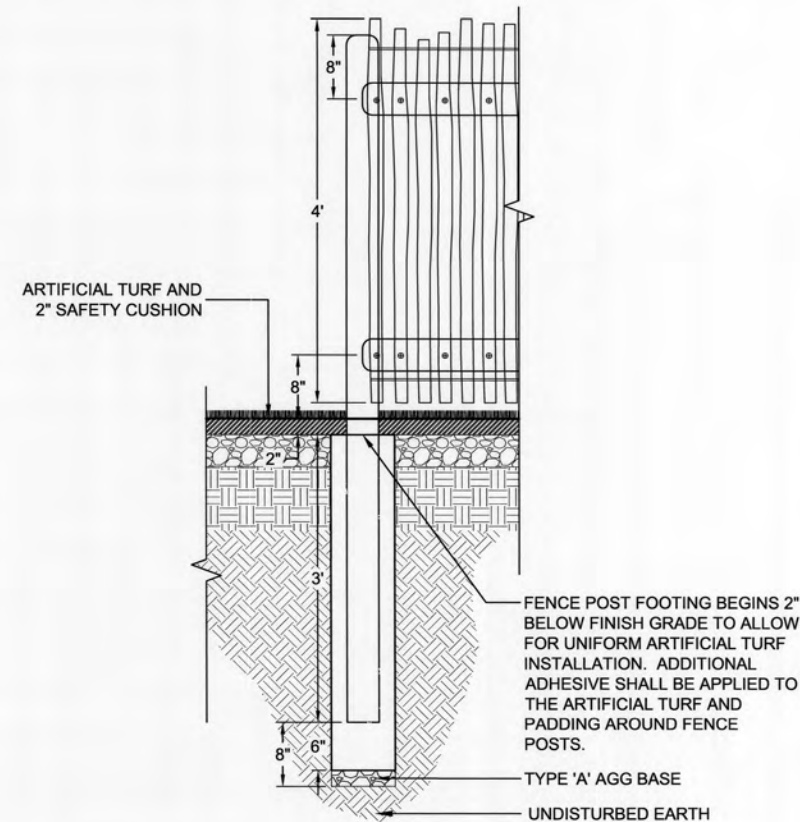
MIDWEST SALES OFFICE:
DOUG BROWN: 954-303-8070



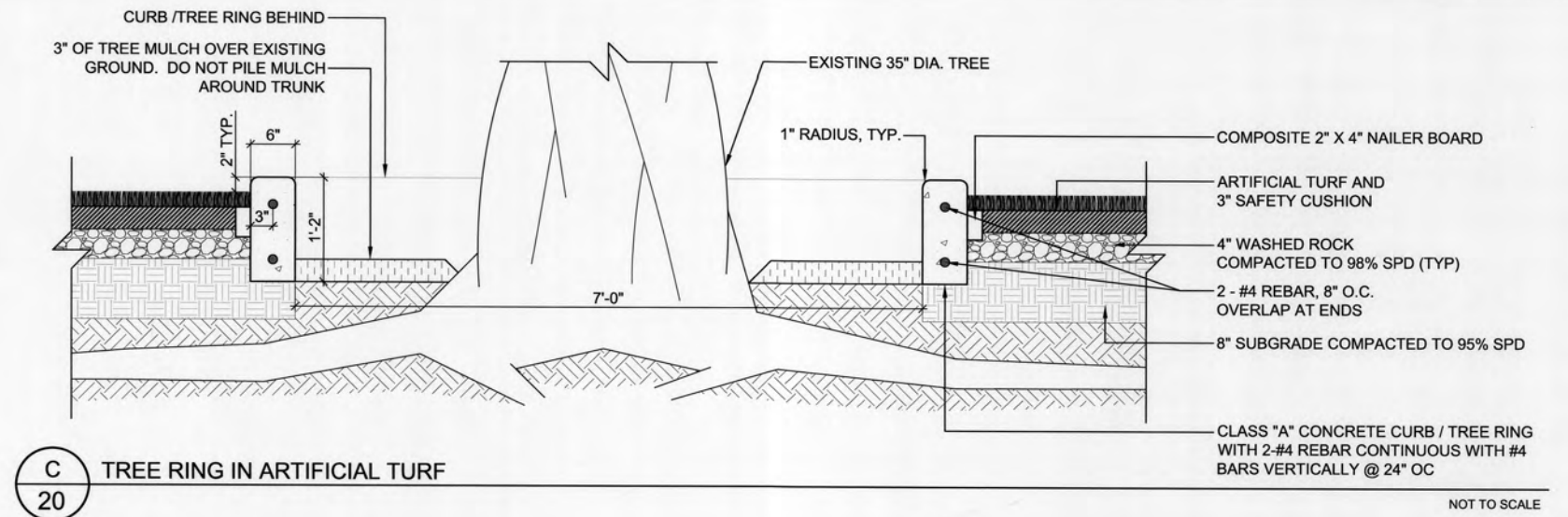
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				RECOMMENDED	8/8/19	
			VERTICAL:	DESIGN MANAGER		
			FILE:	DRAWING:		
			ATLAS PAGE NO:			



A
20 DELTA FENCING POST FOOTINGS IN DURAPLAY RUBBER SAFETY SURFACE "OR APPROVED EQUAL" NOT TO SCALE

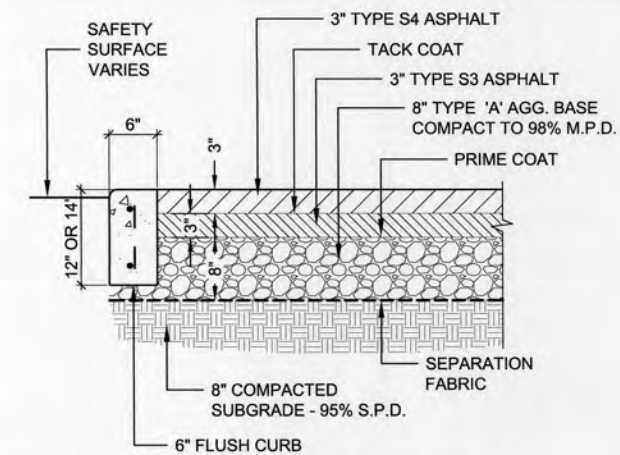
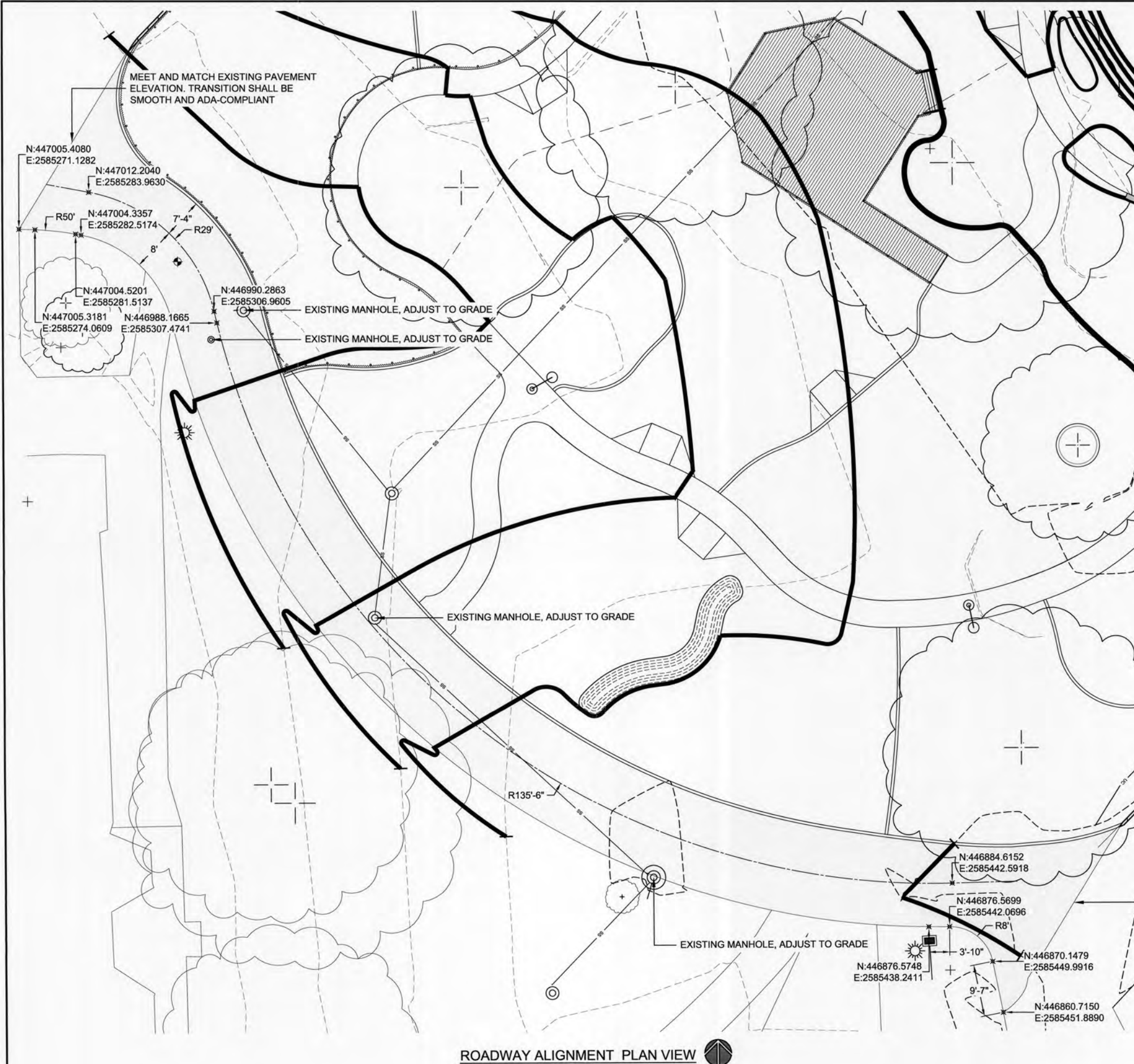


B
20 DELTA FENCING POST FOOTINGS IN ARTIFICIAL TURF SAFETY SURFACE NOT TO SCALE

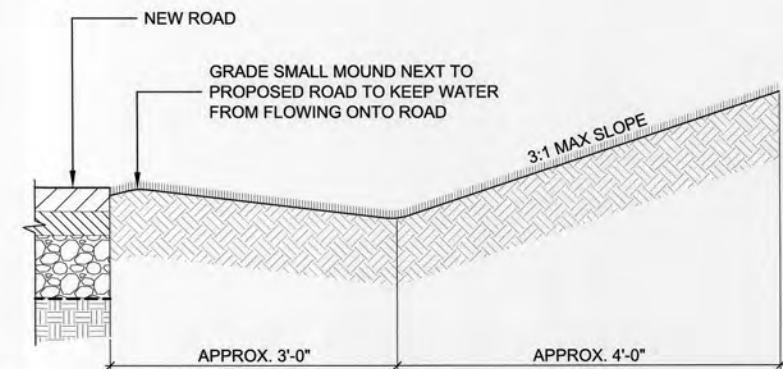


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PROFILE SCALE:							PROJ. MNGR.	ECB 8/19	
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FILE:							DESIGN MANAGER		
ATLAS PAGE NO:							DRAWING:		
							DATE:	8/22/19	
							SHEET 20 OF 25 SHEETS		

TYPICAL DETAILS (5)	
PROJECT # SP19-1	
TULSA ZOO PLAYGROUND	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23RD TULSA, OK 74107 918-584-5454	
DATE: 8/22/19	

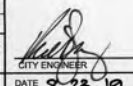


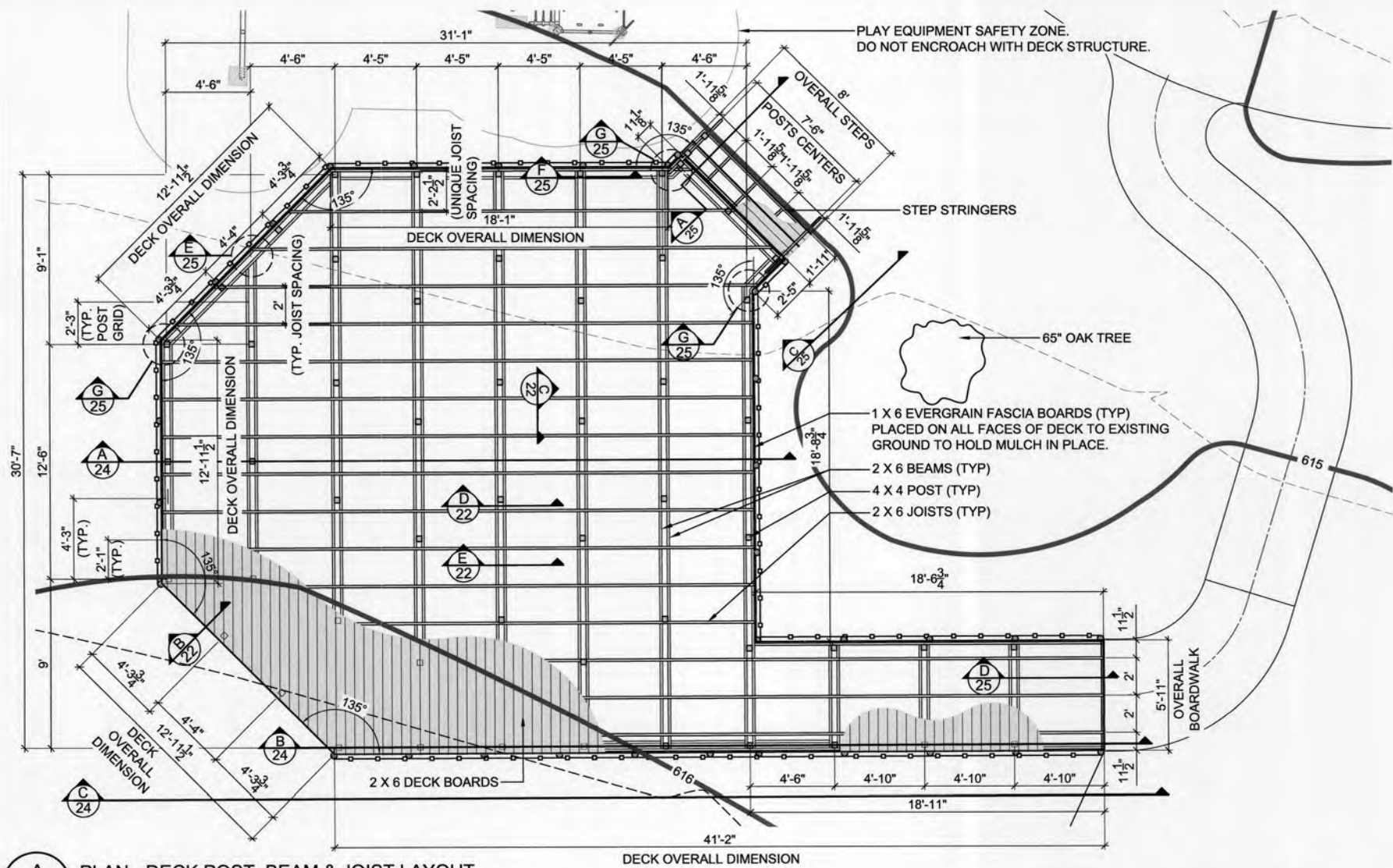
A
21 SECTION - NEW ROAD ASPHALT PAVING AT PLAYGROUND FLUSH CURB NOT TO SCALE



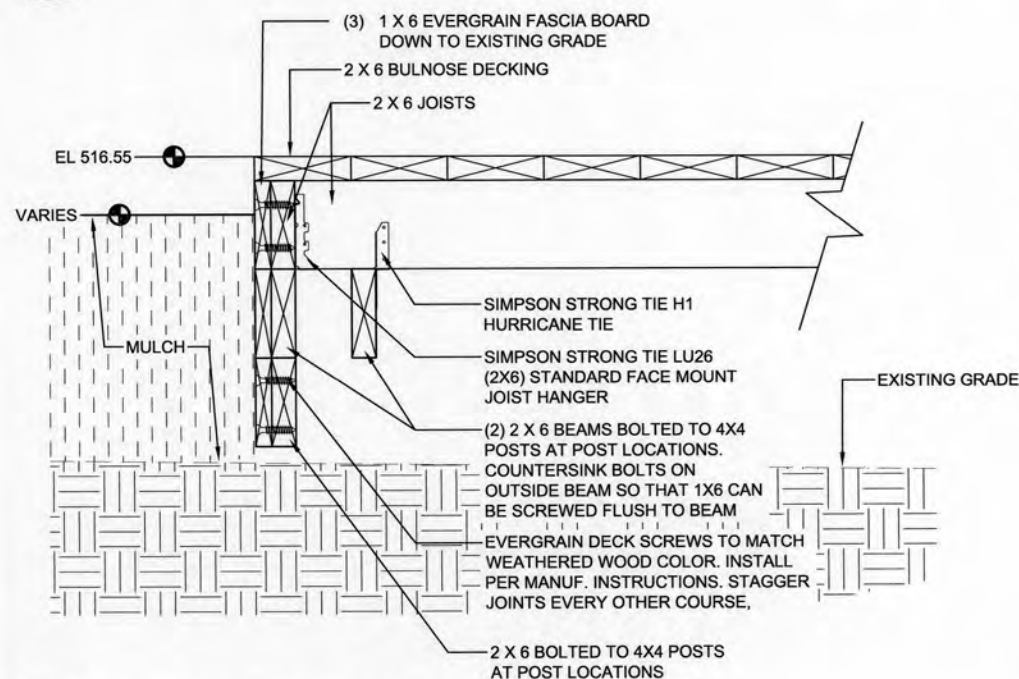
B
21 SECTION - SWALE NEXT TO NEW ROAD NOT TO SCALE



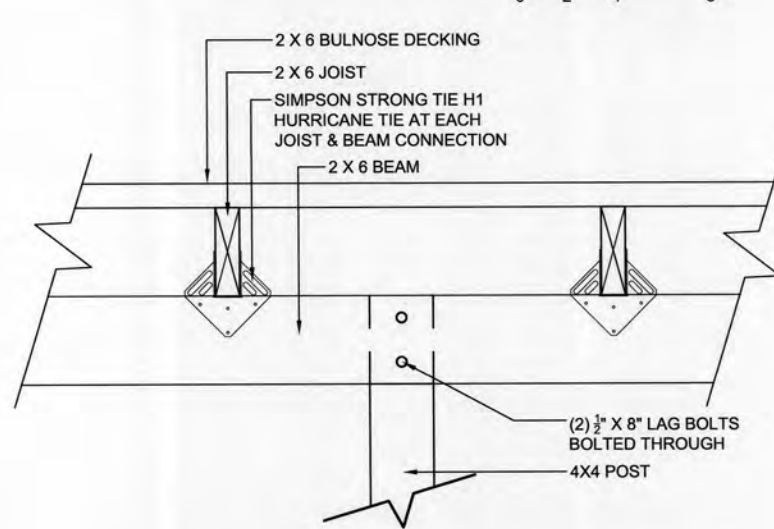
ADD ALT #2 ROADWAY DETAILS			
PROJECT # SP19-7			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS			
1110 WEST 23rd TULSA, OK 74107	918-584-9464	APPROVED:	
PLAN SCALE:	DRAWN: MH		
N/A	DESIGNED: MH		
	SURVEY: AAB		
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FILE:	DRAWING:		
ATLAS PAGE NO.			



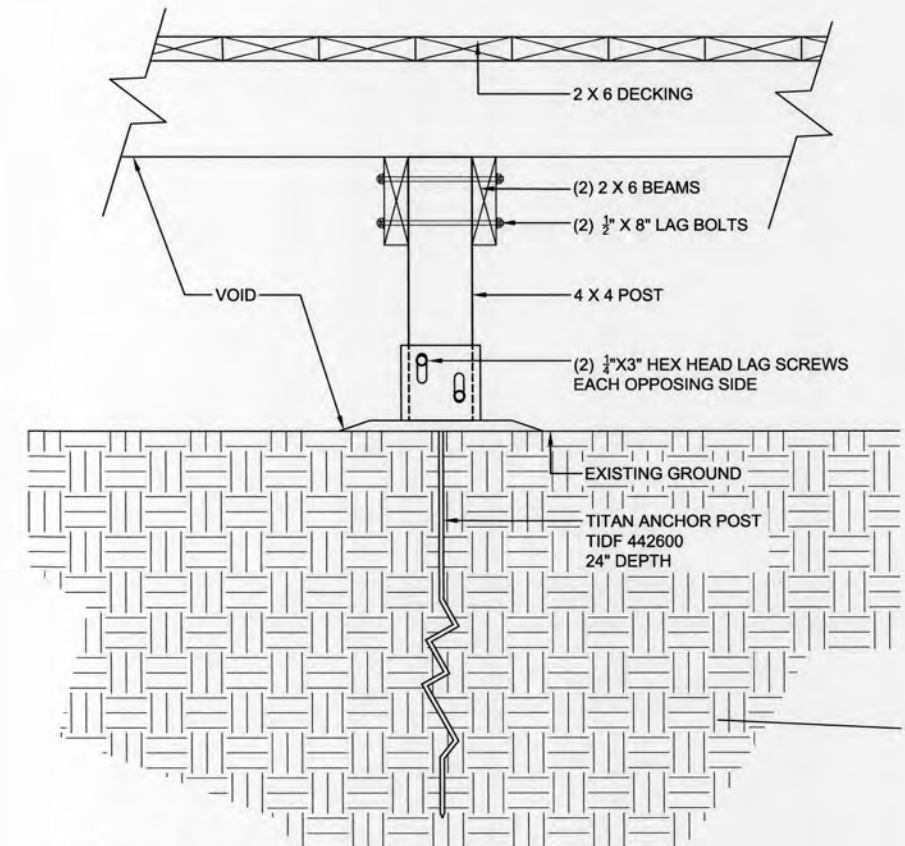
A
22
PLAN - DECK POST, BEAM & JOIST LAYOUT



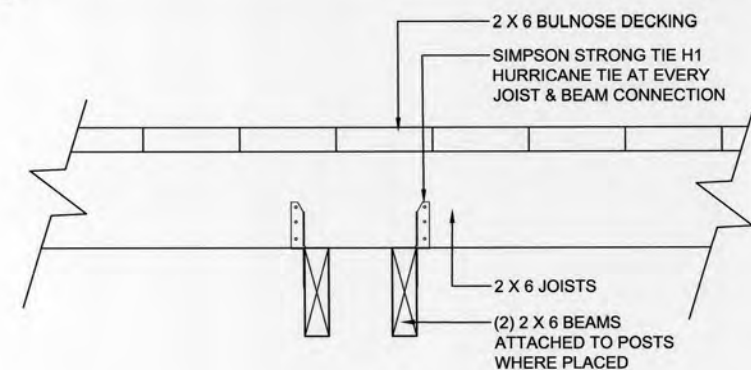
B
22
SECTION - DECK EDGE OPEN TO PLAYGROUND



C
22
SECTION - DECK POST, BEAM & JOIST CONNECTIONS



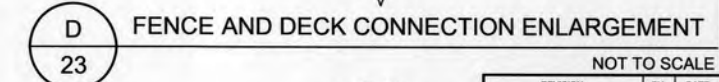
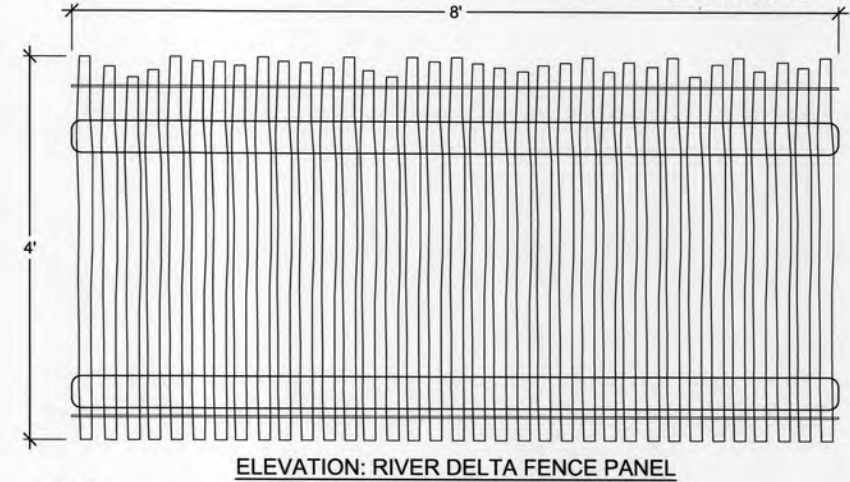
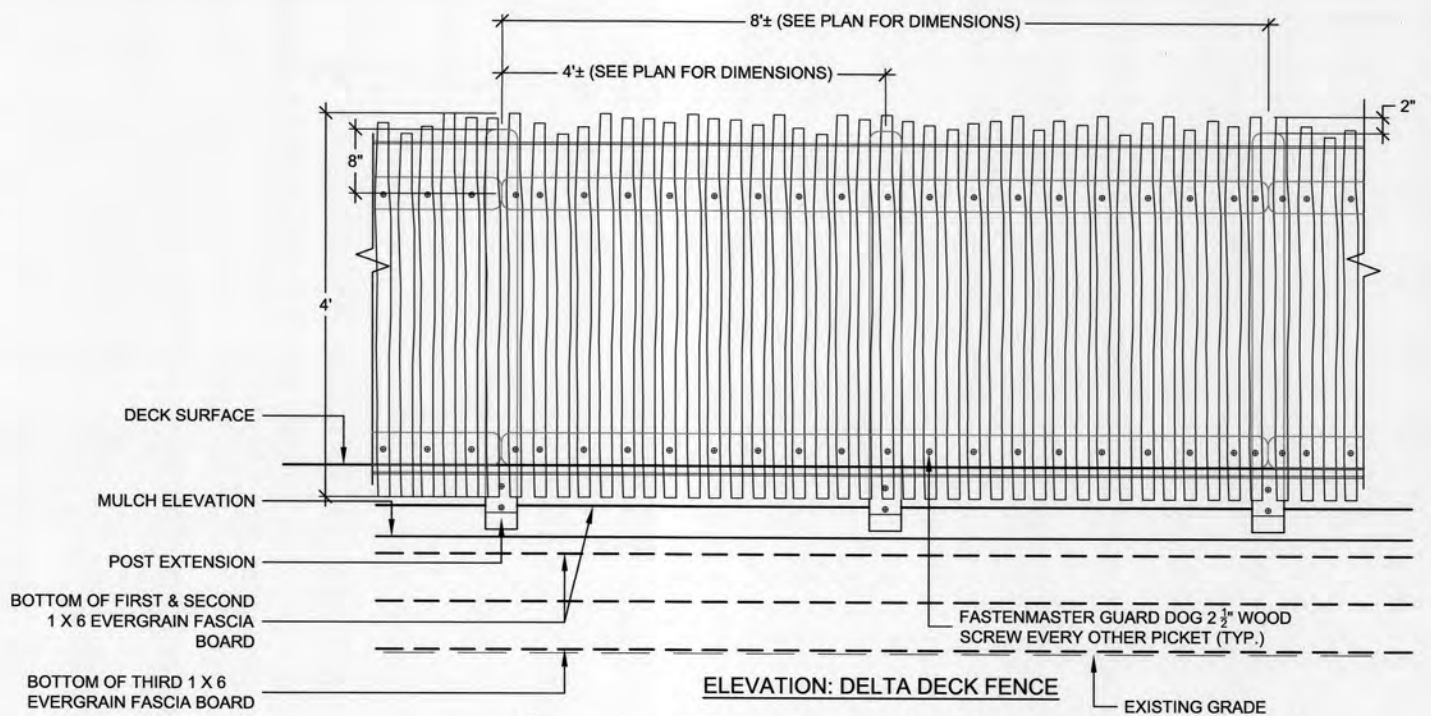
D
22
SECTION - DECK POST & BEAM CONNECTION



E
22
SECTION - DECK JOISTS & BEAM CONNECTION



DECK DETAILS (1)			
PROJECT # SP19-4			
TULSA ZOO PLAYGROUND			
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT			
PLANS AND ESTIMATES PREPARED BY: LANDPLAN CONSULTANTS 1110 WEST 23rd TULSA, OK 74107 918-584-6464			
REVISION	BY	DATE	APPROVED:
PLAN SCALE:	DRAWN	BT	
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VERTICAL:	RECOMMENDED	8/19	
N/A	DESIGN MANAGER	8/19	
FILE:	DRAWING:	DATE	8.23.19
ATLAS PAGE NO:		SHEET 22	OF 25 SHEETS

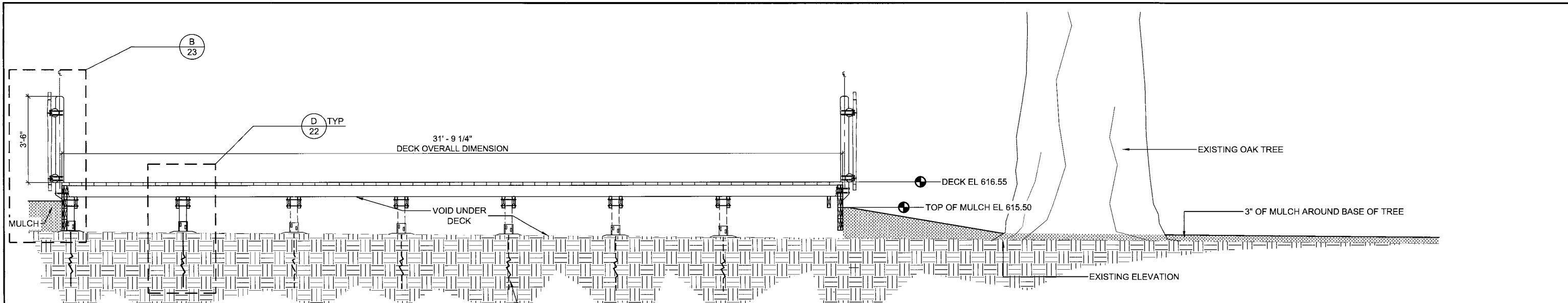


NOT TO SCALE

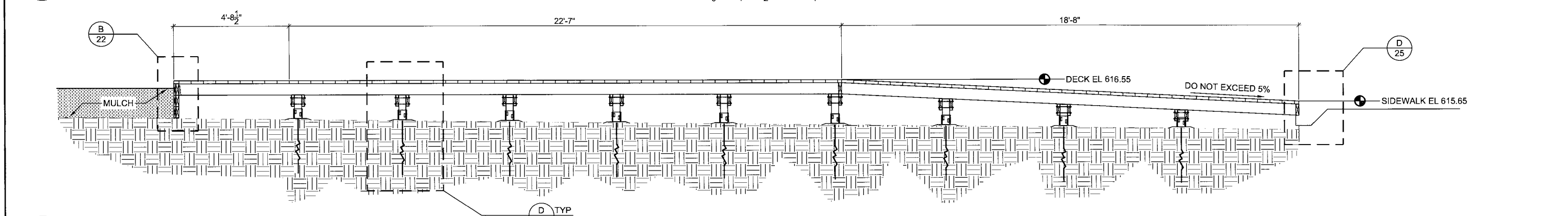
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DATE: 8.23.17
 SHEET 23 OF 25 SHEETS

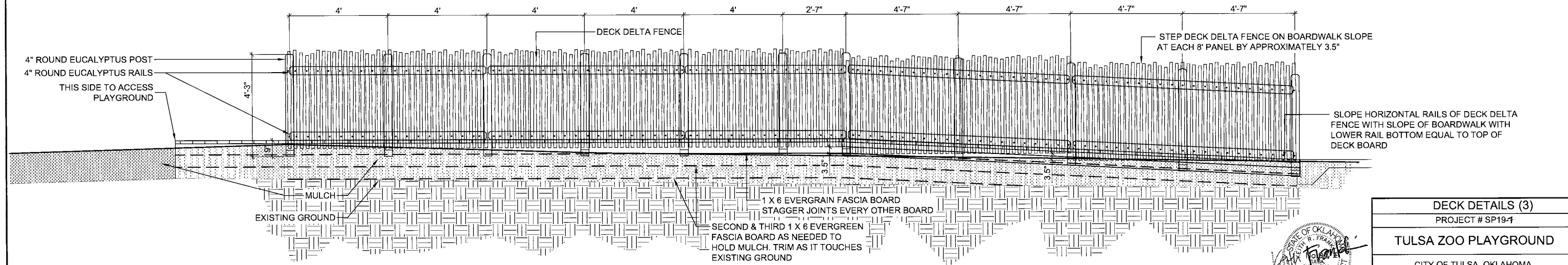




A
24
SECTION - DECK AT CENTER



B
24
SECTION - DECK AT BOARDWALK SECTION



C
24
ELEVATION - DECK ON SOUTHWEST SIDE

DECK DETAILS (3)
PROJECT # SP19-1

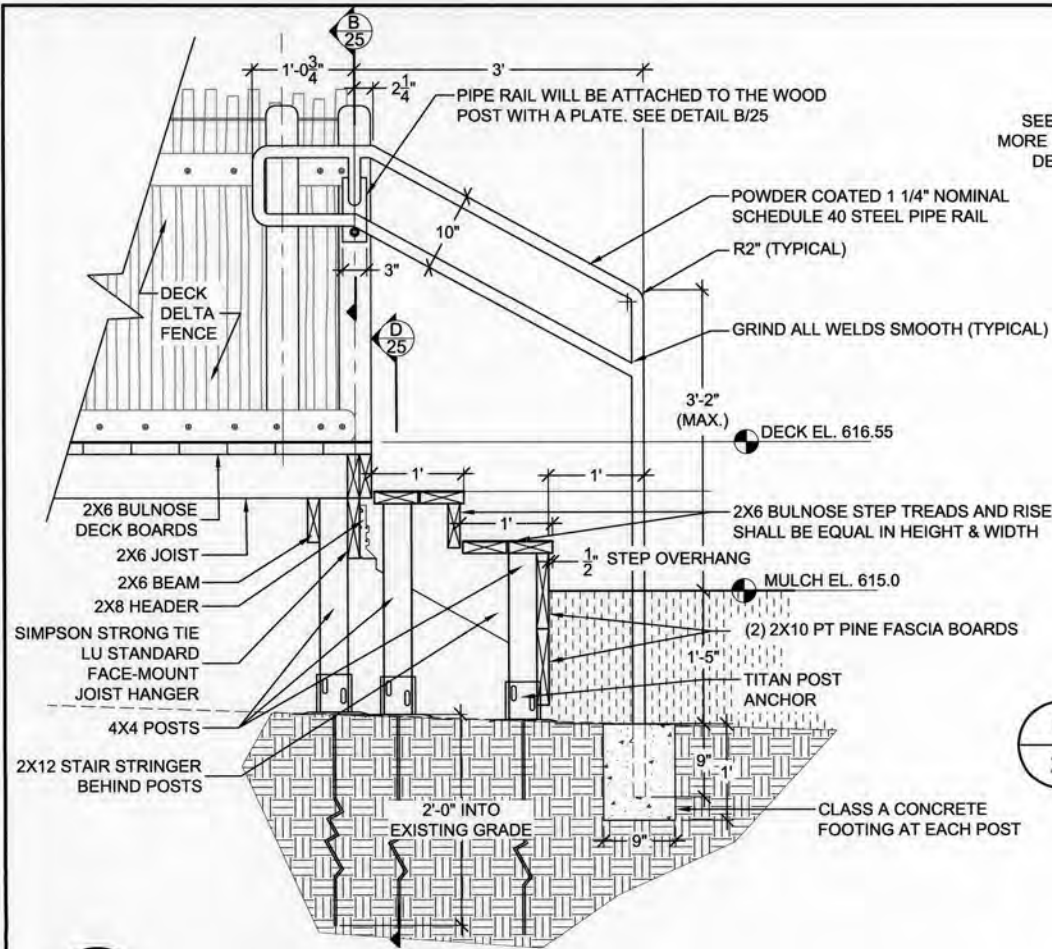
TULSA ZOO PLAYGROUND

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
LANDPLAN CONSULTANTS
1110 WEST 23RD TULSA, OK 74107 918-584-6464

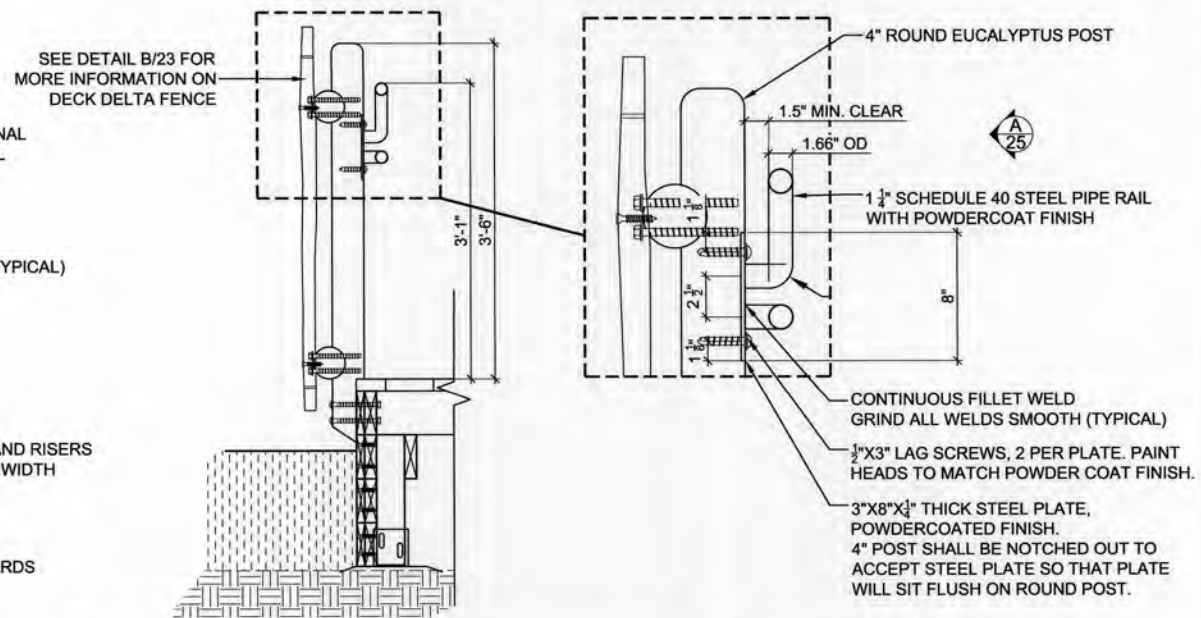
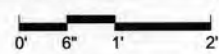
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			HORIZONTAL:	LEAD ENGR.		
				FIELD MNGR.		
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			FILE:	DRAWING:		
			ATLAS PAGE NO:			

DATE: 8.23.19
SHEET 24 OF 25 SHEETS

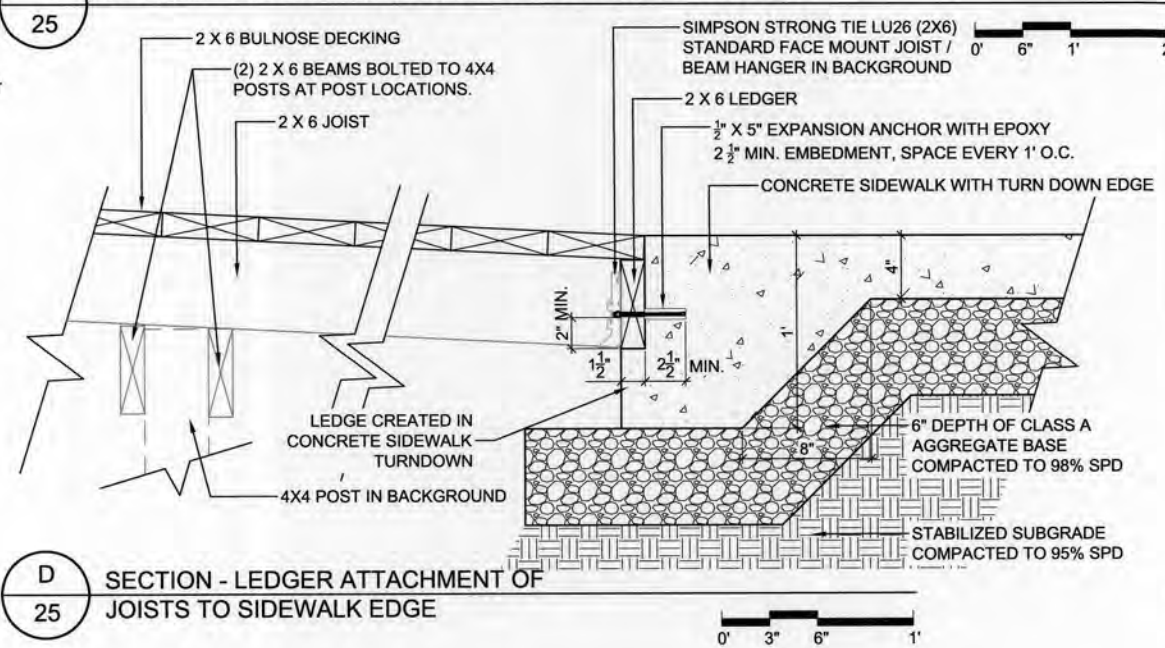


A SECTION - STAIRS AND PIPE RAILING

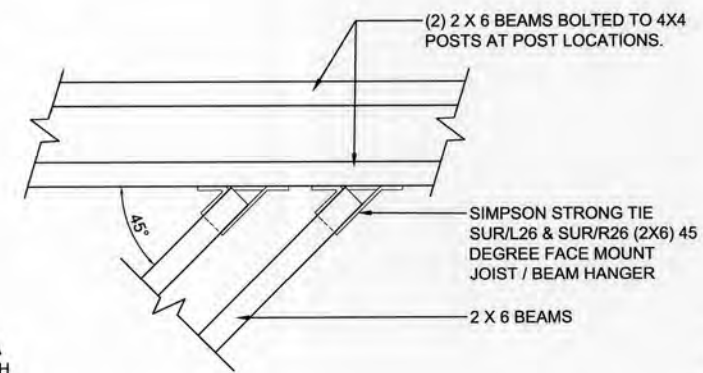
25 TWO PIPE RAILINGS ARE REQUIRED FOR THE DECK STAIRS



B SECTION - PIPE RAILING ATTACHED TO DECK DELTA FENCE



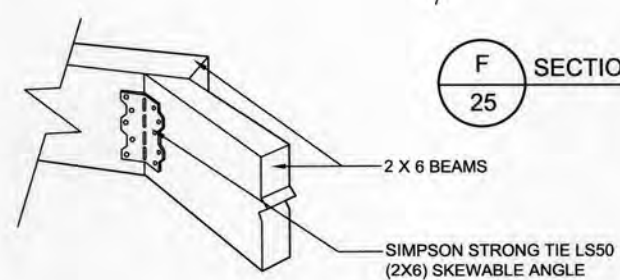
D SECTION - LEDGER ATTACHMENT OF
25 JOISTS TO SIDEWALK EDGE



G ISOMETRIC - 45 DEGREE BEAM CONNECTIONS

25

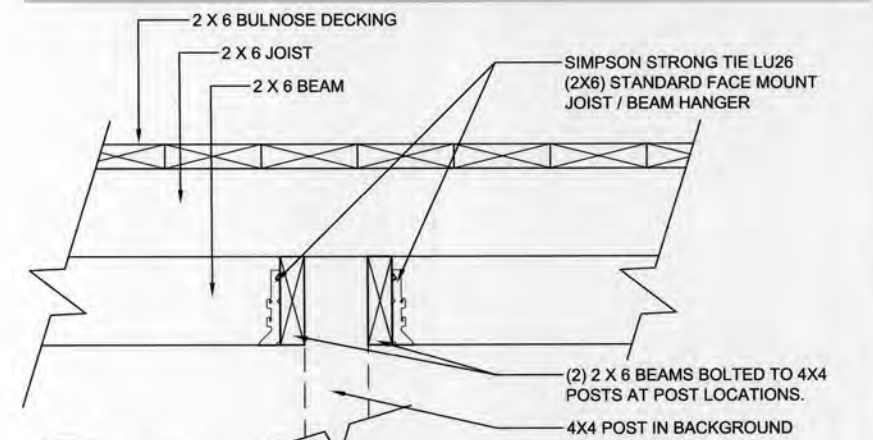
0' 3" 6" 1'



F SECTION - 90 DEGREE BEAM CONNECTIONS

25

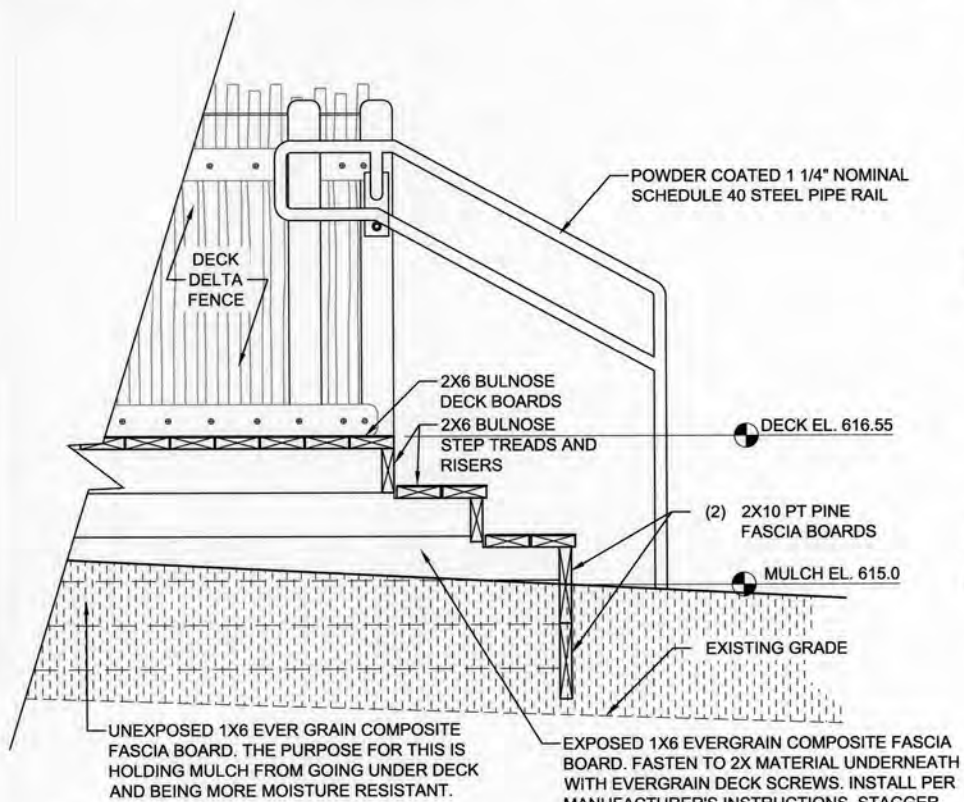
0' 3" 6" 1'



F SECTION - 90 DEGREE BEAM CONNECTIONS

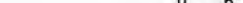
25

0' 3" 6" 1'



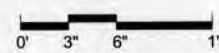
C ELEVATION - STAIRS, PIPE RAILING & EXTERIOR DECK FINISH

25



E PLAN - 45 DEGREE BEAM CONNECTIONS

25 



GENERAL WOOD & STEEL CONSTRUCTION NOTES

- 1) ALL FASTENERS SHALL BE HOT DIPPED GALVANIZED UNLESS SPECIFICALLY STATED OTHERWISE.
- 2) ALL BOLT AND SCREW HEADS EXPOSED TO SURFACES WHERE CHILDREN WILL BE EXPOSED TO THEM SHALL BE ROUNDED TOPPED LAG BOLTS AND SCREWS.
- 3) ALL DECK SCREWS SHALL BE CAMO HIDDEN DECK FASTENING SYSTEM WITH PRO-TECH FINISH OR PRE-APPROVED EQUAL.
- 4) ALL WOOD DECK ELEMENTS SHALL BE DENSE SELECT STRUCTURAL PRESSURE TREATED SOUTHERN YELLOW PINE. DECK BOARDS SHALL HAVE A $\frac{1}{2}$ " BULNOSE EDGE ON ALL FOUR EDGES. A SOURCE FOR THESE DECK BOARDS IS SOUTHERN PINE LUMBER COMPANY IN VALDOSTA, GA. 1-800/322-1500 OR APPROVED EQUAL.
- 5) ALL FASCIA BOARDS SHALL BE 1X6 ($\frac{5}{8}$ "X $\frac{1}{2}$ ") EVERGRAIN COMPOSITE DECKING BY TAMKO BUILDING PRODUCTS OR PRE-APPROVED EQUAL WHICH CAN BE PURCHASED AT T.H. ROGERS LUMBER IN BRISTOW OR HUGHES LUMBER IN CATOOSA OR MUSCOGEE. COLOR SHALL BE "WEATHERED WOOD". INSTALL PER MANUFACTURER'S INSTRUCTIONS. USE EVERGRAIN DECK SCREWS IN "WEATHERED WOOD" COLOR.
- 6) STEEL HANDRAILS SHALL BE PRIMED WITH A ZINC RICH PRIMER AND FINISHED WITH TGIC POLYESTER POWDERCOAT 2.5-3.0 MILS THICK. THE SURFACE SHALL BE FREE OF ALL RUST, OIL, ETC. PRIOR TO PAINTING. POWDERCOAT SHALL BE A SEMI-GLOSS BRONZE AND SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO POWDERCOATING. FASTENERS FOR POWDERCOATED STEEL SHALL BE HAND PAINTED AFTER INSTALLATION TO BLEND WITH RAILING SO THAT THEY DO NOT STAND OUT.
- 7) THE CONTRACTOR SHALL FIELD MEASURE THE AREA THAT THE STEEL HANDRAILS ARE TO BE INSTALLED IN AND PROVIDE SHOP DRAWINGS SHOWING ALL DIMENSIONS. SUBMIT TO THE LANDSCAPE ARCHITECT PRIOR TO FABRICATION.
- 8) DECK FOOTING ANCHORS SHALL BE TITAN TIDF442600 (FOR 4" POST AT 24" DEPTH). CAN BE PURCHASED AT HERMAN LUMBER IN PARSONS KANSAS OR ORDERED ON LINE. IT IS RECOMMENDED THAT A DECK FOOT ANCHOR- AUGER ONLY BE PURCHASED SO THAT THE LOCATIONS FOR THE POSTS CAN BE TESTED FIRST FOR TREE ROOTS. THESE AUGERS CANNOT GO THROUGH TREE ROOTS. IF TREE ROOTS ARE LOCATED IN THE AREA THE POST WAS DESIGNED TO BE LOCATED THE POST CAN BE MOVED IN ONE DIRECTION OR ANOTHER AS LONG AS IT DOES NOT EXCEED THE BEAM SPAN OF 6'-6". INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- 9) ALL DECK BOARDS SHALL BE SPACED ACCORDING TO THE CAMO HIDDEN DECK FASTENING SYSTEM MANUFACTURER'S INSTRUCTIONS. DECK BOARDS SHALL BE INSTALLED BARK SIDE UP OR CONVEX SIDE UP, AND SHALL HAVE STAGGERED JOINTS EVERY OTHER BOARD.
- 10) ALL WOOD STRUCTURAL FASTENERS SHALL BE SIMPSON STRONG TIE OR PRE-APPROVED EQUAL USING MANUFACTURED RECOMMENDED SCREWS. SEE DETAILS FOR SPECIFIC HANGER REQUIRED.
- 11) USE WOOD BLOCKING WHENEVER NECESSARY TO PROVIDE A SOLID DECK SURFACE.
- 12) WAIT A MINIMUM OF NUMBER OF DAYS REQUIRED BY THE MANUFACTURER AFTER DECK IS INSTALLED AND APPLY THOMPSONS WATER CLEAR SEALER OR APPROVED EQUAL.

		
DATE 07/31/19		

REVISION			BY	DATE

DECK DETAILS (4)	
PROJECT # SP19-4	
TULSA ZOO PLAYGROUND	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
PLANS AND ESTIMATES PREPARED BY:	
LANDPLAN CONSULTANTS	
1110 WEST 23rd	TULSA, OK 74107 918-584-6664
	
PLAN SCALE: N/A HORIZONTAL SCALE: LEAD ENGR. N/A VERTICAL SCALE: FIELD MNGR. N/A FILE: _____	DRAWN BT SURVEY AAB PROJ. MNGR. <i>[Signature]</i> SEP 8/19 FIELD MNGR. <i>[Signature]</i> MAY 8/19 RECOMMENDED BY: <i>[Signature]</i> MAY 8/19 CITY ENGINEER: <i>[Signature]</i> DATE: JUN 28/19
ATLAS PAGE NO.	
SHEET 5 OF 25 SHEETS	