

CONSTRUCTION PLANS FOR BITHLO PARK NEW PLAYGROUND 18501 WASHINGTON AVENUE ORLANDO, ORANGE COUNTY, FLORIDA 32820



945 N. Pennsylvania Avenue
Winter Park, Florida 32789
Phone: 407.629.1188

TEAM Engineering, LLC

Certificate of Authorization No. 26618
2215 Wembley Place
Oviedo, Florida 32765
Phone: 407.677.1012

**GOVERNING STANDARDS AND SPECIFICATIONS:
THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH
AND GOVERNED BY THE FLORIDA DEPARTMENT OF
TRANSPORTATION'S DESIGN STANDARDS DATED 2015 AND THE
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION DATED 2012, AS AMENDED BY CONTRACT
DOCUMENTS.**

APPLICABLE DESIGN STANDARDS MODIFICATIONS:

"Design Standards" web site: www.dot.state.fl.us/rddesign/

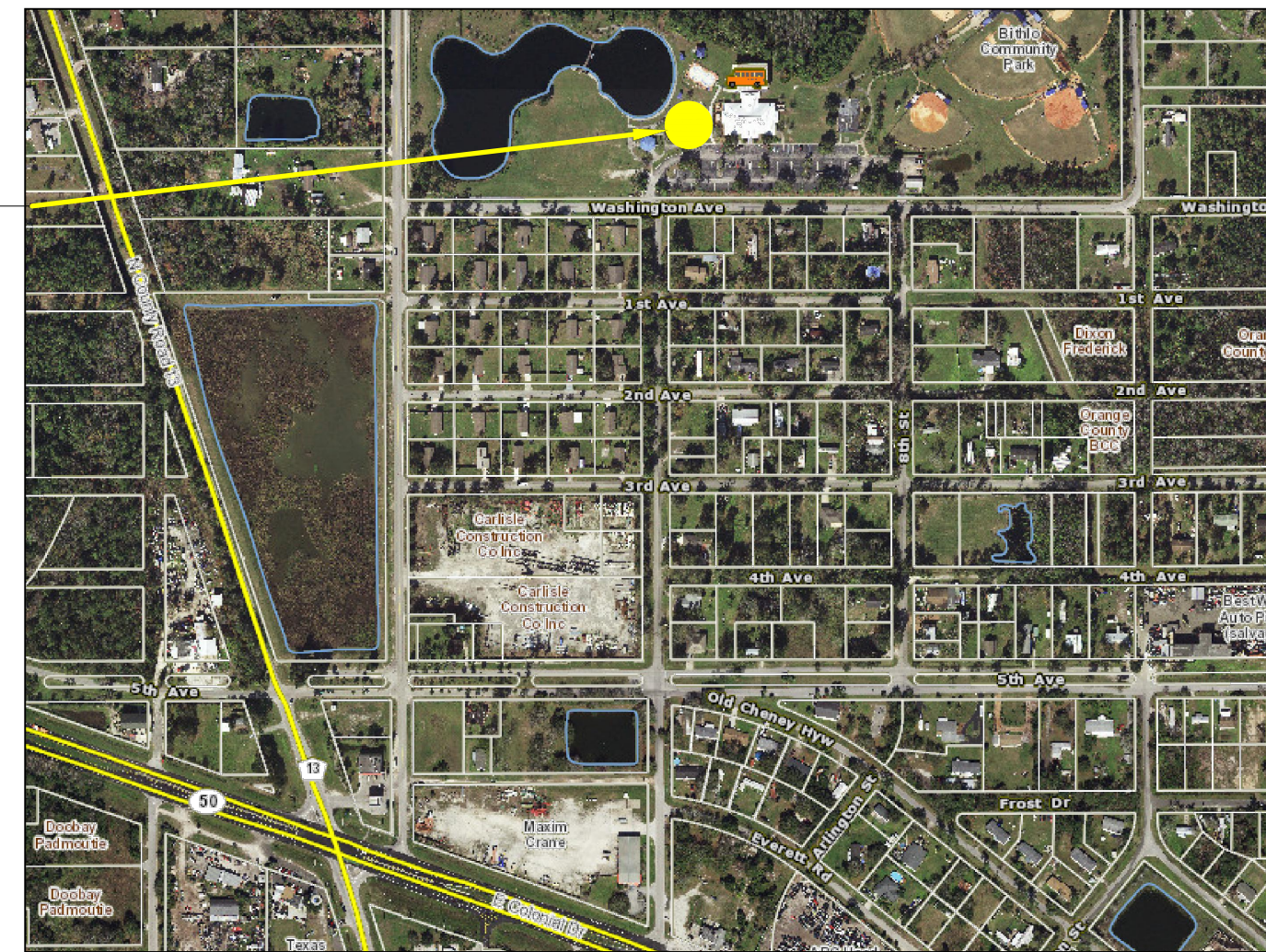
FLORIDA BUILDING CODE FIFTH EDITION (2014)

BOARD OF COUNTY COMMISSIONERS

- TERESA JACOBS _____ COUNTY MAYOR
- BETSY VANDERLEY _____ DISTRICT 1
- BRYAN NELSON _____ DISTRICT 2
- PETE CLARKE _____ DISTRICT 3
- JENNIFER THOMPSON _____ DISTRICT 4
- EMILY BONILLA _____ DISTRICT 5
- VICTORIA P. SIPLIN _____ DISTRICT 6
- JON WEISS _____ COMMUNITY AND ENVIRONMENTAL
SERVICE DIRECTOR
- MATT SUEDEMEYER _____ PARKS AND RECREATION
DEPARTMENT MANAGER

BID/PERMIT DOCUMENTS

PROJECT
LOCATION



18501 WASHINGTON AVENUE, ORLANDO, FL 32820

VICINITY MAP
NOT TO SCALE

SCOPE: ADDITION OF ACCESSIBLE SIDEWALKS AND MODIFICATIONS AND REPLACEMENT TO EXISTING BITHLO PARK PLAYGROUND

NOTES:

1. ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN CHANGED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

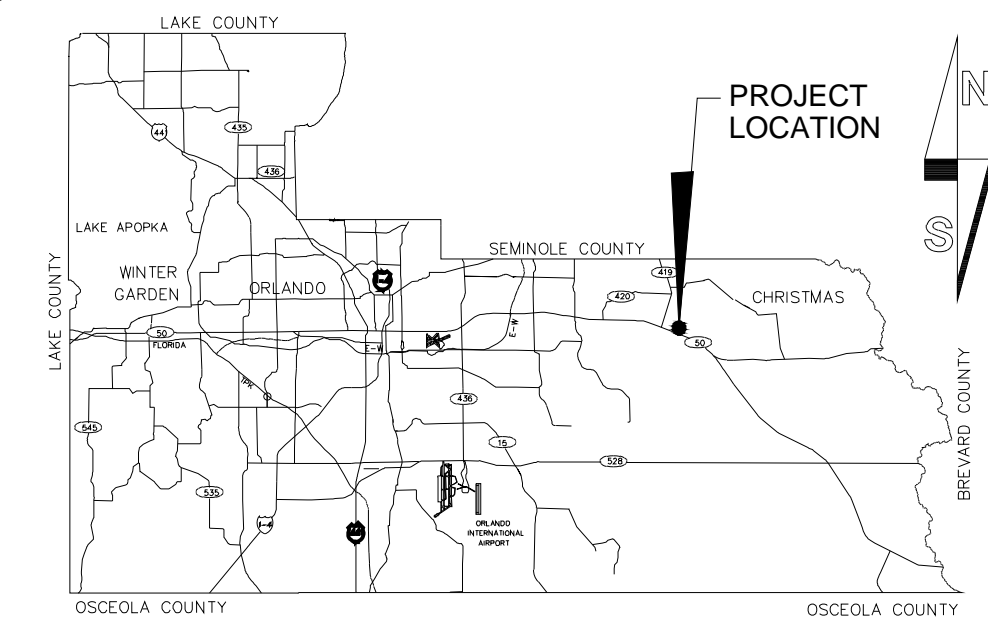
12" X 18" DRAWINGS ~ HALF SIZE
24" X 36" DRAWINGS ~ TO SCALE

2. INFORMATION SHOWN WITHIN THESE PLANS ARE REFERENCED TO A SITE DATUM.

NOTE

PLANS WERE PREPARED TO AVAILABLE INFORMATION TO ADEQUATELY ADDRESS CONDITIONS AS THEY EXISTED AT THE TIME OF PLANS PREPARATION. DEEDS, CONDITIONS AND OWNERSHIP OF PROPERTIES MAY HAVE CHANGED SINCE PROJECT DESIGN. THE COUNTY'S REPRESENTATIVE WILL ADDRESS CHANGES AND NEEDS WITH THE PROPERTY OWNER OR THEIR REPRESENTATIVES. CONTRACTOR SHALL WORK WITH THE COUNTY'S REPRESENTATIVE IN ADDRESSING AND MEETING NEEDS AND CONDITIONS THAT MAY HAVE CHANGED SINCE PLANS PREPARATION.

DATE: _____ ENGINEER: _____ REG. NO. 49935
JEFFREY J. EARHART



SECTION 22, TOWNSHIP 22 SOUTH, RANGE 32 EAST
PARCEL NUMBER: 22-22-32-0712-46-003

LOCATION MAP

INDEX OF SHEETS

SHEET	DESCRIPTION
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4.2	PLAYGROUND EQUIPMENT DRAWING
4.3	PLAYGROUND FOOTING LAYOUT
5.0	GRADING AND DRAINAGE PLAN
5.1	GRADING AND DRAINAGE DETAILS
6.0	DETAILS

UTILITIES ENCOUNTERED

WATER: ORANGE COUNTY FACILITIES MANAGEMENT	407-836-9850
SANITARY SEWER: ORANGE COUNTY FACILITIES MANAGEMENT	407-836-0114
ELECTRIC: DUKE ENERGY	407-629-1010
PHONE: AT&T	800-288-2020
TELECOM: ORANGE COUNTY ISS	407-836-2929

REVISIONS

REVISIONS	DATE	BY

DESIGNED BY: MS DATE: 10/2016
DRAWN BY: MS DATE: 10/2016
CHECKED BY: JE DATE: 10/2016
BID SET 02-01-2017
PROJECT NO: BITHLO PARK

SHEET 1
OF 10



REVISIONS	DATE	BY

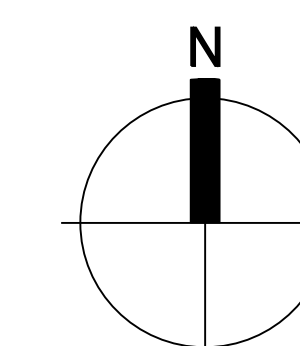
TEAM Engineering, LLC

GENERAL NOTES:

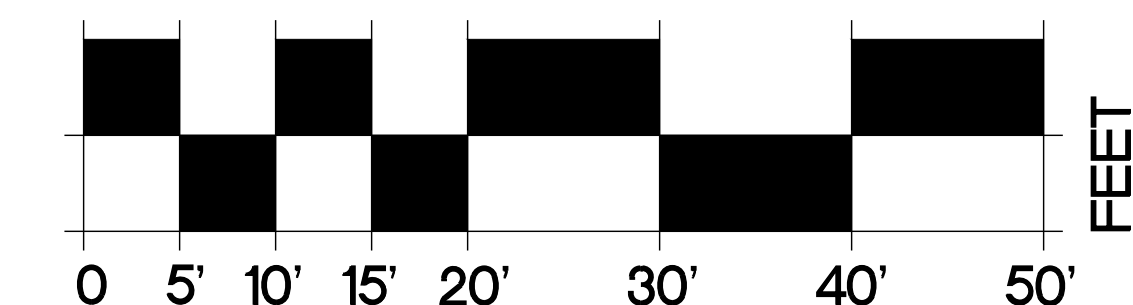
1. ALL ELEVATIONS SHOWN IN THESE PLANS ARE BASED ON SITE DATUM.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH AND CONFORM TO THE MOST STRINGENT REQUIREMENTS OF THE PROJECT SPECIFICATIONS, THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2012 EDITION), AND SUPPLEMENTS THERETO, AND ORANGE COUNTY ROAD CONSTRUCTION SPECIFICATIONS.
3. SUBSURFACE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FOR USE IN ESTABLISHING TOPOGRAPHIC FEATURES FOR THE PROJECT. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS NOT TO BE CONSTRUED AS PART OF THE PLAN GOVERNING CONSTRUCTION OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INQUIRE OF THE ENGINEER IF ADDITIONAL INFORMATION IS AVAILABLE, TO MAKE ARRANGEMENTS TO REVIEW SAME PRIOR TO BIDDING, AND TO MAKE HIS OWN DETERMINATION AS TO ALL SUBSURFACE CONDITIONS.
4. ALL PERSONAL PROPERTY, EXCEPT MAIL BOXES, WITHIN THE RIGHT-OF-WAY NOT RELOCATED BY THE PROPERTY OWNER SHALL BE REMOVED BY THE CONTRACTOR AS NECESSARY TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS. MAIL BOXES SHALL BE RELOCATED BY THE CONTRACTOR IN ACCORDANCE WITH F.D.O.T. DESIGN STANDARD 532.
5. THE DISPOSAL OF EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. APPROVAL(S) OF THE DISPOSAL SITES SHALL BE OBTAINED FROM ORANGE COUNTY PRIOR TO DISPOSAL. ALL EXCESS MATERIALS ARE THE PROPERTY AND RESPONSIBILITY OF THE CONTRACTOR.
6. SOD ALL DISTURBED AREAS UNLESS OTHERWISE SHOWN ON THE PLANS. SOD SHALL MATCH EXISTING TYPE SOD UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
7. PEGGED SOD TO BE PLACED ON ALL SLOPES 1:2 OR STEEPER.
8. SAWCUT CONCRETE DRIVEWAYS AND WALKWAYS AS REQUIRED FOR CONSTRUCTION.
9. ALL PAVEMENT OFFSETS SHOWN ARE TO PROPOSED CENTERLINE OF CONSTRUCTION; ALL RADII AND DIMENSIONS ARE TO PROPOSED EDGE OF PAVEMENT.
10. THE CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH REQUIREMENTS OF THE VARIOUS PERMITS INCLUDED IN THE BID SPECIFICATIONS. ENVIRONMENTAL CONTROLS SHALL BE USED AT LOCATIONS DESIGNATED IN THE STORMWATER POLLUTION PREVENTION PLAN AND/OR DESIGNATED BY THE ENGINEER.
11. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND SURVEYS BUT IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WITH PROJECT CONSTRUCTION. PRIOR TO ORDERING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL DETERMINE IF DRAINAGE/UTILITY CONFLICTS EXIST. INFORMATION ON CONFLICTS IS TO BE SUBMITTED TO THE ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY FOR RESOLUTION. SUNSHINE STATE ONE CALL MUST BE NOTIFIED FOR LOCATES AT 1-800-432-4770.
12. UTILITIES ARE TO BE ADJUSTED BY OTHERS OR AS DIRECTED BY THE ENGINEER.
13. THE CONTRACTOR SHALL NOTIFY ALL GAS UTILITY COMPANIES A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION AS REQUIRED BY CHAPTER 77-153 OF THE FLORIDA STATUTES.
14. ALL EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL REMAIN, UNLESS OTHERWISE SHOWN IN THE PLANS OR DIRECTED BY THE ENGINEER.
15. DESIGN CHANGES OF PIPE INVERTS NOT EXCEEDING PLUS OR MINUS ONE FOOT WILL NOT BE CONSIDERED AS A BASIS FOR ADDITIONAL COMPENSATION FOR THE PERTINENT PIPE BID ITEM OR FOR MODIFICATION OF PRECAST STRUCTURES.
16. CONTRACTOR IS TO MAINTAIN UNINTERRUPTED ACCESS TO ALL PARK DRIVEWAYS AND SIDE STREETS AT ALL TIMES AND IS TO NOTIFY PROPERTY OWNERS FIVE DAYS PRIOR TO STARTING CONSTRUCTION.
17. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CALL SUNSHINE ONE TWO BUSINESS DAYS IN ADVANCE OF PERFORMING ANY UTILITY ADJUSTMENTS OR RELOCATIONS. SUNSHINE ONE PHONE NUMBER 1-(800)-432-4770.
18. CONTRACTOR TO VIDEOTAPE AND PHOTOGRAPH THE LIMITS OF CONSTRUCTION PRIOR CONSTRUCTION AND GIVE A COPY TO THE COUNTY.
19. ALL EXISTING SPOT ELEVATIONS ARE AS A RESULT OF A FIELD SURVEY WITHOUT BENEFIT OF DATUM INFORMATION. ALL PROPOSED SPOT ELEVATIONS ARE RELATIVE TO THOSE FIELD SHOT EXISTING ELEVATIONS. THE DRAIN INLET RIM ELEVATION IS EXISTING AND THE BASE ELEVATION WAS BASED ON THE WATER LEVEL IN BOX AT THE TIME OF FIELD SURVEY. FOR QUESTIONS CONTACT , OR ENGINEER, JEFFERY EARHART, 407-677-1012.

GENERAL NOTES BITHLO PARK PLAY AREA

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820



NORTH



NO SCALE

SHEET 2.0



DATE: _____ ENGINEER: JEFFREY J. EARHART REG. NO. 49935

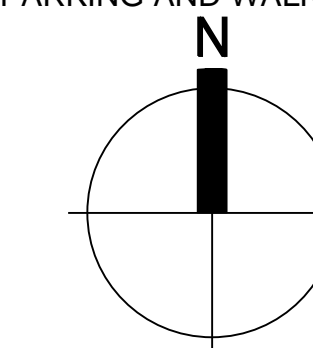
OCTOBER 10, 2016 MS
BID SET 02-01-2017

REVISIONS	DATE	BY

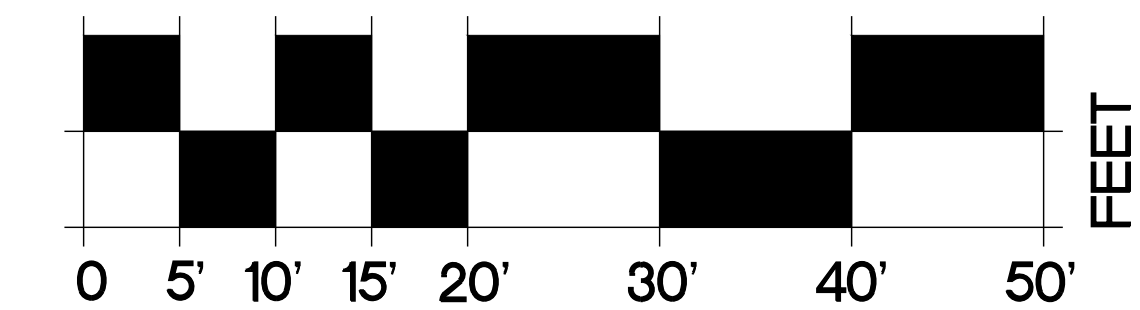


EXISTING CONDITIONS AND DEMOLITION PLAN BITHLO PARK PLAY AREA

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820



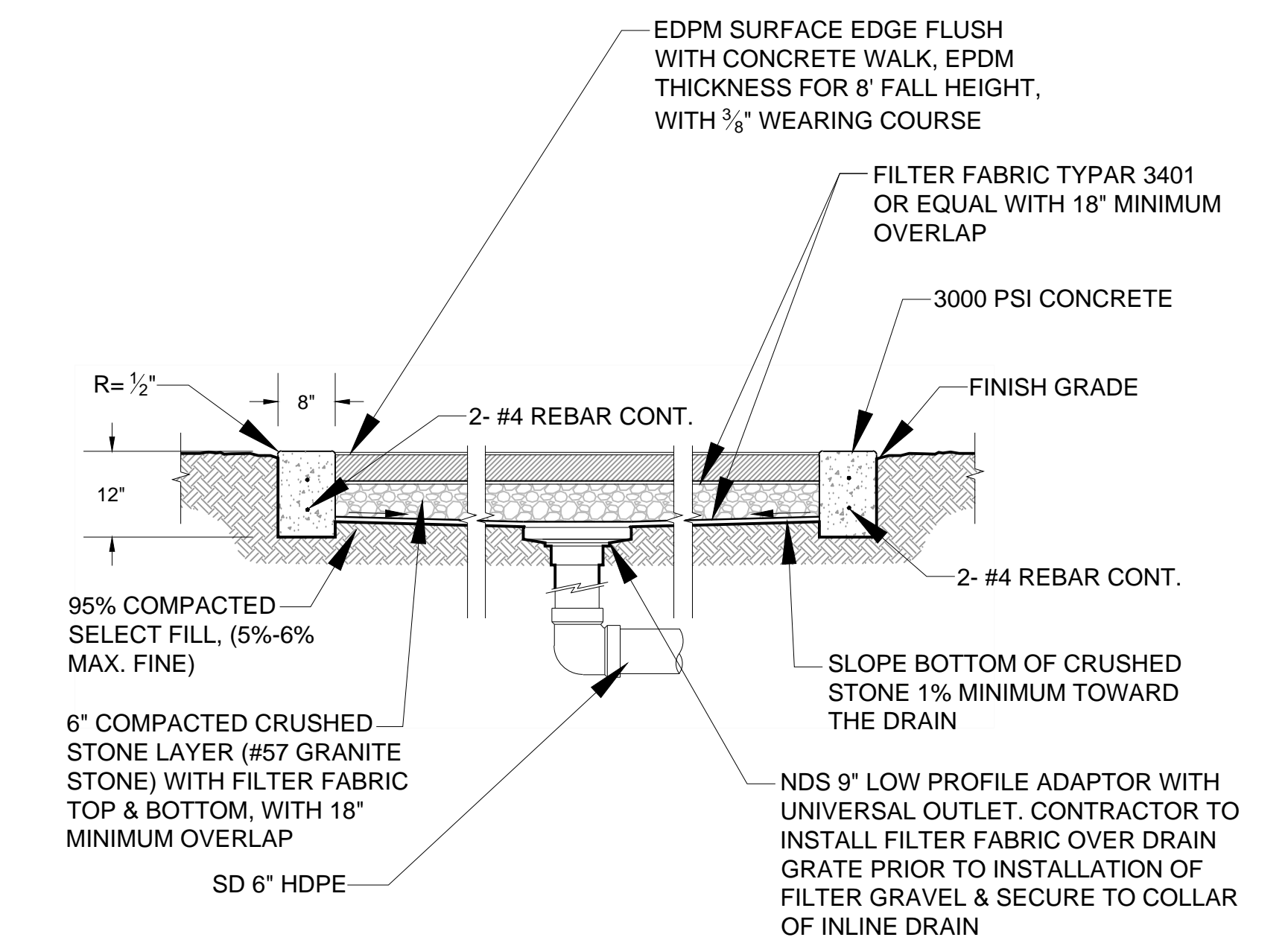
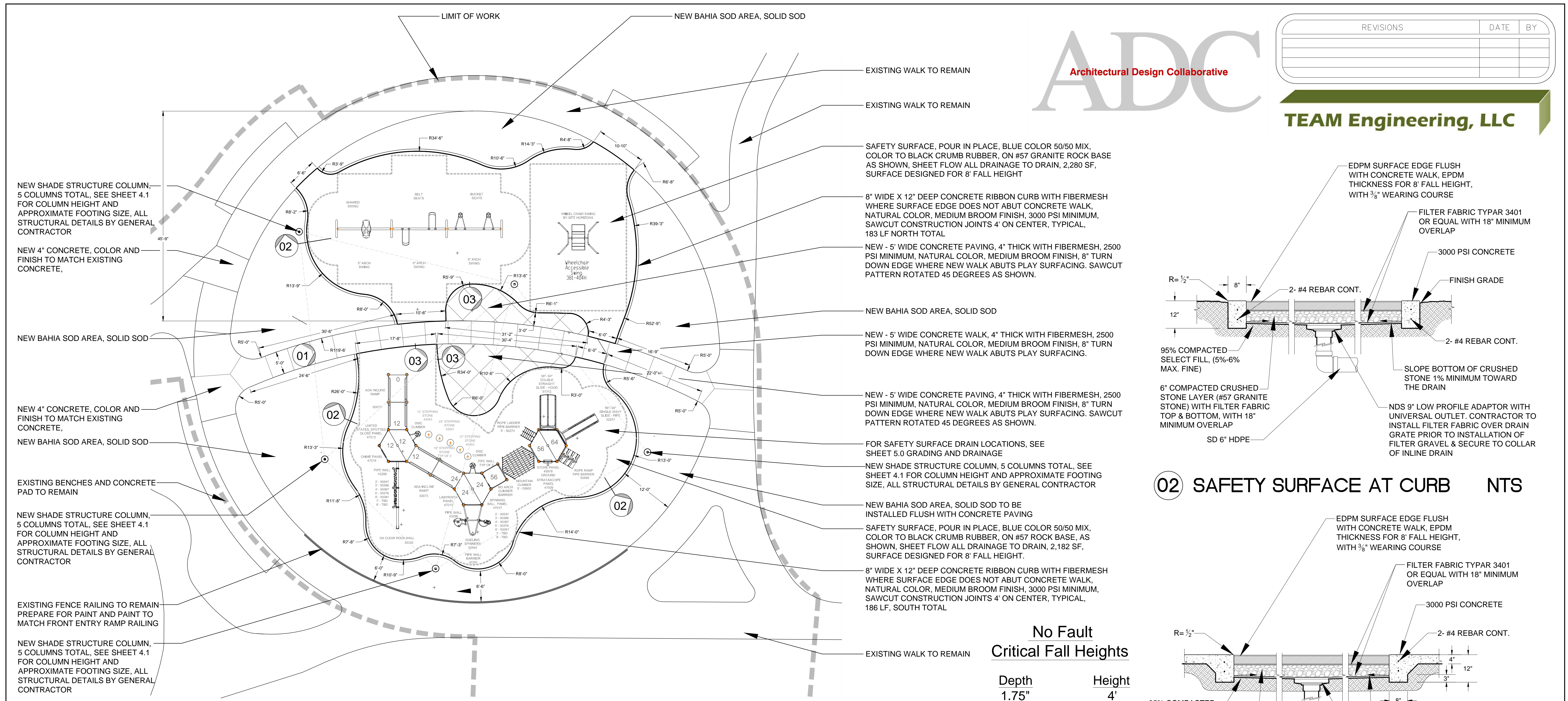
NORTH



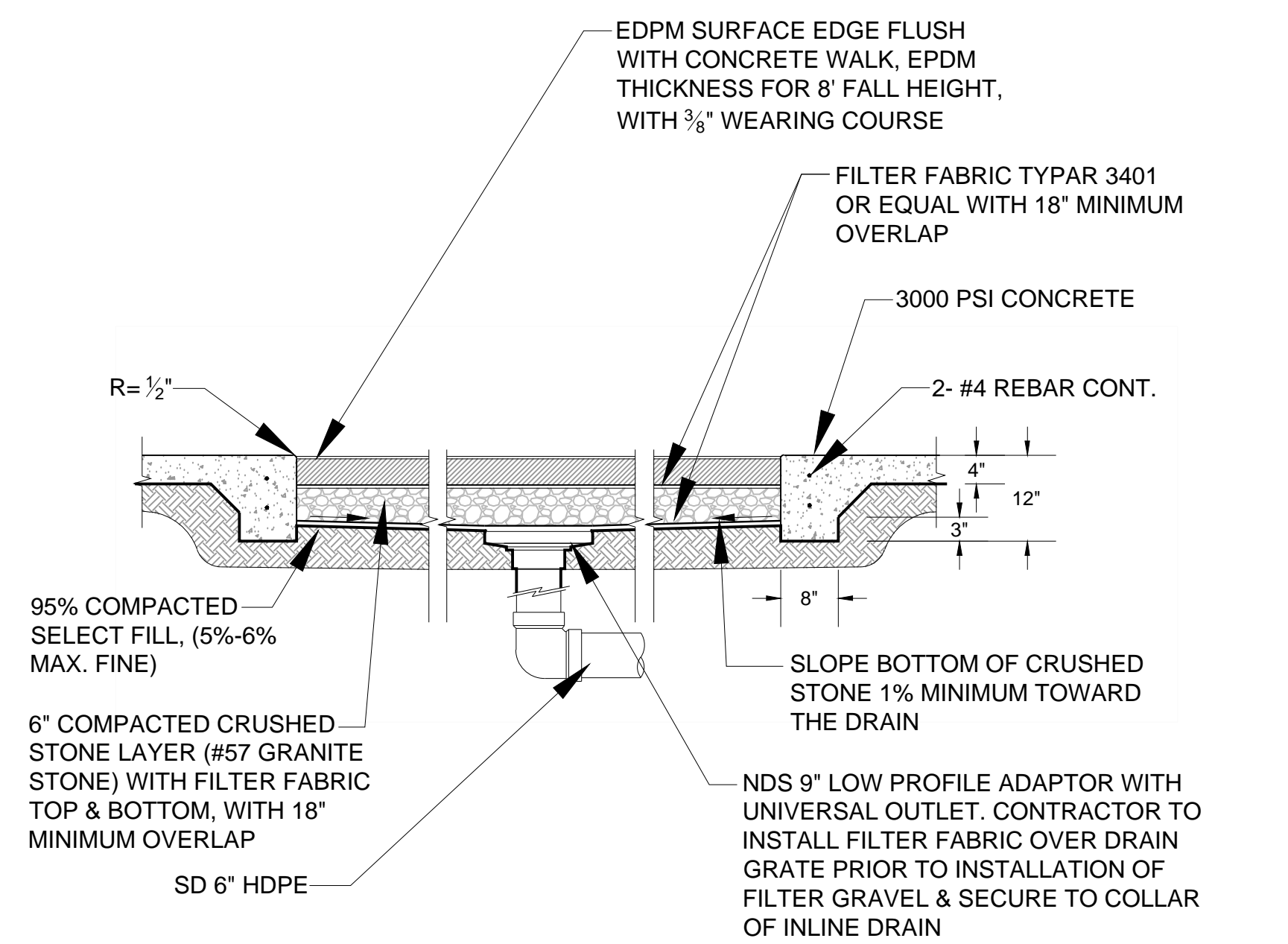
SCALE: 1" = 10'-0"

SHEET 3.0

REVISIONS	DATE	BY



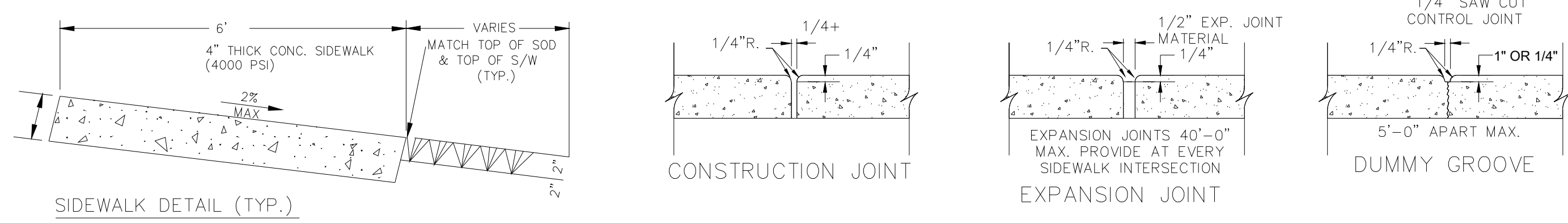
02 SAFETY SURFACE AT CURB NTS



03 SAFETY SURFACE AT WALK NTS

No Fault
Critical Fall Heights

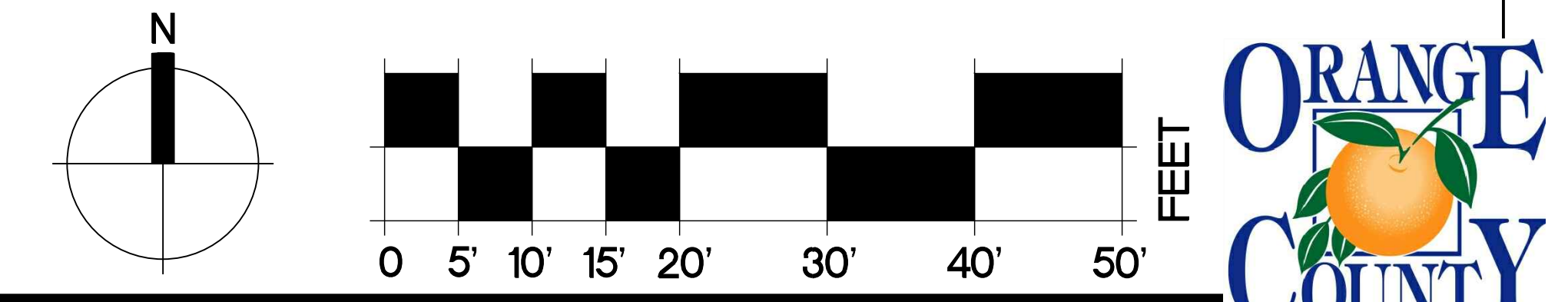
Depth	Height
1.75"	4'
2.25"	5'
2.50"	6'
3.00"	7'
3.50"	8'
4.5"	9'
5.00"	10'
6.50"	12'



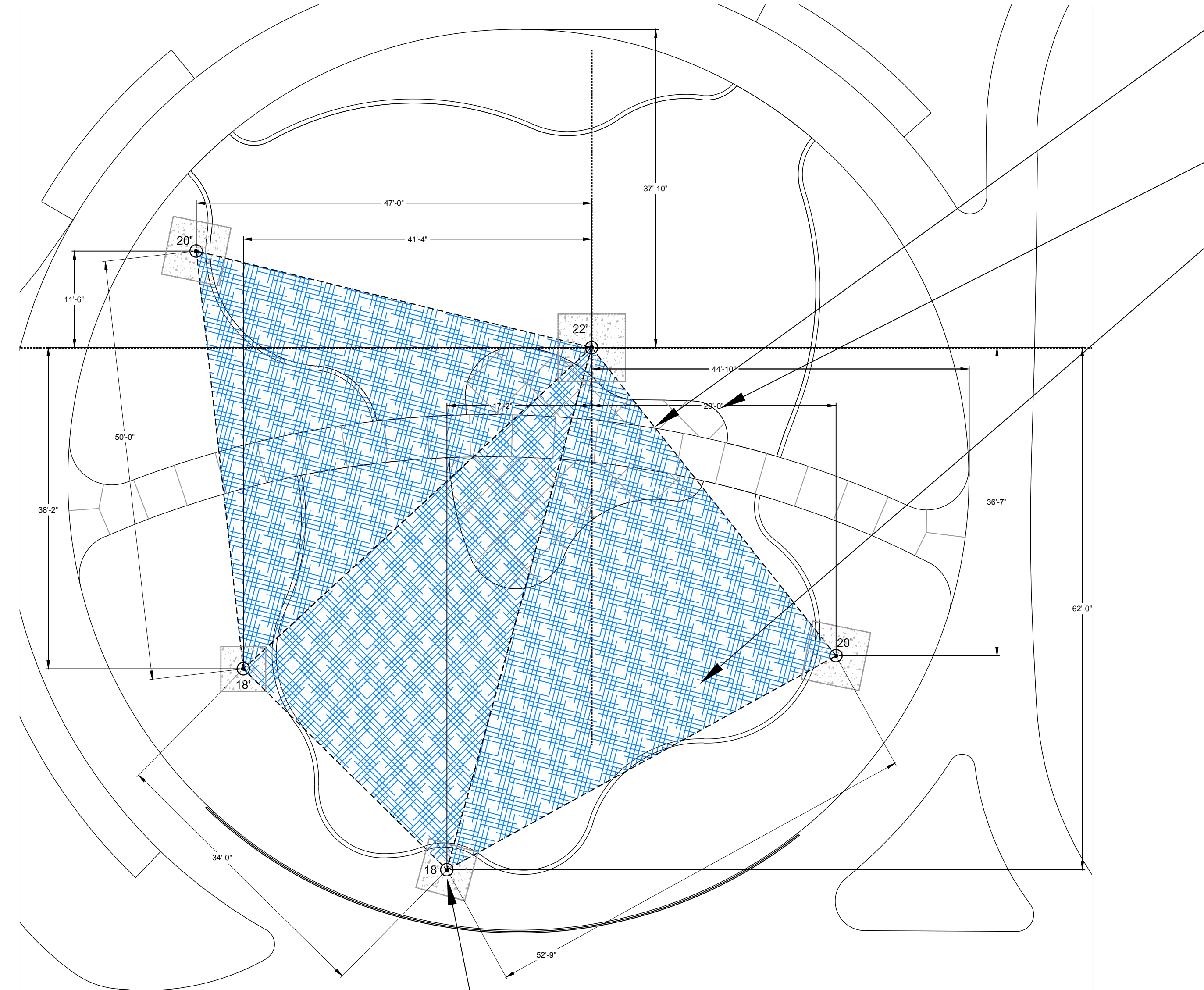
01 CONCRETE WALK DETAILS NTS

CONSTRUCTION LAYOUT PLAN BITHLO PARK PLAY AREA

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820



REVISIONS	DATE	BY
REVISE SHADE SAIL STRUCTURE	8-8-2016	MS



SHADE STRUCTURE FOOTING LOCATION, SIZE IS APPROXIMATE AND FOR ILLUSTRATION ONLY, FOOTING AND SURFACE MOUNT HARDWARE SHALL BE ENGINEERED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE CERTIFIED SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE BY ENGINEER AND ORANGE COUNTY PARKS AND RECREATION.

CENTER OF PROPOSED SAIL SHADE STRUCTURE, LOCATE THIS COLUMN USING DIMENSIONS FROM EXISTING CONCRETE TO REMAIN, LOCATE OTHER COLUMNS BY OFFSET FROM THIS COLUMN.

SHADE STRUCTURE FABRIC, SEE PHOTO DETAIL AND SPECIFICATIONS THIS SHEET

SHADE SAIL SPECIFICATIONS:

1. FABRIC SPECIFICATIONS
 - A. UV SHADE FABRIC SHALL BE MADE OF UV STABILIZED CLOTH MANUFACTURED BY ALNET, OR APPROVED EQUAL.
 - B. THE HIGH DENSITY POLYETHYLENE MATERIAL SHALL BE MANUFACTURED WITH TENSIONED FABRIC STRUCTURES IN MIND.
 - C. THE FABRIC KNIT IS TO BE MADE USING MONOFILAMENT AND TAPE FILLER WHICH HAS A WEIGHT OF 9.38 TO 10.32 OUNCE PER SQUARE YARD. MATERIAL SHALL BE RACHEL-KNITTED TO INSURE MATERIAL WILL NOT UNRAVEL IF CUT.
 - D. BURST STRENGTH OF 828 LBFT (ASTM 3786)
 - E. CLOTH SHALL MEET FIRE RESISTANCE TESTS AS FOLLOWS:
ALNET EXTRA BLOCK: CALIFORNIA STATE FIRE MARSHALL REG. #F-93501
NFPA 701-99 (TEST METHOD 2)
ASTM E-84
 - F. FABRIC PROPERTIES:

STRETCH	STENTORED
TEAR TESTS (LBS/FT)	WARP 44.8
	WEFT 44
BURST TESTS (LBS FT)	828
FABRIC WEIGHT (OZ/SF) AVG	1.02 TO 1.07
FABRIC WIDTH	9'-10"
ROLL LENGTH	150'
ROLL SIZE	63"X16.5"
WEIGHT	120 LBS.
LIFE EXPECTANCY	10 YEARS
FADING	MINIMAL FADING AFTER 6 YEARS
NOTE	3 YEARS FOR RED AND YELLOW
TEMPERATURE	-77 DEGREES
MAXIMUM TEMPERATURE	+167 DEGREES
2. THREAD
 - A. SHALL BE 100% EXPANDED PTFE FIBER WHICH CARRIES A 10 YEAR WARRANTY THAT IS HIGH STRENGTH AND LOW SHRINKAGE.
 - B. SHALL HAVE A WIDE TEMPERATURE AND HUMIDITY RANGE.
 - C. ABRASION RESISTANT AND UV RADIATION IMMUNITY.
 - D. SHALL BE UNAFFECTED BY NO-HYDROCARBON BASED CLEANING AGENTS, ACID RAIN, MILDEW, ROT, CHLORINE, SALTWATER, AND POLLUTION.
 - E. LOCKSTITCH THREAD - 1200 DENIER OR EQUAL.
 - F. CHAIN STITCH THREAD - 2400 DENIER OR EQUAL.
3. STEEL TUBING
 - A. ALL FABRICATED STEEL MUST BE IN ACCORDANCE WITH APPROVED SHOP DRAWINGS AND CALCULATIONS.
 - B. ALL STEEL IS CLEANED, DEGREASED, OR ETCHED TO ENSURE PROPER ADHESION OF POWDER-COAT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - C. ALL STEEL USED ON THIS PROJECT NEEDS TO BE NEW AND ACCOMPANIED BY THE MILL CERTIFICATES IF REQUESTED. STRUCTURAL STEEL TUBING UP TO 5'-7 GAUGE SHALL BE GALVANIZED PER ALLIED STEEL FLO-COAT SPECIFICATIONS. SCHEDULE 40 BLACK PIPE FABRICATION SHALL BE SANDBLASTED AND PRIMED AS DESCRIBED BELOW.
 - D. ALL NON-HOLLOW STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A-53 GRADE C, UNLESS OTHERWISE NOTED.
 - E. PLATE PRODUCTS SHALL COMPLY WITH ASTM A-36.
4. POWDER COATING AND PRIMING
 - A. ALL NON-GALVANIZED STEEL SHALL BE SANDBLASTED AND PRIMED PRIOR TO POWDER COATING USING BROWN FUSED ALUMINUM OXIDE GRIT AND THE FOLLOWING PRIMER.
 - B. ALL NON-GALVANIZED STEEL MUST BE COATED WITH RUST INHIBITING PRIMER PRIOR TO APPLYING THE POWDER COAT. PRIMER SHALL BE MARINE GRADE CARDINAL INDUSTRIAL FINISHES CORP. E396 - GR1372 EPOXY POWDER COATING SEMI-GLOSS SMOOTH ZINC RICH PRIMER.
 - C. WELDS SHALL BE PRIMED WITH RUST INHIBITING PRIMER PRIOR TO APPLYING THE POWDER COAT. PRIMER SHALL BE MARINE GRADE CARDINAL INDUSTRIAL FINISHES CORP. E396 - GR1372 EPOXY POWDER COATING SEMI-GLOSS SMOOTH ZINC RICH PRIMER.
 - D. ALL STEEL PARTS SHALL BE COATED FOR RUST PROTECTION AND FINISHED WITH A MINIMUM 3.5 MIL THICK UV-INHIBITED WEATHER RESISTANT POWDER COATING.
 - E. CHARACTERISTICS: POWDER USED IN THE POWDER-COAT PROCESS SHALL HAVE THE FOLLOWING CHARACTERISTICS:

N.3.1	SPECIFIC GRAVITY	1.68+/- 0.05
N.3.2	THEORETICAL COVERAGE	114+/- 4FT 2/LB/MIL
N.3.3	MASS LOSS DURING DURE	<1%
N.3.4	MAXIMUM STORAGE TEMPERATURE	75 DEGREES F
 - F. POWDER-COATING SHALL MEET THE FOLLOWING TESTS:

ASTM	GLOSS AT 60 DEGREE	85-95
HOI TM 10.219	PCI POWDER SMOOTHNESS	7
ASTM D2454-91	OVER-BAKE RESISTANCE TIME	200%
ASTM D3363-92A	PENCIL HARDNESS	H-2H
ASTM D2794-93	DIR/REV IMPACT, GARDNER	140/140 IN/LBS

- | | | |
|----------------|--|-----------------------|
| ASTM D3359-95B | ADHESION, CROSS HATCH | 5B PASS |
| ASTM D522-93A | FLEXIBLE MANDREL | 1/4" DIA, NO FRACTURE |
| ASTM B117-95 | SALT SPRAY | 1,000 HOURS |
| UL D10V2 | ORGANIC COATING STEEL ENCLOSURES, ELECT. EQ. | RECOGNIZED |
- G. APPLICATION CRITERIA:

N.5.1	ELECTROSTATIC SPRAY COLD	SUBSTRATE:0.032 IN. CRS
N.5.2	CURE SCHEDULE	10 MIN. AT 400 DEGREES F
N.5.3	PRETREATMENT	BONDERITE 1000
N.5.4	FILM THICKNESS	3.5 MILS
 5. WELDING
 - A. ALL SHOP WELDS SHALL BE EXECUTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS.
 - B. WELDING PROCEDURES SHALL COMPLY IN ACCORDANCE WITH THE AWS D1.1-AWS STRUCTURAL WELDING CODE-STEEL.
 - C. ALL WELDS SHALL BE PERFORMED BY A CERTIFIED WELDER. ALL WELDS SHALL BE CONTINUOUS WHERE LENGTH IS NOT GIVEN, UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS.
 - D. ALL WELDS SHALL DEVELOP THE FULL STRENGTH OF THE WEAKER MEMBER. ALL WELDS SHALL BE MADE USING E70XX.0.35 WIRE.
 - E. SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. FIELD CONNECTIONS SHALL BE INDICATED ON DRAWINGS. FIELD-WELDED CONNECTIONS ARE NOT ACCEPTABLE.
 - F. ALL FILLET WELDS SHALL BE A MINIMUM FO 1/4" UNLESS OTHERWISE NOTED.
 - G. ALL STEEL SHALL BE WELDED SHUT AT TERMINATIONS TO PREVENT INTERNAL LEAKAGE.
 - H. INTERNAL WELD SLEEVING IS NOT ACCEPTABLE.
 - I. ON-SITE WELDING OF ANY COMPONENT IS NOT ACCEPTABLE.
 6. SEWING
 - A. ON-SITE SEWING OF A FABRIC WILL NOT BE ACCEPTED.
 - B. ALL CORNERS SHALL BE REINFORCED WITH EXTRA NON-TEAR CLOTH AND STRAP TO DISTRIBUTE THE LOAD.
 - C. THE PERIMETERS THAT CONTAIN THE CABLES SHALL BE DOUBLE LOCK STITCHED.
 7. INSTALLATION HARDWARE
 - A. BOLT AND FASTENING HARDWARE SHALL BE DETERMINED BASED ON CALCULATED ENGINEERING LOADS.
 - B. ALL BOLTS SHALL COMPLY WITH SAE-1429 (GRADE 8) OR ASTM A325 (GRADE BD). ALL NUTS SHALL COMPLY WITH ASTM F-594, ALLOY GROUP 1 OR 2.
 - C. UPON REQUEST, STAINLESS STEEL HARDWARE SHALL COMPLY WITH ASTM A-304.
 - D. 1/4" GALVANIZED WIRE ROPE SHALL BE 7X19 STRAND WITH A BREAKING STRENGTH OF 7,000 LBS. FOR SHADES GENERALLY UNDER 575 SQ.FT., CABLE SHALL BE 3/16" WITH A BREAKING STRENGTH OF 9,800 LBS. UPON REQUEST, 1/4" STAINLESS STEEL WIRE ROPE SHALL BE 7X19 STRAND WITH A BREAKING STRENGTH OF 6,400 LBS. 3/16" STAINLESS STEEL WIRE ROPE SHALL BE 7X19 STRAND WITH A BREAKING STRENGTH OF 9,000 LBS.
 - E. ALL FITTINGS REQUIRED FOR PROPER SECURING OF THE CABLE ARE HOT DIPPED GALVANIZED.
 8. CONCRETE
 - A. CONCRETE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE LATEST EDITION OF AMERICAN CONCRETE BUILDING CODE ACI 318 UNLESS SPECIFIED BY THE GOVERNING MUNICIPALITY.
 - B. CONCRETE SPECIFICATIONS SHALL COMPLY IN ACCORDANCE WITH, AND DETAILED AS PER PLANS AS FOLLOWS:
 1. 28 DAYS STRENGTH F_c = 2500 PSI
 2. AGGREGATE: HR
 3. SLUMP: 3-5
 4. PORTLAND CEMENT SHALL CONFORM TO C-150
 5. AGGREGATE SHALL CONFORM TO ASTM C-33
 - C. ALL REINFORCEMENT SHALL CONFORM TO ASTM A-615 GRADE 60.
 - D. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL AND MANUAL OF STANDARD PRACTICE.
 - E. WHENEVER DAILY AMBIENT TEMPERATURES AREA BELOW 80 DEGREES FAHRENHEIT, THE CONTRACTOR MAY HAVE MIX ACCELERATORS AND HOT WATER ADDED AT THE BATCH PLANT (SEE TABLE 1).

TEMPERATURE RANGE	% ACCELERATOR	TYPE ACCELERATOR
75-80 DEGREES	1%	HIGH EARLY (NON CALCIUM)
70-75 DEGREES	2%	HIGH EARLY (NON CALCIUM)
BELOW 70 DEGREES	3%	HIGH EARLY (NON CALCIUM)
 9. FOOTINGS
 - A. ALL ANCHOR BOLTS SET IN NEW CONCRETE SHALL BE ASTM A-307, OR ASTM F-1554 IF SPECIFIED BY ENGINEER.
 - B. ALL ANCHOR BOLTS SHALL BE ZINC PLATED UNLESS SPECIFIED OTHERWISE.
 - C. FOOTING SHALL BE PLACE IN ACCORDANCE WITH AND CONFORM TO ENGINEERED SPECIFICATIONS AND DRAWINGS.

SHADE STRUCTURE COLUMN, HEIGHT SHOWN IS HEIGHT FROM TOP OF FOOTING, ALL COLLARS ARE MINIMUM 6" FROM TOP OF COLUMN, TYPICAL SPACE BETWEEN COLLARS IS 4"



POST/COLLAR SAIL ATTACHMENT, 6" FROM TOP OF COLUMN, CONTRACTOR SHALL GENERATE SHOP DRAWINGS OF CONNECTIONS ILLUSTRATING ALL DIMENSIONS, MATERIAL TYPES, BOLT DIAMETERS AND LENGTHS AS REQUIRED TO ACCOMODATE SPECIFICATIONS THIS SHEET.

SAIL TENSIONER UNIT WITH QUICK DISCONNECT INTEGRAL INTO THE DESIGN, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF CONNECTIONS AND EXPLODED VIEW TO INDICATE INNER WORKINGS OF BOLT AREAS.

CABLE HOUSING BOTH SIDES OF SHADE CLOTH AND CABLES, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR CABLE AND CABLE CONNECTIONS TO CABLE HOUSING AND TENSIONER

SHADE SAIL SHALL BE TRUE BLUE COLOR, BY SUPERIOR SHADE OR EQUAL

POST SHALL BE STEEL CASING AS SHOWN IN SPECIFICATIONS THIS SHEET, BLACK

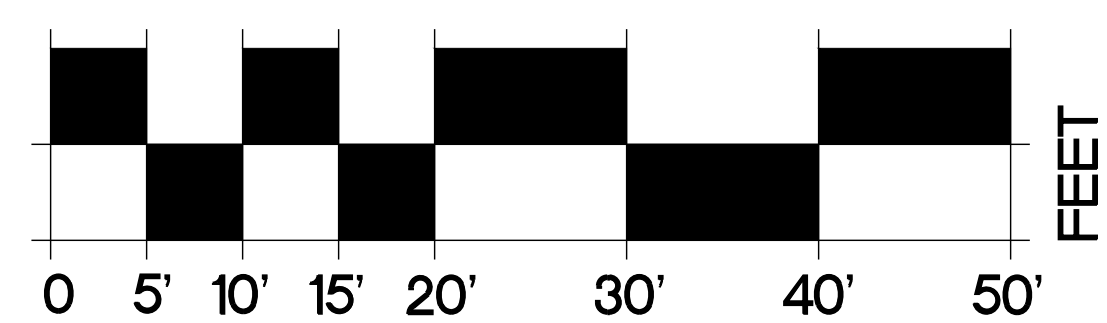
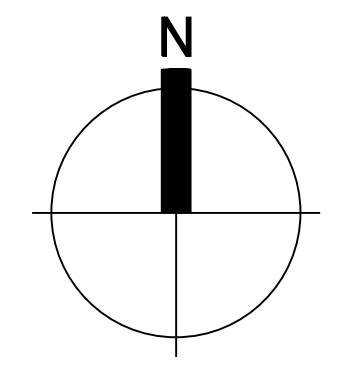
SHADE SAIL / POST PHOTO DETAIL NO SCALE

SHADE STRUCTURE LAYOUT PLAN

BITHLO PARK PLAY AREA

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820

- ANCHOR NOTES:**
1. COLUMN HEIGHTS ARE SHOWN ON PLAN, FOR FOOTING REMARKS AND REQUIREMENTS, SEE DETAIL.
 2. BASE PLATE BOLT HOLE DIAMETER SHALL NOT EXCEED ANCHOR BOLT DIAMETER PLUS 1/8" TYPICAL.
 3. PROVIDE STANDARD HARDENED WASHER FOR ANCHOR BOLT AT BASE PLATE.
 4. COLUMN BASE PLATE AND ANCHOR BOLTS SHALL BE ENCASED IN 2500 PSI CONCRETE AS SHOWN IN SPECIFICATIONS.



NORTH SCALE: 1" = 10'-0" SHEET 4.1

PLAY EQUIPMENT LEGEND:

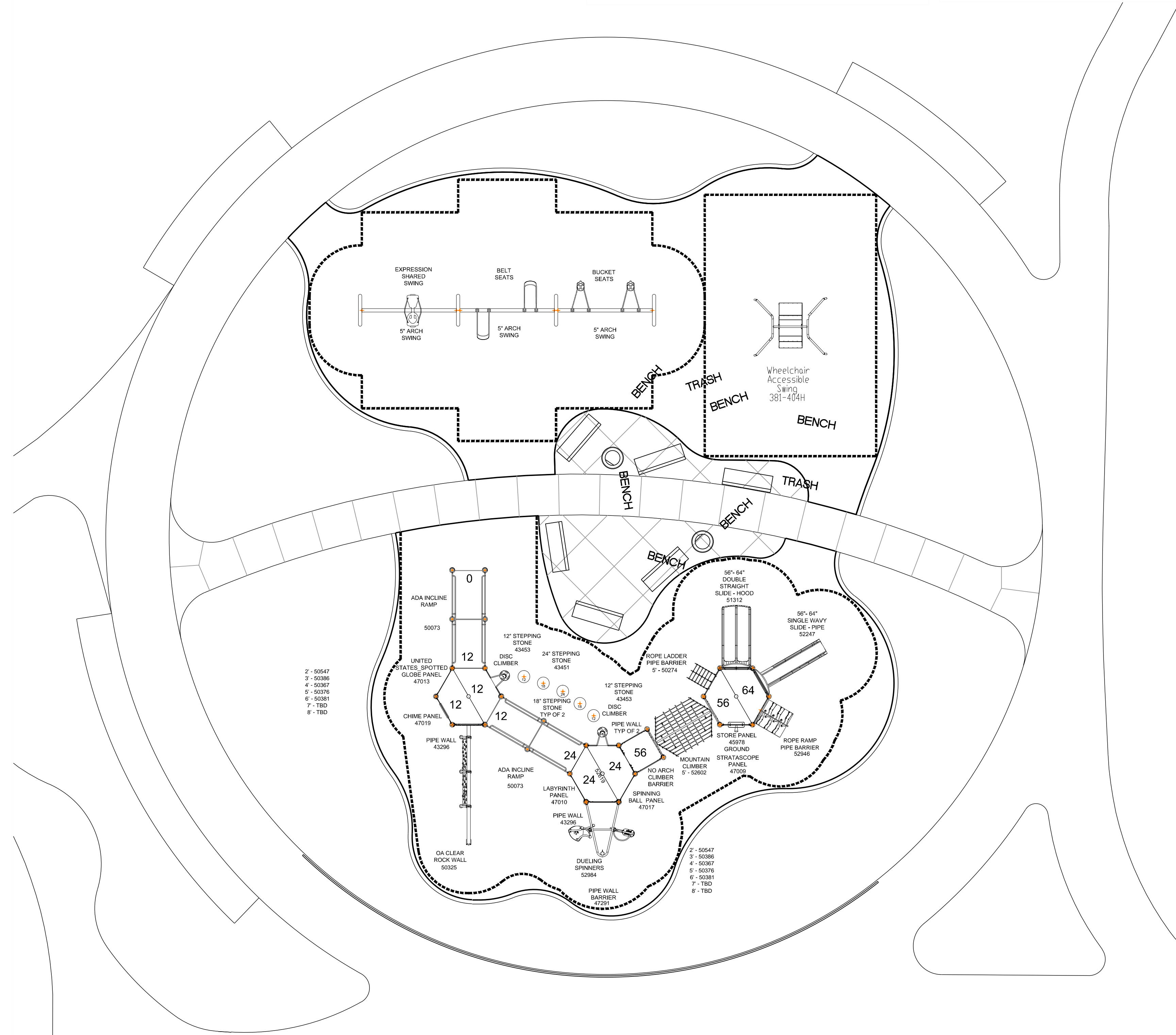
ITEM DESCRIPTION	QTY	BASIS OF DESIGN
5' ARCH SWING	3	XCENT PLAY
BUCKET SEATS	2	XCENT PLAY
BELT SEATS	2	XCENT PLAY
EXPRESSION SHARED SEAT SWING	1	GAMETIME
WHEELCHAIR ACCESSIBLE SWING - 381-404H	1	SPORTSPLAY
ADA INCLINE RAMP 50073	2	XCENT PLAY
UNITED STATES SPOTTED GLOBE PANEL-47013	1	XCENT PLAY
CHIME PANEL-47019	1	XCENT PLAY
PIPE WALL-43296	3	XCENT PLAY
OA CLEAR ROCK WALL-50325	1	XCENT PLAY
DISC CLIMBER	2	XCENT PLAY
12" STEPPING STONE-43453	2	XCENT PLAY
18" STEPPING STONE-43452	2	XCENT PLAY
24" STEPPING STONE-43451	1	XCENT PLAY
LABYRINTH PANEL-47010	1	XCENT PLAY
DUELING SPINNERS-52984	1	XCENT PLAY
PIPE WALL BARRIER-47291	1	XCENT PLAY
SPINNING BALL PANEL-47017	1	XCENT PLAY
NO ARCH LIMBER BARRIER	1	XCENT PLAY
MOUNTAIN CLIMBER 5' -52602	1	XCENT PLAY
STORE PANEL-45978	1	XCENT PLAY
STRATASCOPE PANEL-47009	1	XCENT PLAY
ROPE RAMP PIPE BARRIER-52946	1	XCENT PLAY
56"-64" SINGLE WAVY SLIDE-PIPE-52247	1	XCENT PLAY
56"-64" DOUBLE STRAIGHT SLIDE-HOOD-51312	1	XCENT PLAY
ROPE LADDER PIPE BARRIER 5'-50274	1	XCENT PLAY
HALF HEX DECK - 42793	6	XCENT PLAY
48" SQUARE DECK - 42789	1	XCENT PLAY
5' HEX POST	AS REQ'D	XCENT PLAY
6' HEX POST	AS REQ'D	XCENT PLAY
12" CAPPED POST 9'	AS REQ'D	XCENT PLAY
16" CAPPED POST 9'-4"	AS REQ'D	XCENT PLAY
24" CAPPED POST 10'	AS REQ'D	XCENT PLAY
48" CAPPED POST 12'/OVERHEAD ARCH & WEDGE WALL POST	AS REQ'D	XCENT PLAY
56" CAPPED POST 12'-8"	AS REQ'D	XCENT PLAY
64" CAPPED POST 13'-4"	AS REQ'D	XCENT PLAY
8" KICK PLATE/STEEL - 46908	AS REQ'D	XCENT PLAY
COLLAR - 46440	AS REQ'D	XCENT PLAY
6' BENCH	6	PILOT ROCK, GALVANIZED FRAME WITH PRESSURE TREATED YELLOW PINE SLATS ON SEAT AND BACK. SURFACE MOUNT TO CONCRETE PAVING PER MANUFACTURER'S SPECIFICATIONS.
TRASH RECEPTACLE	2	PILOT ROCK, GALVANIZED FRAME WITH PRESSURE TREATED YELLOW PINE SLATS WITH GALVANIZED DOME LID, GALVANIZED LINER. SURFACE MOUNT TO CONCRETE PAVING PER MANUFACTURER'S SPECIFICATIONS

SITE HORIZONS AND XCENT PLAY IS PRIMARY BASIS FOR DESIGN, CONTACT MARY LANGLEY, 407-947-6318
 REP SERVICES INC. AND LANDSCAPE STRUCTURES IS AN "EQUAL" ALTERNATE 1 FOR BASIS OF DESIGN, CONTACT NATHAN ALMOND, 407-831-9658
 DOMINICA RECREATION PRODUCTS AND GAMETIME IS AN "EQUAL" ALTERNATE 2 FOR BASIS OF DESIGN, CONTACT FRANK HOUSE, 407-331-0101
 SPORTSPLAY, 800-727-9034 AS PRIMARY BASIS FOR DESIGN FOR THE WHEELCHAIR ACCESSIBLE SWING ONLY
 PILOT ROCK BY RJ TOMAS MFG. CO., INC., 800-762-5002 IS BASIS FOR DESIGN FOR BENCHES AND TRASH RECEPTACLES



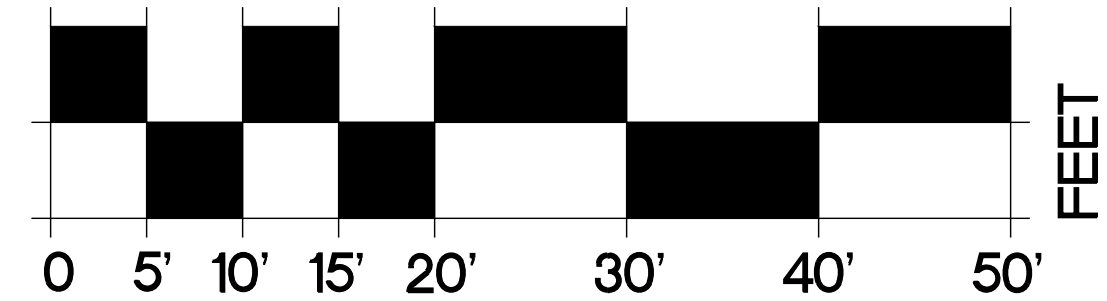
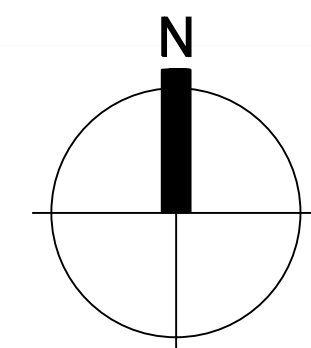
REVISIONS	DATE	BY

TEAM Engineering, LLC



PLAY EQUIPMENT PLAN BITHLO PARK PLAY AREA

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820



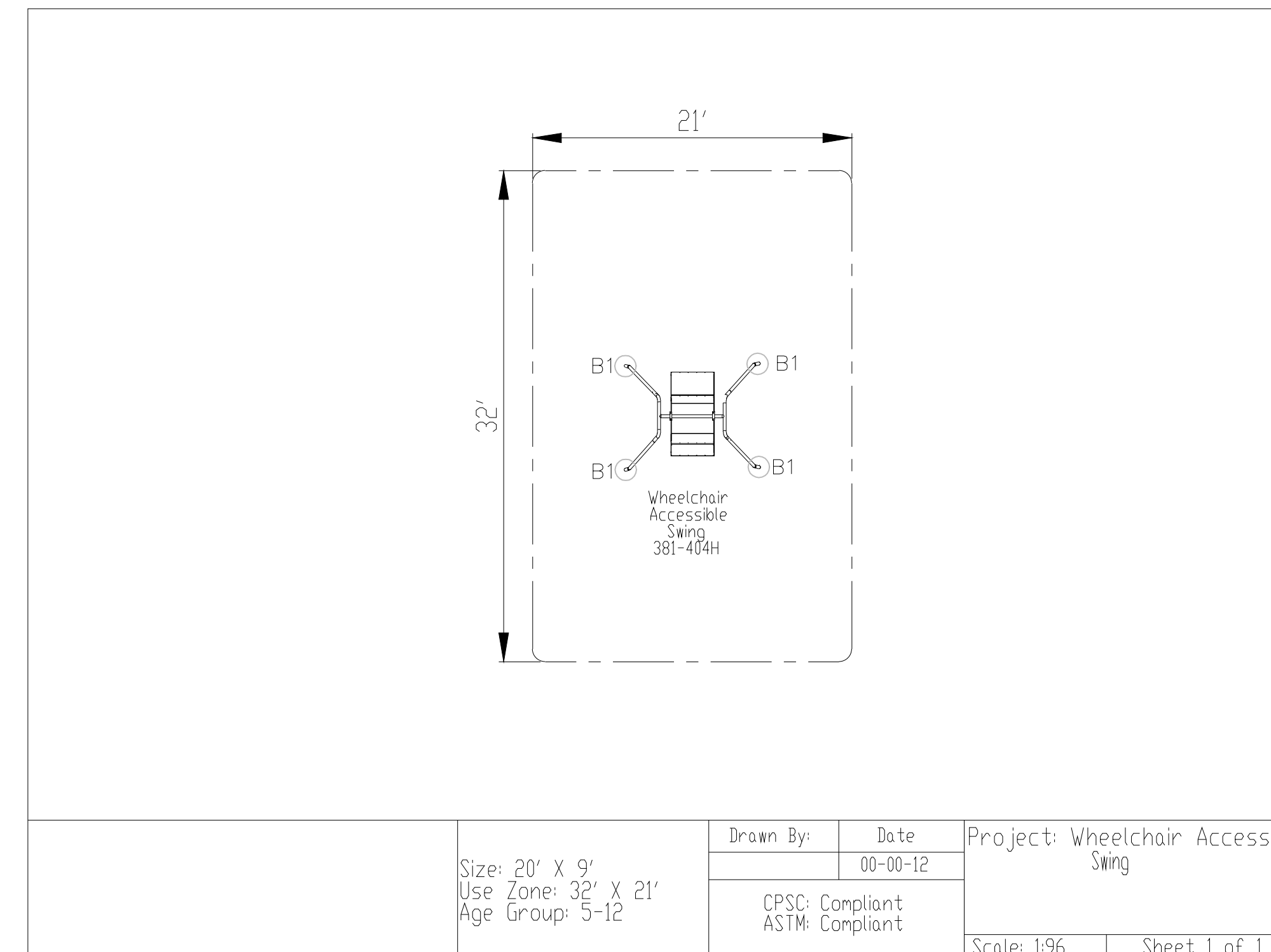
NORTH SCALE: 1" = 10'-0" SHEET 4.2

DATE: _____ ENGINEER: JEFFREY J. EARHART REG. NO. 49935

OCTOBER 10, 2016 MS
BID SET 02-01-2017



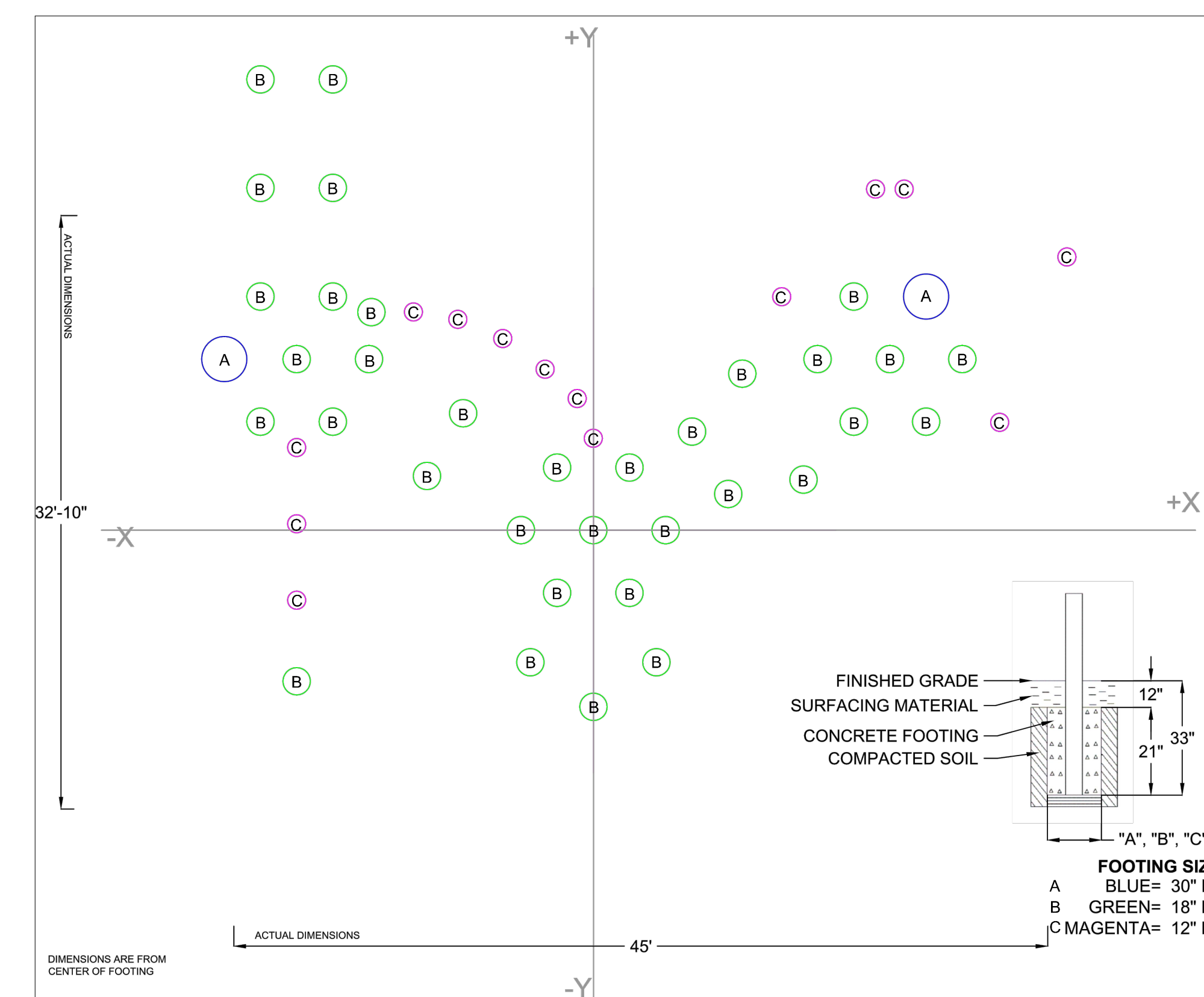
REVISIONS	DATE	BY



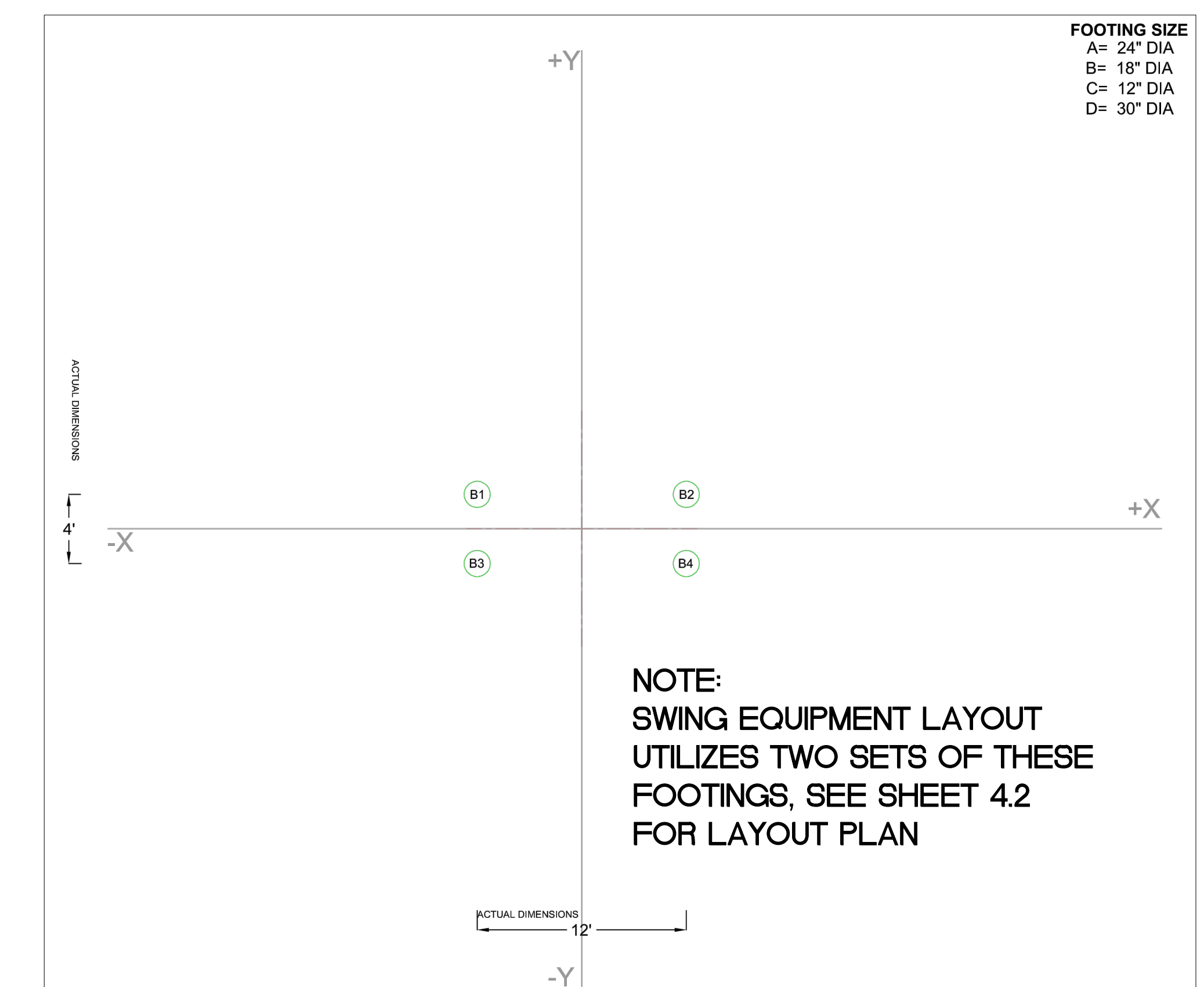
WHEEL ACCESSIBLE SWING FOOTINGS

STRUCTURAL DESIGN CRITERIA:

- A. STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE FOLLOWING CODES, STANDARDS, AND SPECIFICATIONS.
 - 1. FLORIDA BUILDING CODE (FBC) 2014 EDITION (CH 16, 1603.1.4)
- B. DESIGN LOADS
 - 1. WIND LOADS
 - a. SPEED-135 MPH ZONE
 - b. EXPOSURE-URBAN AND SUBURBAN AREAS, WOODED AREAS
 - c. RISK CATEGORY 1 NON-HABITAT STRUCTURE
 - d. WIND VELOCITY PRESSURE (ASD) 12.2 PSF
 - e. INTERNAL PRESSURE COEF - OPEN STRUCTURE



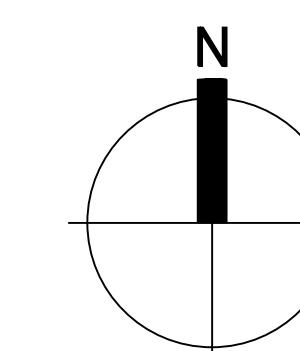
2-12 PLAY EQUIPMENT FOOTINGS



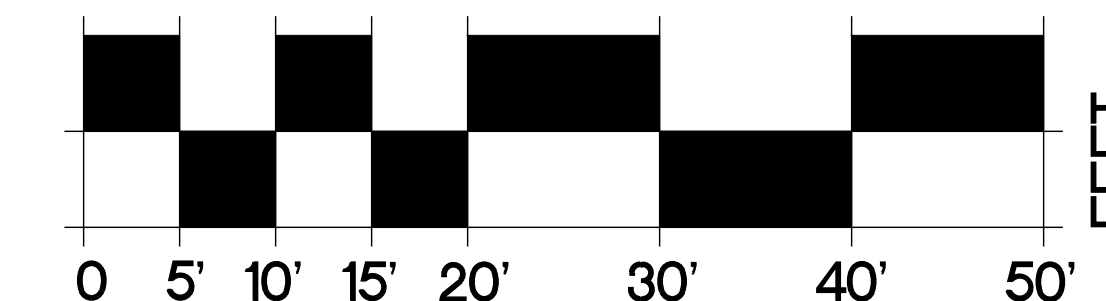
SWING EQUIPMENT FOOTINGS

PLAY EQUIPMENT FOOTING PLAN BITHLO PARK PLAY AREA

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820



NORTH



NOT TO SCALE

SHEET 4.3



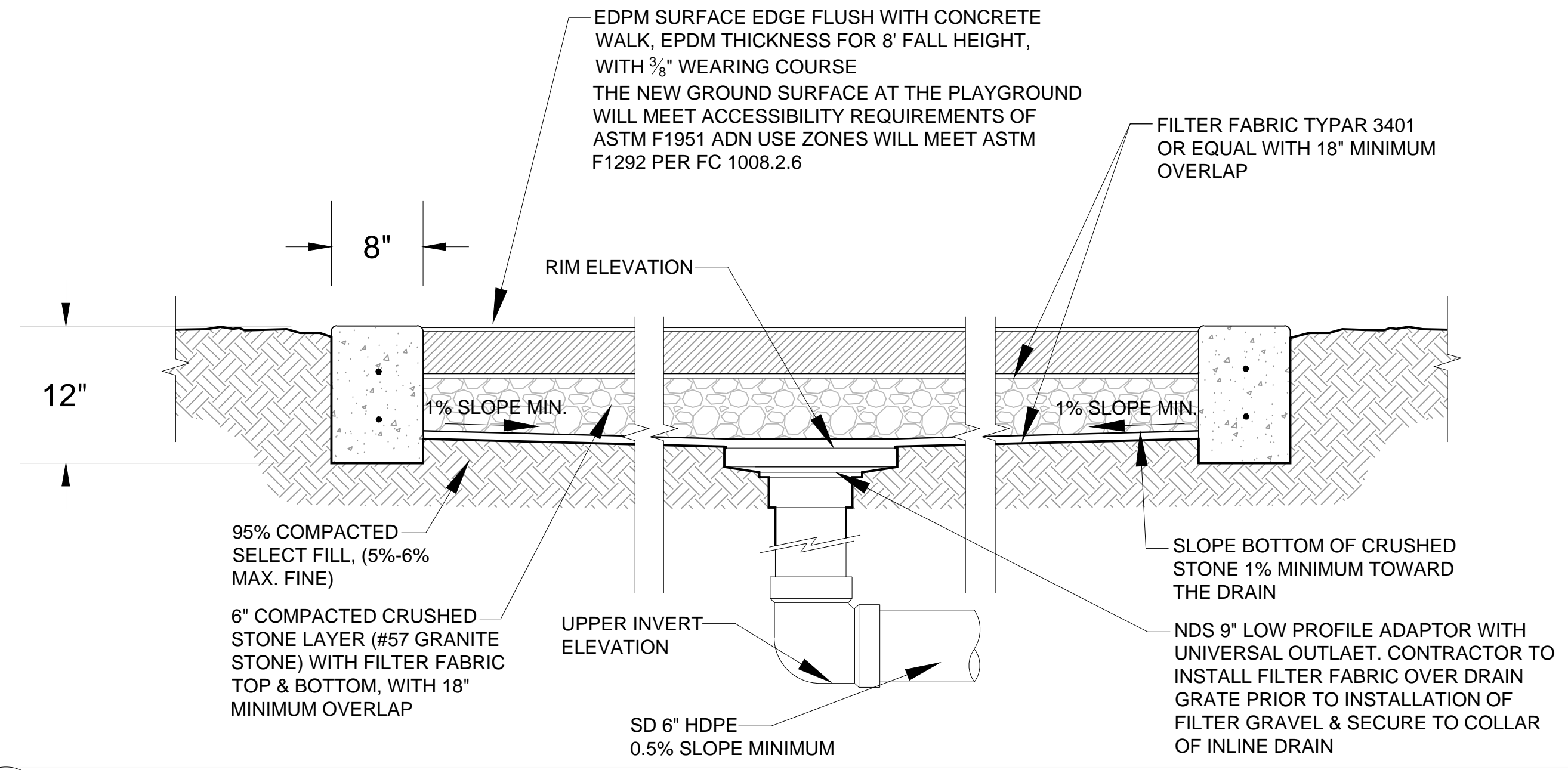
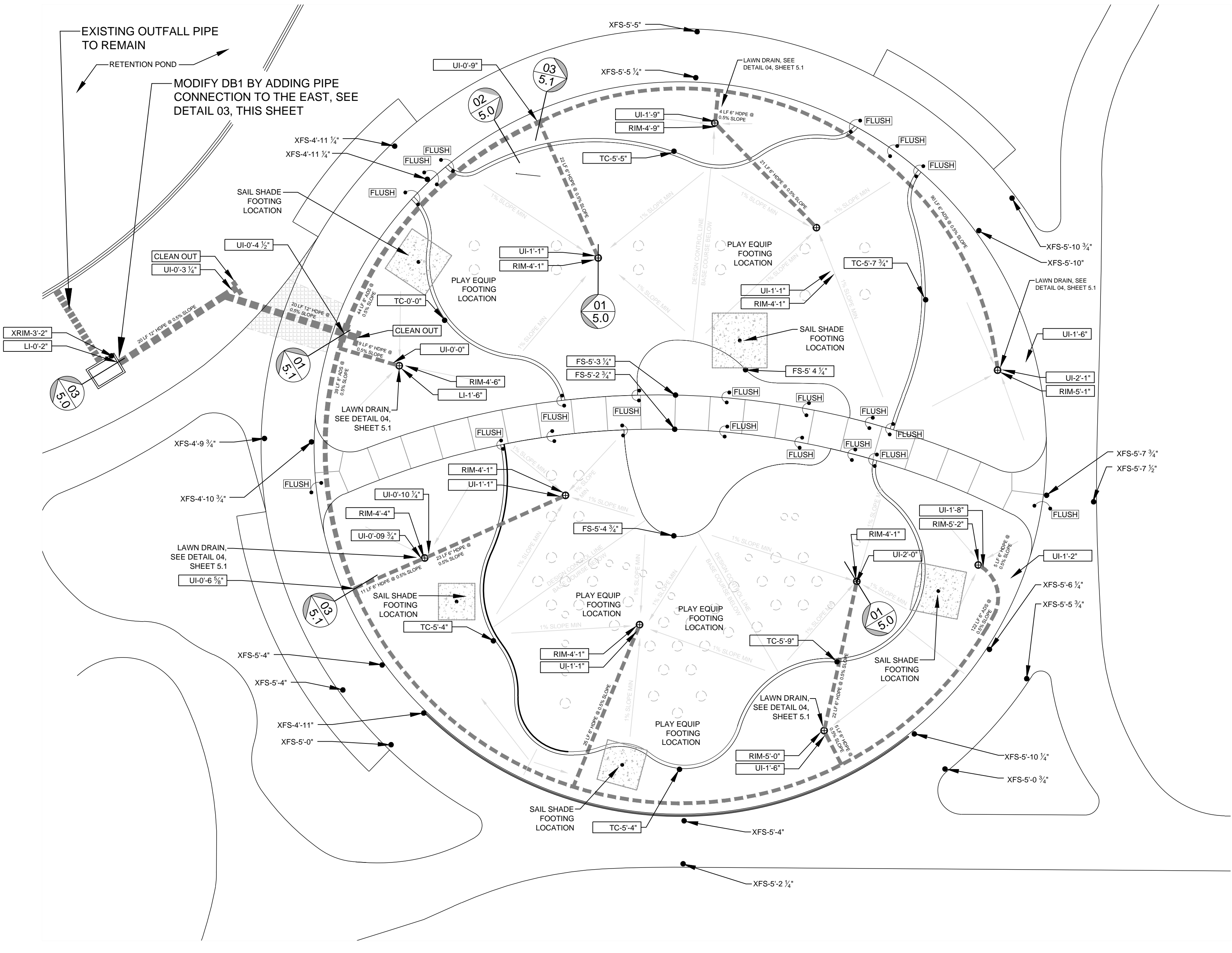
REVISIONS	DATE	BY

GRADING LEGEND:

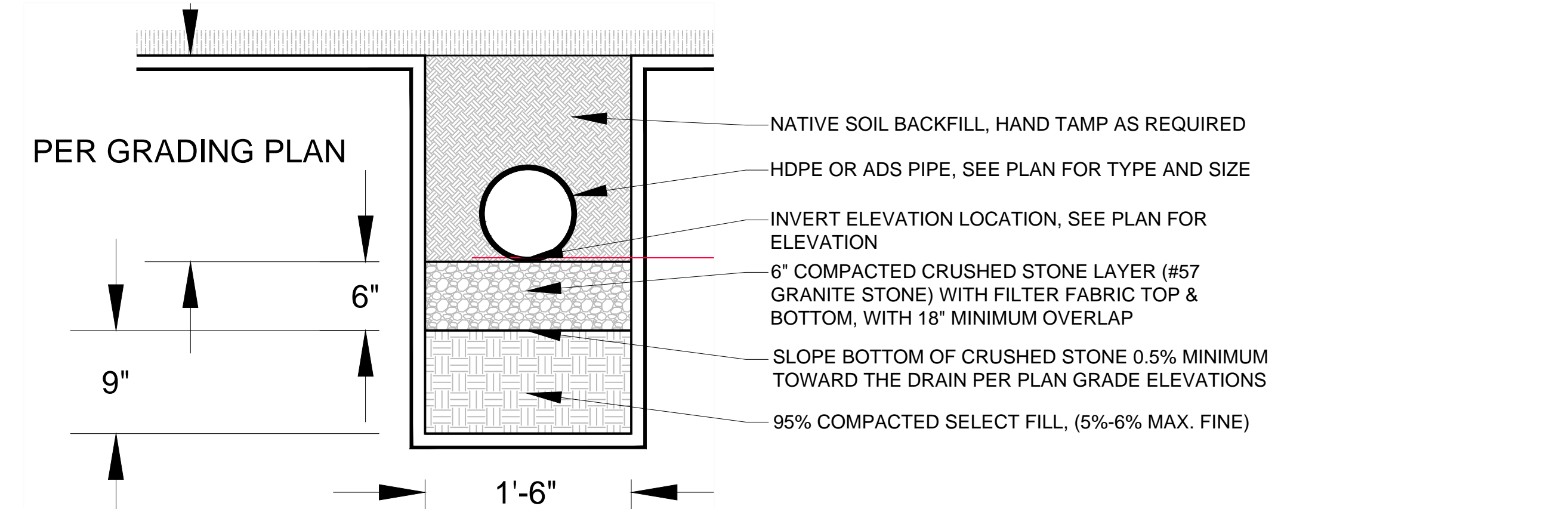
- XFG EXISTING FINISH GRADE ELEVATION
- XFS EXISTING FINISH SURFACE ELEVATION
- XRIM EXISTING RIM ELEVATION
- FG PROPOSED FINISH GRADE ELEVATION
- FS PROPOSED FINISH SURFACE ELEVATION
- UI PROPOSED UPPER INVERT ELEVATION
- LI PROPOSED LOWER INVERT ELEVATION
- RIM PROPOSED RIM ELEVATION
- TC TOP OF CURB ELEVATION
- FLUSH PROPOSED CONSTRUCTION SETS FLUSH WITH EXISTING OR PROPOSED PAVING

GRADING AND DRAINAGE NOTES:

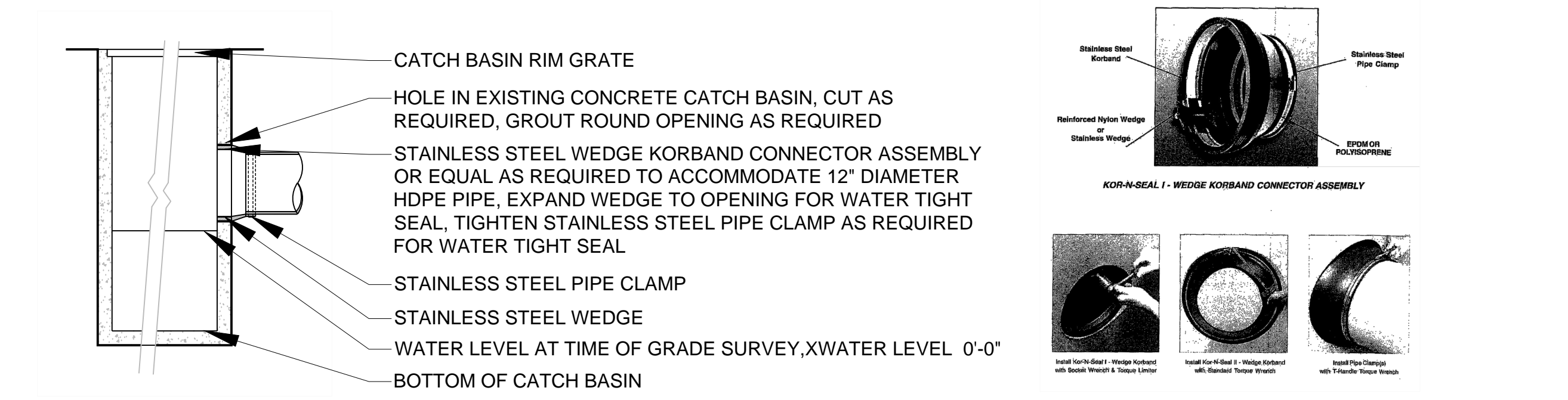
1. EXISTING CONCRETE AT PERIMETER TO REMAIN IN PLACE WITH THE EXCEPTION OF THE CUT AREA FOR THE DRAIN PIPE CROSSING. CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING AND DRAINAGE TAKE OFFS AND ANY REQUIRED MEANS AND METHODS TO PERFORM GRADING AND DRAINAGE FOR SITE REQUIREMENTS. CONCRETE CUT BY DEMOLITION CONTRACTOR.
2. PROPOSED CONCRETE PAVEMENT FINISH SURFACE GRADES SHOWN HERE. PROPOSED UNDERGROUND DRAINAGE AND SURFACE STRUCTURES SHOWN HERE. REFERENCE GRADE AT EXISTING DRAINAGE STRUCTURE IS SHOWN RELATIVE TO BALANCE OF FIELD SHOT GRADES.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AS SHOWN ON PLAN PRIOR TO INSTALLATION OF DRAINAGE STRUCTURES AND PIPING, AND ALL PROPOSED CONCRETE PAVING.
4. ALL EXCESS SOIL REQUIRED FOR REMOVAL SHALL BE PLACED AND GRADED ON-SITE AT A LOCATION DETERMINED BY PROGRAM MANAGER, RICHARD HARMIC, 407-836-6200.
5. ALL PIPE AND FITTINGS SHALL BE WATER TIGHT FITTINGS.
6. SEE THIS SHEET AND SHEET 6.0 FOR DRAINAGE DETAILS.
7. PROPOSED SIDEWALK - MAXIMUM LONGITUDINAL SLOPE OF 5% OR 1:20, MAXIMUM CROSSLOPE OF 2% OR 1:50 MAXIMUM.
8. REFERENCED CLEAN OUTS ARE THREADED PVC COUPLINGS WITH THREADED PLUG INSTALLED AT FINISH GRADE.



01 SAFETY SURFACE DRAINAGE DETAIL



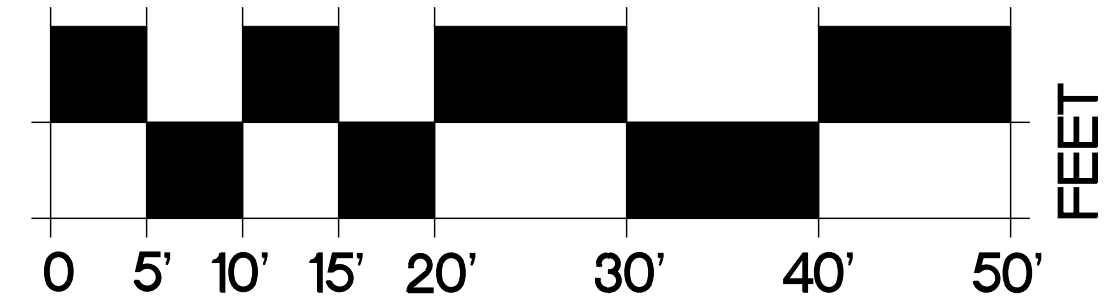
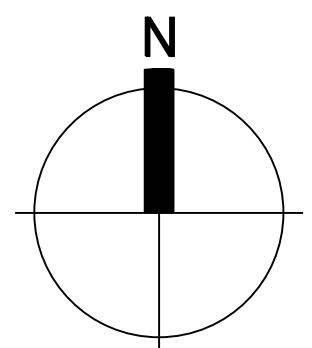
02 TRENCH DETAIL



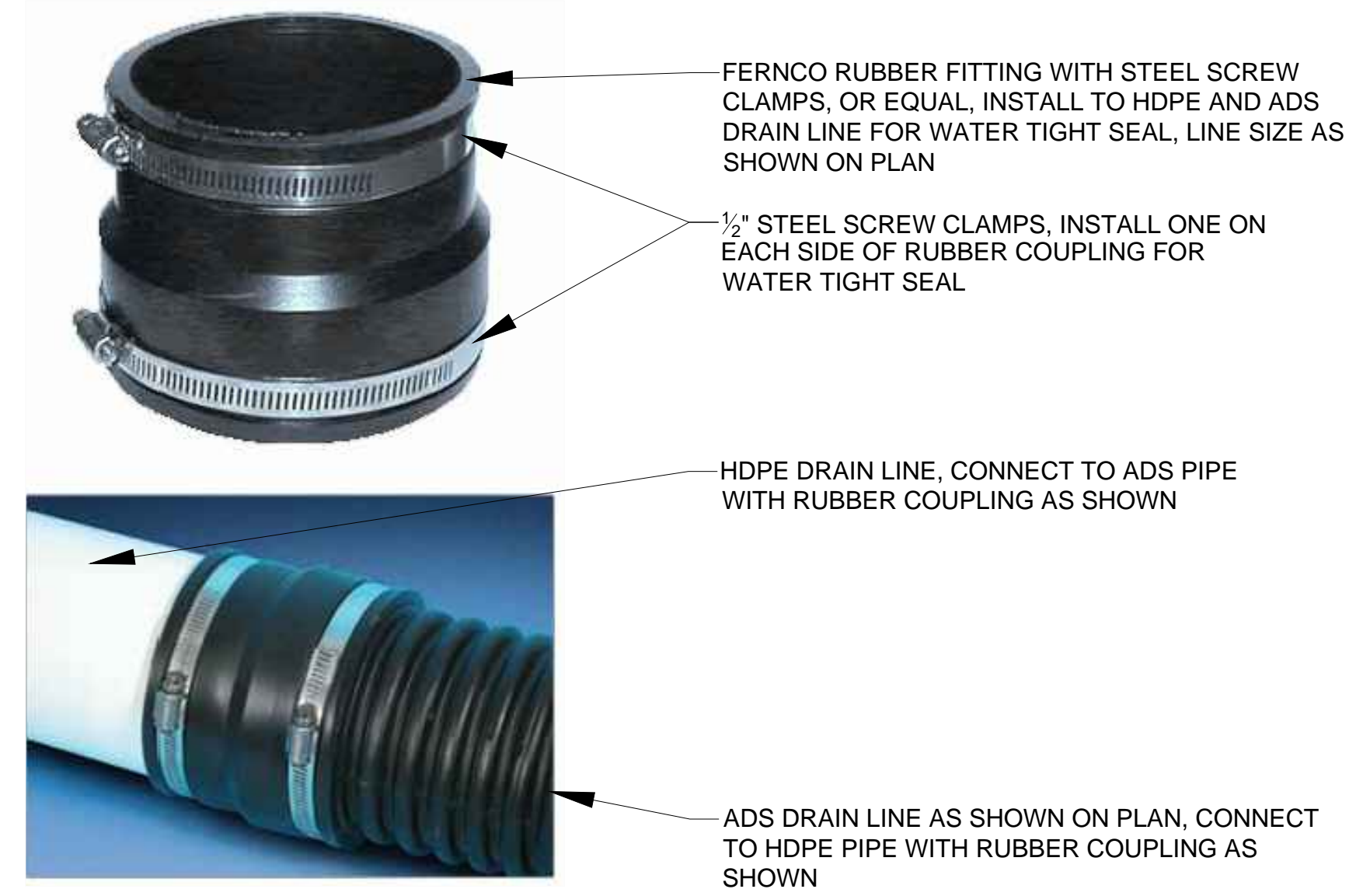
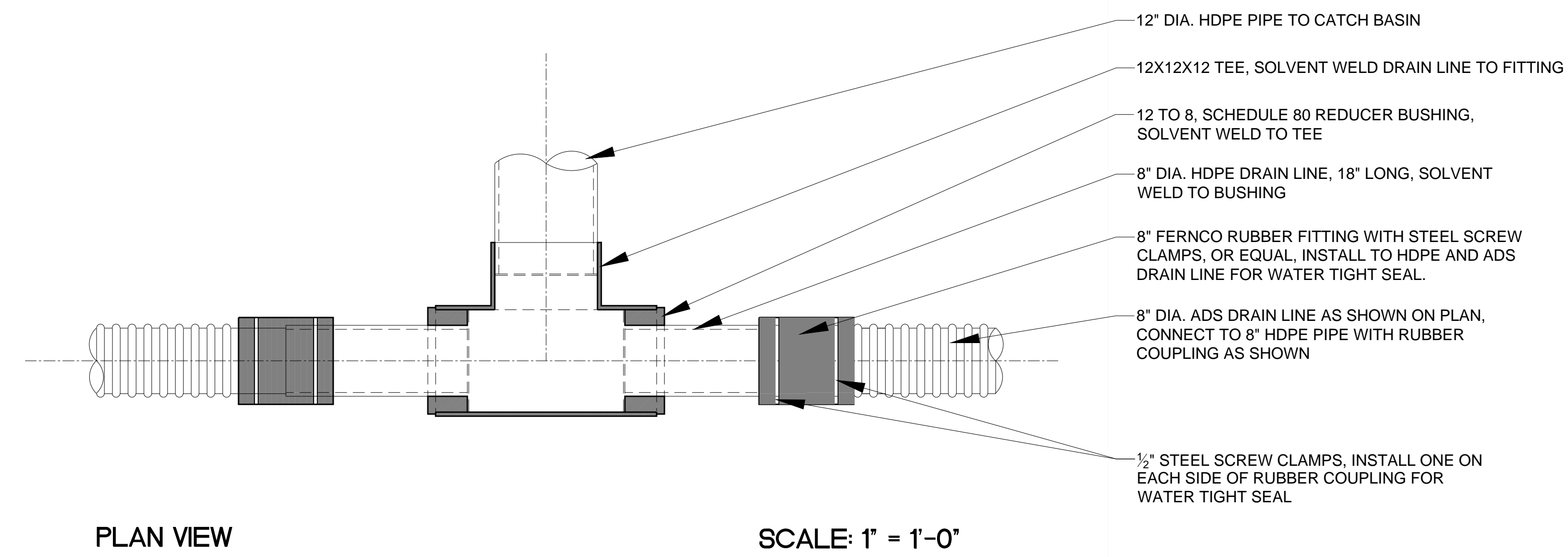
03 CATCH BASIN CORE DETAIL

GRADING AND DRAINAGE PLAN BITHLO PARK PLAY AREA

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820

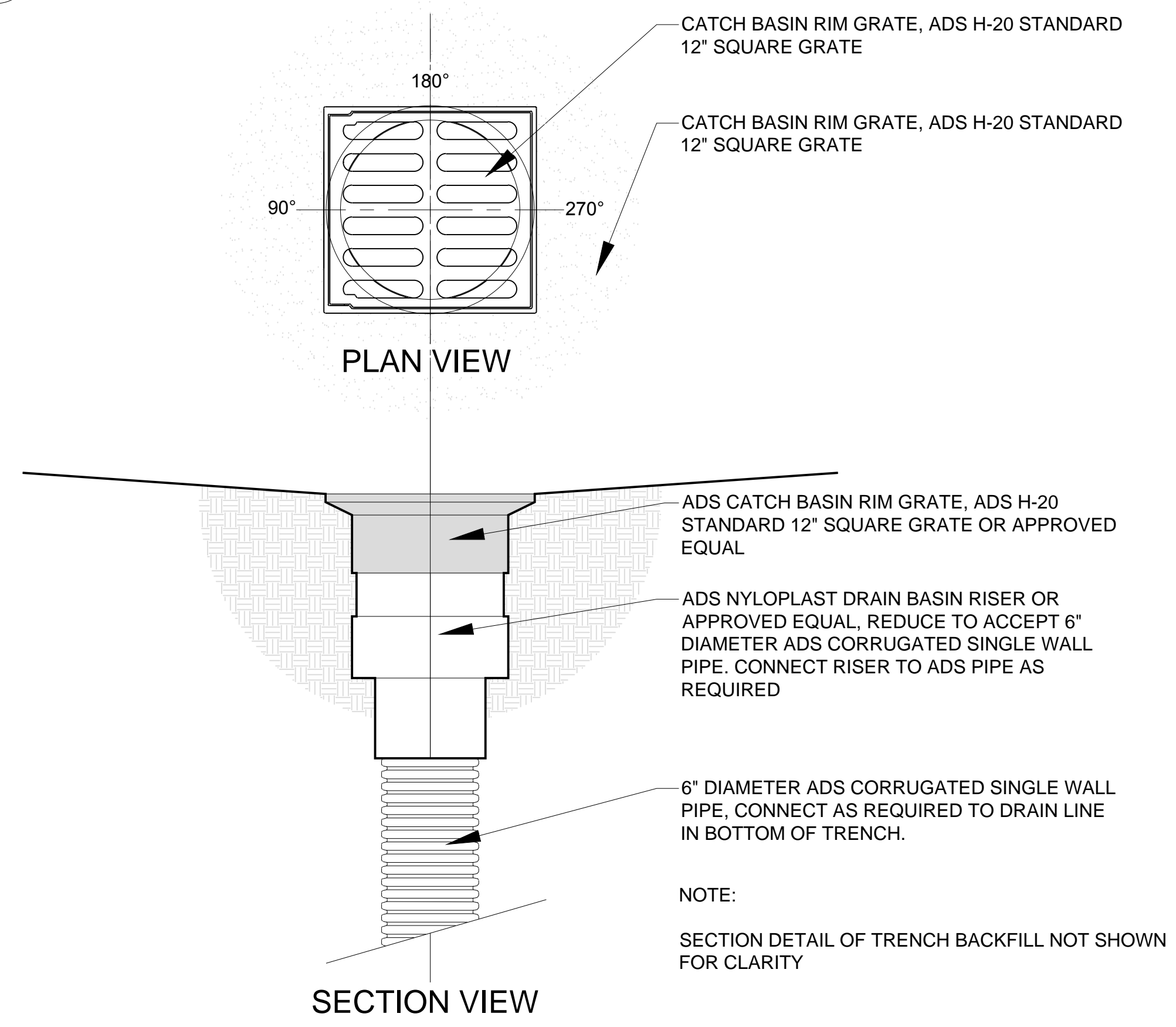
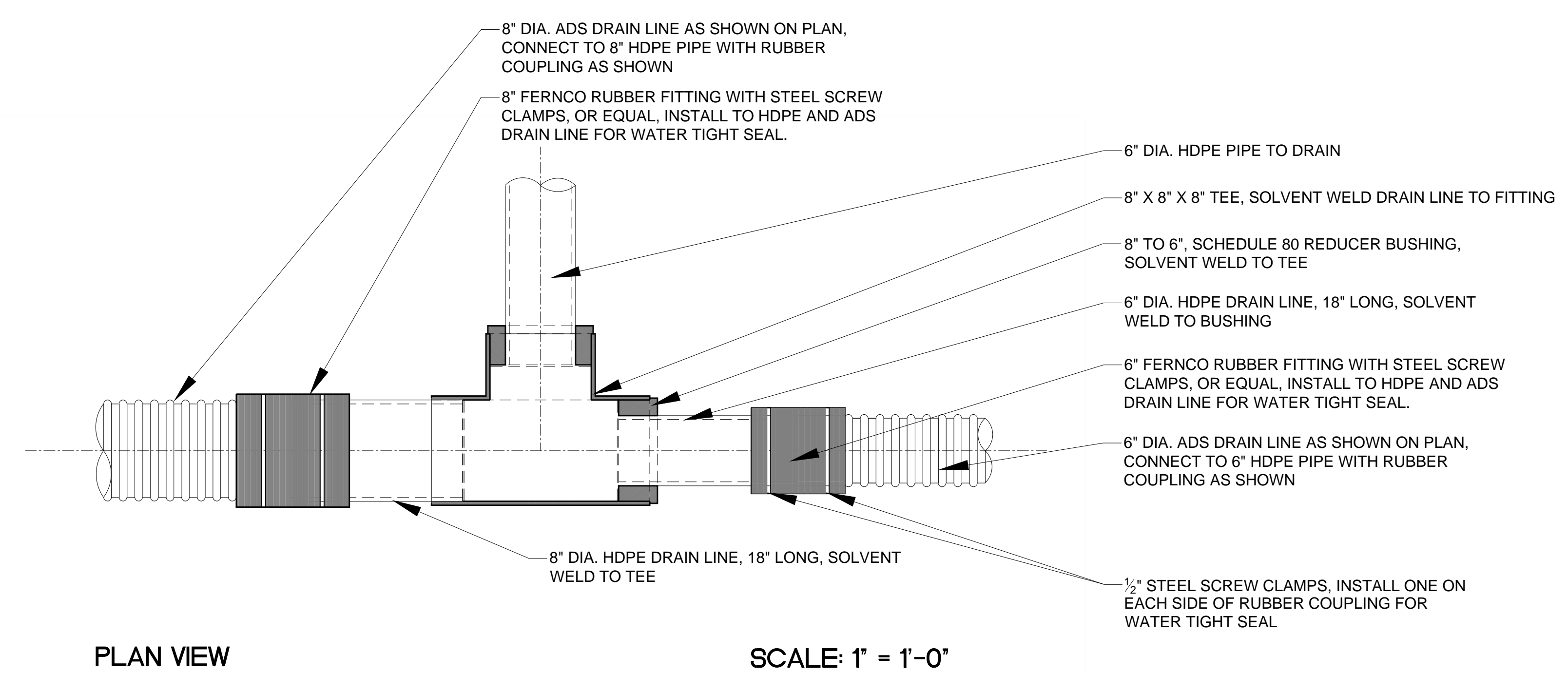


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01 HDPE/ADS DRAINAGE PIPING TRANSITION DETAIL

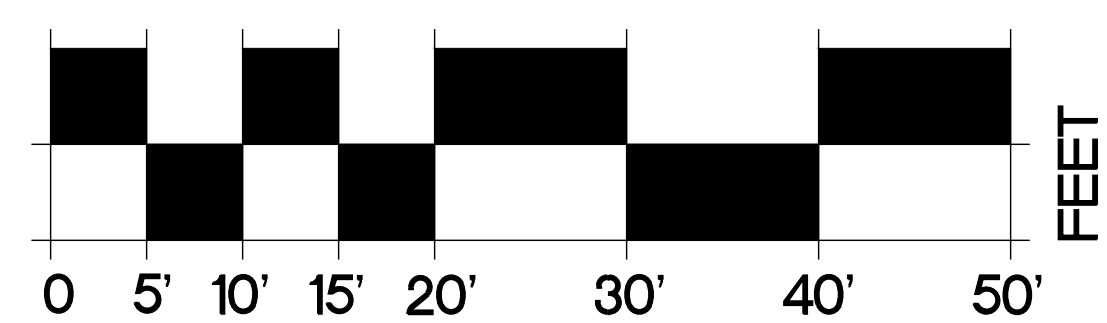
02 RUBBER COUPLING DETAIL NO SCALE



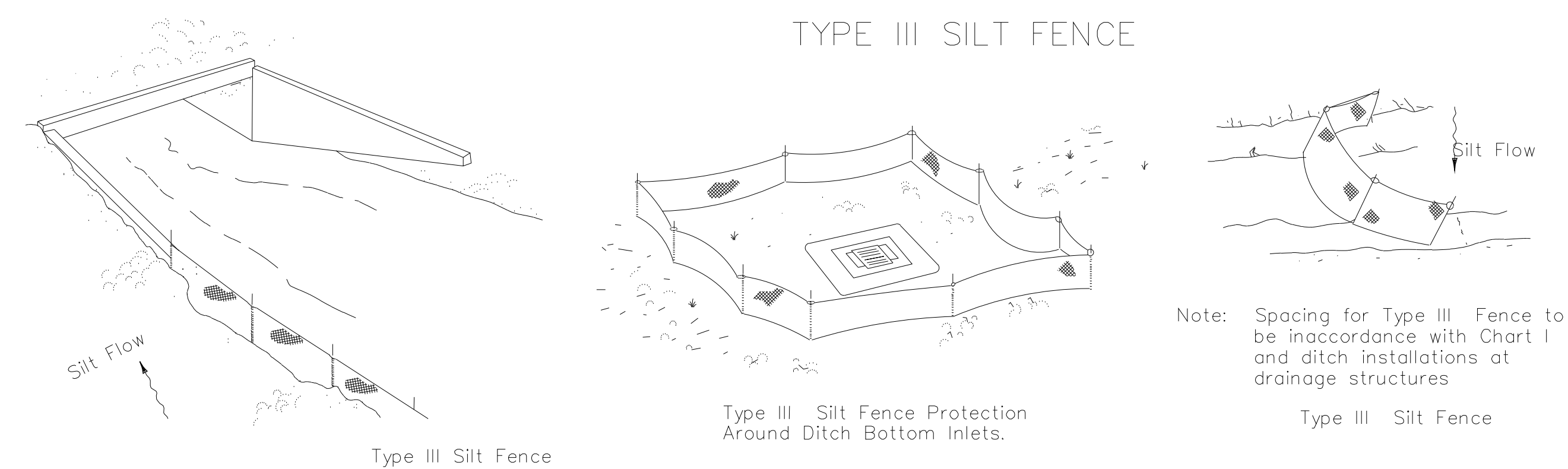
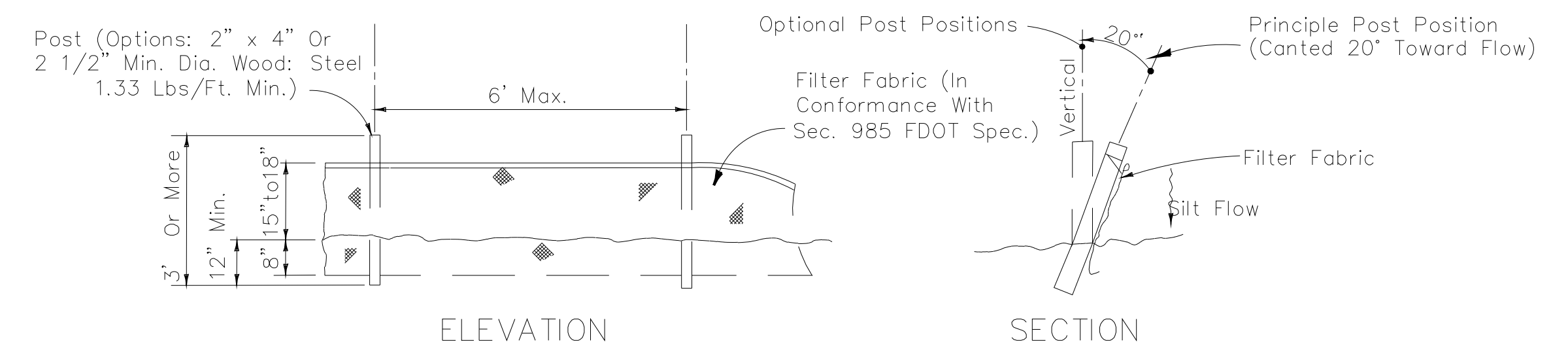
03 HDPE/ADS DRAINAGE PIPING TRANSITION DETAIL

04 ADS LAWN DRAIN DETAIL NOT TO SCALE

GRADING AND DRAINAGE DETAILS BITHLO PARK PLAY AREA



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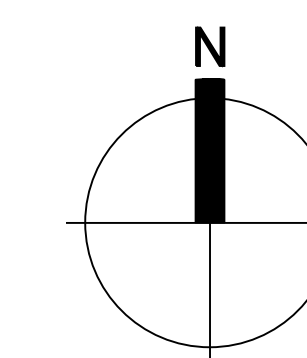
Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

01 SILT FENCE APPLICATIONS

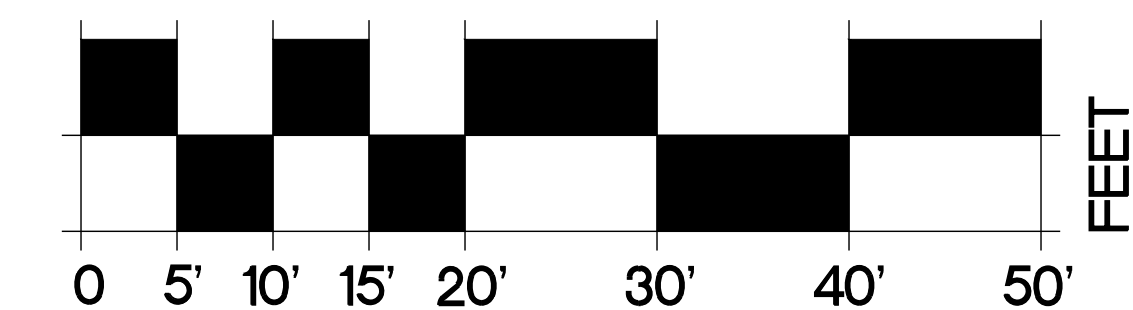
NOT TO SCALE

**DETAILS
BITHLO PARK PLAY AREA**

18501 WASHINGTON AVENUE ORLANDO, FLORIDA 32820



NORTH



SCALE: AS SHOWN SHEET 6.0