

GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:
 Kansas One-Call (316) 687-2470
 The Contractor must notify the following in case of an emergency:
 AT&T 1-800-246-8464
 Black Hills Energy 1-800-694-8989
 City of Wichita Water & Sewer Dept. 1-316-219-8921
 City of Wichita Stormwater 1-316-268-4090
 City of Wichita Traffic 1-316-268-4034
 Cox Communications 1-888-249-3530
 Kansas Gas Service 1-888-482-4950
 Westar Energy 1-800-544-4857
- Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer, that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- The Engineering Division shall field locate water valves one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match final grades by the contractor.
- The Contractor shall notify the consultant engineer and Tom Mason with the City at 316-268-4574 with the anticipated construction start date and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
- If traffic is impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at traffic@wichita.gov before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
- All elevations shown are in NAVD88.

- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
- Any sidewalk, drive approach, or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.
- City maintenance of storm sewer ends at right-of-way or easement line.
- A portion of excess excavated material shall be mounded around manholes which extend more than one (1) foot above the existing ground. Such mound shall be constructed with new development a six (6) foot diameter flat top with 4 to 1 side slopes down to the original ground. The elevation of the flat top of the mound shall be 0.4 foot below the top to the manhole.
- Geotechnical report available upon request.
- Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.
- The inspecting firm shall submit to the City Stormwater Maintenance Division a digital copy of the CCTV inspection of the conduits and structures following construction. The digital file formation shall be compatible with the City input template. A copy of the template is available upon request at 316-268-4090.
- The Contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractors expense.
- Contractor shall provide positive drainage away from all manhole covers.
- No shrink or swell factors have been applied to the earthwork quantities shown on this project. All earthwork quantities are based on raw surface volume comparisons.
- Excess dirt generated from installation of underground utilities is to be removed from this site.

Stormwater Certification:
 New Development or (Redevelopment) (Circle One)
 Stormwater Permit # SW2019-0016
 NOI Permit # S-AR94-1464 (KSR113773)

These construction plans were prepared in accordance with the current Stormwater Management Regulations as set forth in the City of Wichita's Stormwater Management Ordinance 16.32 and the policies/guidelines presented in the Wichita/Sedgwick County Stormwater Manual.

Site Area (Acres) = 1.45 Acres
 Disturbed Area (Acres) = 1.45 Acres
 Water Quality Treatment: Stormtech Underground Detention System
 Downstream Channel Protection: N/A
 Detention: Stormtech Underground Detention System (7400 CF of storage volume provided)
 The BMP used for this development is Stormtech System

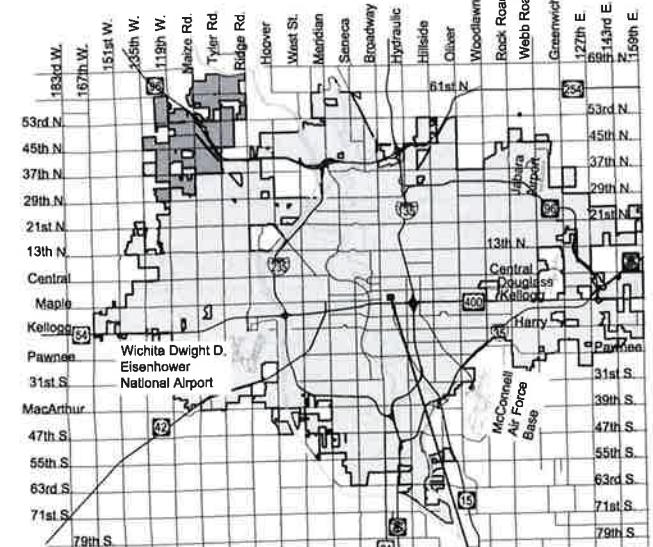
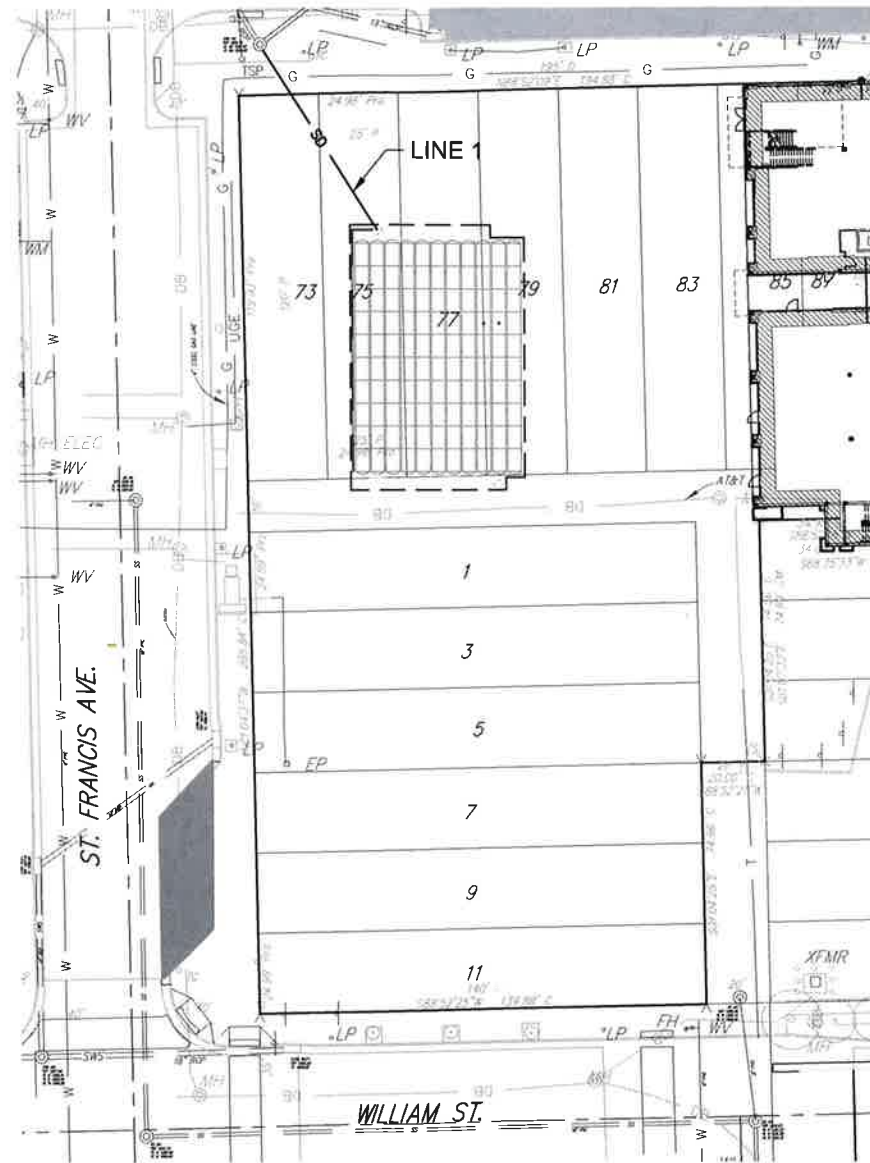
Benchmarks

BENCHMARK: CHISELED SQUARE ON THE TOP OF CURB ON THE SOUTH CURB RETURN AT THE SOUTHEAST CORNER OF ST. FRANCIS AND WILLIAMS ST.
 ELEVATION = 1297.56 (NAVD88, G12B)

BENCHMARK: CHISELED SQUARE ON THE TOP OF CURB AT THE NORTH END OF PARKING LOT, 81' S. OF THE CENTERLINE OF DOUGLAS AND 339' E. OF THE CENTERLINE OF ST. FRANCIS.
 ELEVATION = 1300.79 (NAVD88, G12B)

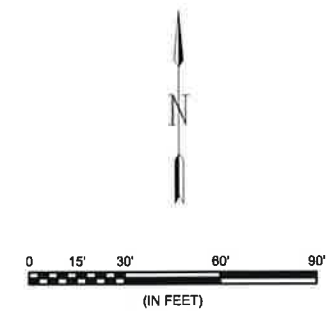
PRIVATE STORM WATER DRAIN
 to serve
NAFTZGER PARK
CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer
 Project Number
 568 PPD (133119)



Vicinity Map PROJECT LOCATION

Sheet Number	Sheet Title
1	Titlesheet
2	Line 1 Plan-Profile
3	Site Plan
4	Underground Detention Details
5	Underground Detention Details
6	Underground Detention Details
7	Underground Detention Details
8	Underground Detention Details
9	Underground Detention Details



AS-BUILT PLAN:
 12-18-19
 Contractor: Nowak Const.
 Inspection; Garver



APPROVED AS NOTED
 BY WICHITA PUBLIC WORKS ENGINEERING
 AND STORMWATER DIVISION

Engineering Neth Gotschey 4.2.19
 Stormwater Joe Hinkle 4.2.19

NOTE TO CONTRACTORS

Installation, inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer in the state of Kansas. No work shall be performed the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov).

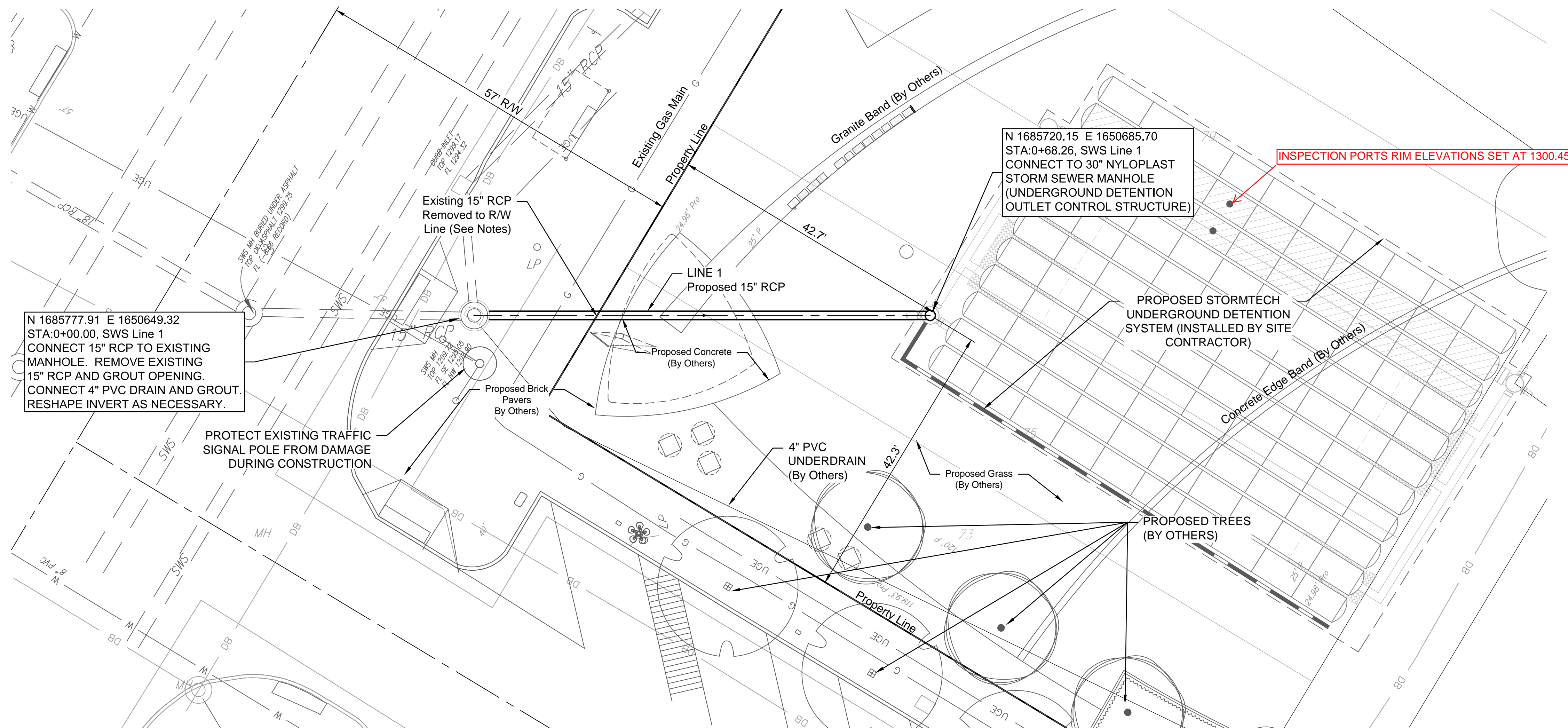
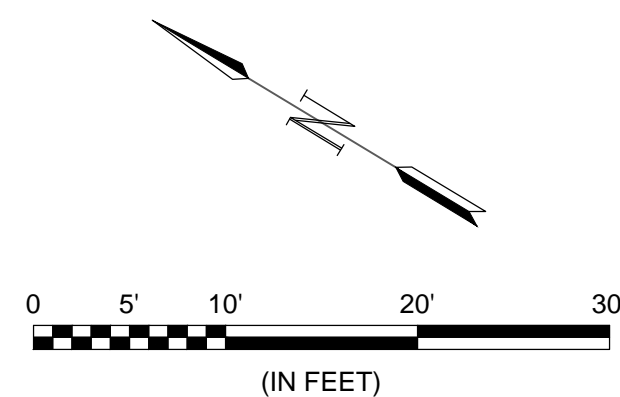
An approved copy of these plans signed by City staff are required on-site.

February 2019
 PLANS PREPARED BY





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N 1685777.91 E 1650649.32
 STA:0+00.00, SWS Line 1
 CONNECT 15" RCP TO EXISTING MANHOLE. REMOVE EXISTING 15" RCP AND GROUT OPENING. CONNECT 4" PVC DRAIN AND GROUT. RESHAPE INVERT AS NECESSARY.

N 1685720.15 E 1650685.70
 STA:0+68.26, SWS Line 1
 CONNECT TO 30" NYLOPLAST STORM SEWER MANHOLE (UNDERGROUND DETENTION OUTLET CONTROL STRUCTURE)

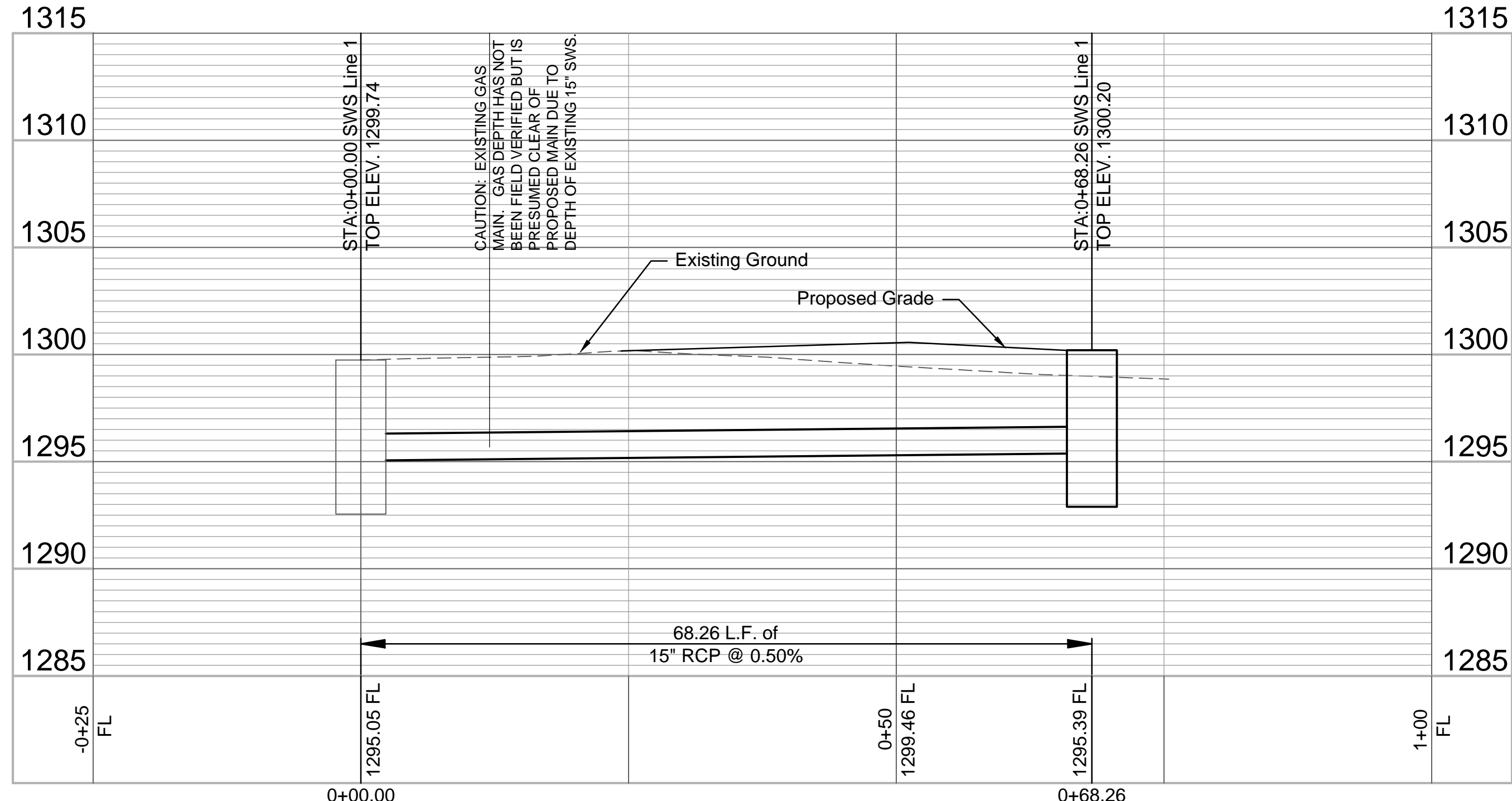
INSPECTION PORTS RIM ELEVATIONS SET AT 1300.45

PROTECT EXISTING TRAFFIC SIGNAL POLE FROM DAMAGE DURING CONSTRUCTION

PROPOSED TREES (BY OTHERS)

STORM SEWER NOTES

1. STORMTECH UNDERGROUND DETENTION SYSTEM TO BE INSTALLED BY THE SITE CONTRACTOR. DETAILS ARE INCLUDED IN THIS PLAN FOR INFORMATION ONLY.
2. ALL OTHER STORM DRAINS PROPOSED FOR THIS SITE ARE 10" OR BELOW IN SIZE AND WILL BE DETAILED WITH THE NAFTZGER PARK SITE PLANS.
3. THE EXISTING 15" RCP THAT DRAINED THE ORIGINAL ON-SITE POND HAS BEEN REMOVED TO THE R/W LINE. CONTRACTOR SHALL REMOVE REMAINING LINE TO MANHOLE PRIOR TO INSTALLATION OF NEW LINE.
4. EXISTING SIDEWALK SHOULD BE REMOVED PRIOR TO THE CONSTRUCTION OF THE STORM SEWER AND WILL BE REPLACED WITH BRICK PAVERS BY THE SITE CONTRACTOR.



68.26 L.F. of 15" RCP @ 0.50%

REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS
 NAFTZGER PARK
 STORM WATER
 IMPROVEMENTS

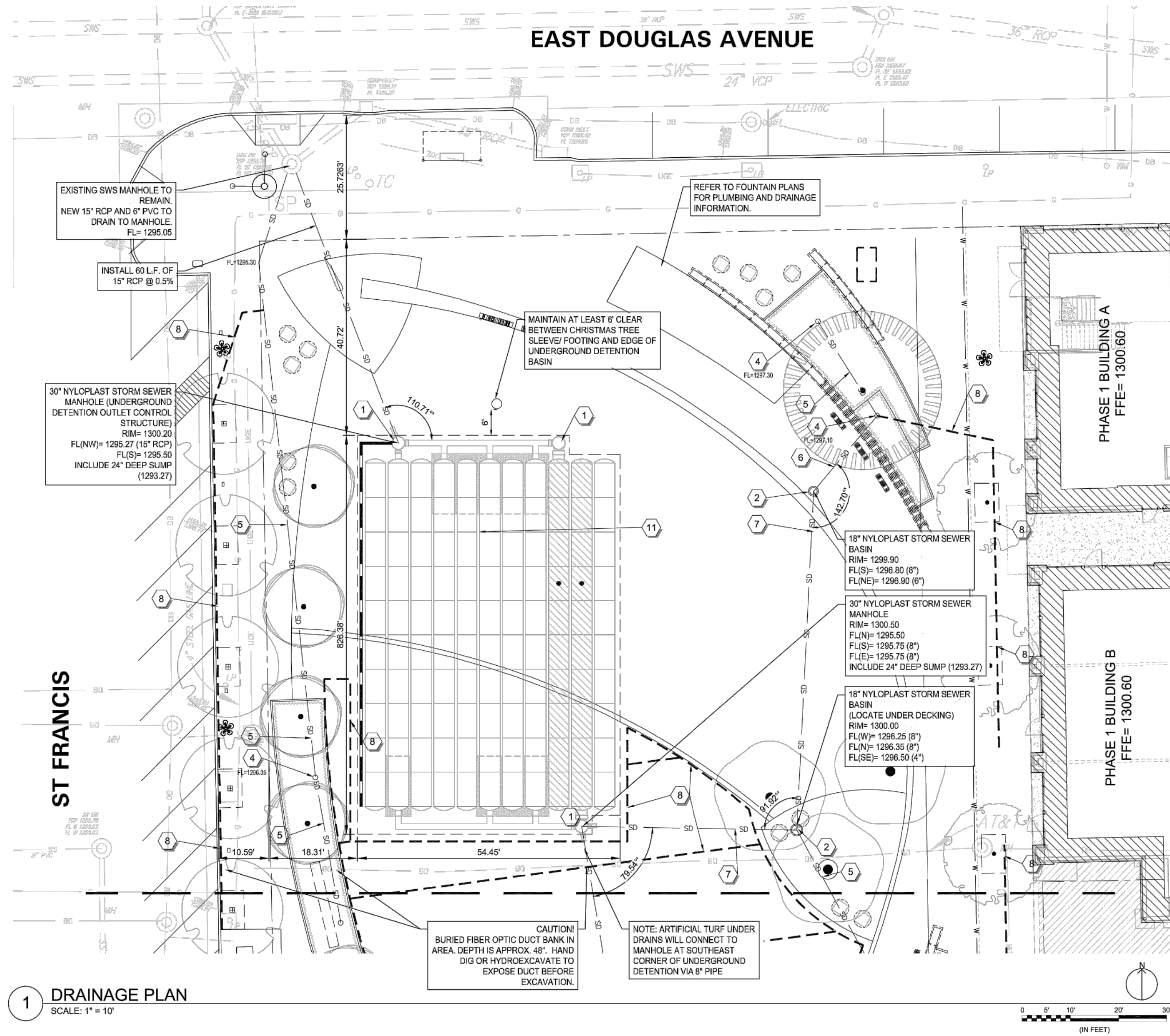
**Line 1
 Plan-Profile**

JOB NO.: 18267015
 DATE: FEB 2019
 DESIGNED BY: KWL
 DRAWN BY: KWL

BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

File: L:\2018\18267015 - Naftzger Park\Drawings\C3D\SWS Plan Profile.dwg, Last Save: 3/19/2019 9:17 AM, Last saved by: BDTThomas
 Last plotted by: Thomas, Brent D., Plot Style: ---, Plot Scale: 1:2,5849, Plot Date: 3/19/2019 12:01 PM, Plotter Used: None



1 DRAINAGE PLAN
SCALE: 1" = 10'

THIS PAGE IS FOR INFORMATION ONLY

LEGEND

NEW	EXISTING	CONTOUR
— 25.0 —	— 25.0 —	---
— SD —		STORM DRAIN LINE (PVC OR RCP)
	BS	BOTTOM STEP
	EOP	EDGE OF PAVEMENT
	FL	FLOW LINE
	HP	HIGH POINT
	LF	LINEAR FEET
	TC	TOP OF CURB
	TS	TOP STEP

BENCHMARKS:

BENCHMARK: CHISELED SQUARE ON THE TOP OF CURB ON THE SOUTH CURB RETURN AT THE SOUTHEAST CORNER OF ST. FRANCIS AND WILLIAMS ST., ELEVATION = 1297.58 (NAVD88, G12B)
 BENCHMARK: CHISELED SQUARE ON THE TOP OF CURB AT THE NORTH END OF PARKING LOT, 81' S. OF THE CENTERLINE OF DOUGLAS AND 339' E. OF THE CENTERLINE OF ST. FRANCIS, ELEVATION = 1300.79 (NAVD88, G12B)

NOTES:

- MANHOLE RINGS AND COVERS, VALVE BOXES, METER BOXES, CLEAN-OUTS, ETC. TO REMAIN SHALL BE ADJUSTED TO FINISH GRADE.
- SIDEWALK CROSS-SLOPE SHALL NOT EXCEED 2%.
- GRADES SHOWN ARE ROUGH GRADES. ALLOW FOR TOP SOIL, SOD, MULCH, CRUSHED STONE, ETC. WHEN APPLICABLE.
- UNSATURABLE SOILS ENCOUNTERED DURING EXCAVATION SHALL BE REMOVED AND DISPOSED OF AT THE DIRECTION OF THE ENGINEER.
- NO EXCAVATION, FILL, CONSTRUCTION TRAFFIC, OR STORAGE OF MATERIALS SHALL TAKE PLACE WITHIN THE TREE PROTECTION ZONE AROUND TREES TO REMAIN. CONTRACTOR SHALL PROPERLY MAINTAIN TREE PROTECTION FENCING AND INFORM ALL SUBCONTRACTORS OF TREE PROTECTION.

DRAINAGE PLAN SCHEDULE

SYMBOL	DESCRIPTION
1	30" NYLOPLAST STORM SEWER MANHOLE
2	18" NYLOPLAST STORM SEWER BASIN W/ PEDESTRIAN CAST IRON GRATE
3	AREA DRAIN W/ 7" ADJUSTABLE TOP (NICKEL BRONZE TOP) (#FD-304-01, MFG BY WATTS)
4	9" x 9" ATRIUM GRATE (MODEL #981, COLOR: BLACK) & 9" LOW PROFILE ADAPTER HOUSING (MODEL #932) MANUF. BY NDS, INC.
5	4" SCHEDULE 40 PVC PIPE
6	6" SCHEDULE 40 PVC PIPE
7	8" SCHEDULE 40 PVC PIPE
8	4" DIA. CORRUGATED POLYETHYLENE DRAINAGE PIPE W/ SOCK (TREE CELL UNDERDRAINS) (UNDER ARTIFICIAL TURF, VERIFY UNDERDRAIN SIZE WITH INSTALLER)
9	8" PERFORATED PVC HEADER PIPE
10	NOT USED
11	50" x 75" UNDERGROUND DETENTION CELLS. REF: SHEETS C3.02 AND C3.03

NAFTZGER PARK

698 E William Street
Wichita, KS 67202

WICHITA, KS

Client
DOUGLAS DEVELOPMENT
 125 N Emporia Ave #202
 Wichita, KS 67202
 316-260-9088
 Mr. Quentin Ellis
 quentin@tgcddevelopment.com

Landscape Architect
Swa/Balsley

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 New York, NY 10001-6914
 United States
 www.swabalsley.com
 +1.212.684.9230 o

Consultant
ASSOCIATE LANDSCAPE ARCHITECT
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 Wichita, KS 67202
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CIVIL ENGINEER
 Garver
 8535 E. 21st Street, Suite 130
 Wichita, KS 67206
 316-264-8008 | www.garverusa.com

ELECTRICAL ENGINEER
 Basis Consulting Engineers
 800 E. 1st Street #401
 316-941-5533 | www.basisengineers.com

STRUCTURAL ENGINEER
 MKEC
 411 North Webb Road
 Wichita, KS 67206
 316-684-9600 | www.mkec.com

AQUATIC ENGINEER
 Water's Edge Aquatic Design
 11205 W 79th Street
 Lenexa, KS 66214
 913-438-4338 | www.wedesignpools.com

AUDIO VISUAL DESIGNER
 Audiomatrix
 316-736-5094 | www.audiomatrix.com

Stamp

Revisions

-
-
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Key Plan

Date

January 31, 2019

Phase

Construction Documentation
 Job Number
 TGCNY701

Drawing Title
DRAINAGE PLAN-NORTH
 NOT FOR CONSTRUCTION

Drawing Number
C1.02



DATE: DECEMBER 17, 2018
 DWG FILE: GC- GRADING PLAN.DWG
 PROJECT NO. 18267015

800 E 21ST ST, SUITE 130, WICHITA, KANSAS 67202
 P: 316.264.8008 F: 316.264.8003
 WWW.GARVERUSA.COM



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS
NAFTZGER PARK
STORM WATER
IMPROVEMENTS

Site Plan

JOB NO.: 18267015
 DATE: FEB 2019
 DESIGNED BY: KWL
 DRAWN BY: KWL

BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

SHEET NUMBER **3** OF **9**

File: L:\2018\18267015 - Naftzger Park\Drawings\C3\DWG\Details.dwg Last Save: 2/26/2019 1:34 PM Last saved by: KWL
 Last plotted by: Thomas, Brent D. Plot Style: ---- Plot Scale: 1:2,5849 Plot Date: 3/19/2019 12:02 PM Plotter Used: None

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	GARRETT KLINGLER 816-401-7559 GARRETT.KLINGLER@ADS-PIPE.COM
ADS SALES REP:	DUSTIN KETCHUM (316)-201-7032 DUSTIN.KETCHUM@ADS-PIPE.COM
PROJECT NO:	S101153



ADVANCED DRAINAGE SYSTEMS, INC.



NAFTZGER PARK

WICHITA, KS

STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740 OR SC-310.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIERED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
WICHITA, KANSAS
NAFTZGER PARK
STORMWATER
IMPROVEMENTS

Underground
Detention
Details

JOB NO.: 18267015
DATE: FEB 2019
DESIGNED BY: KWL
DRAWN BY: KWL

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

SHEET NUMBER **4** OF **9**

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PROPOSED LAYOUT

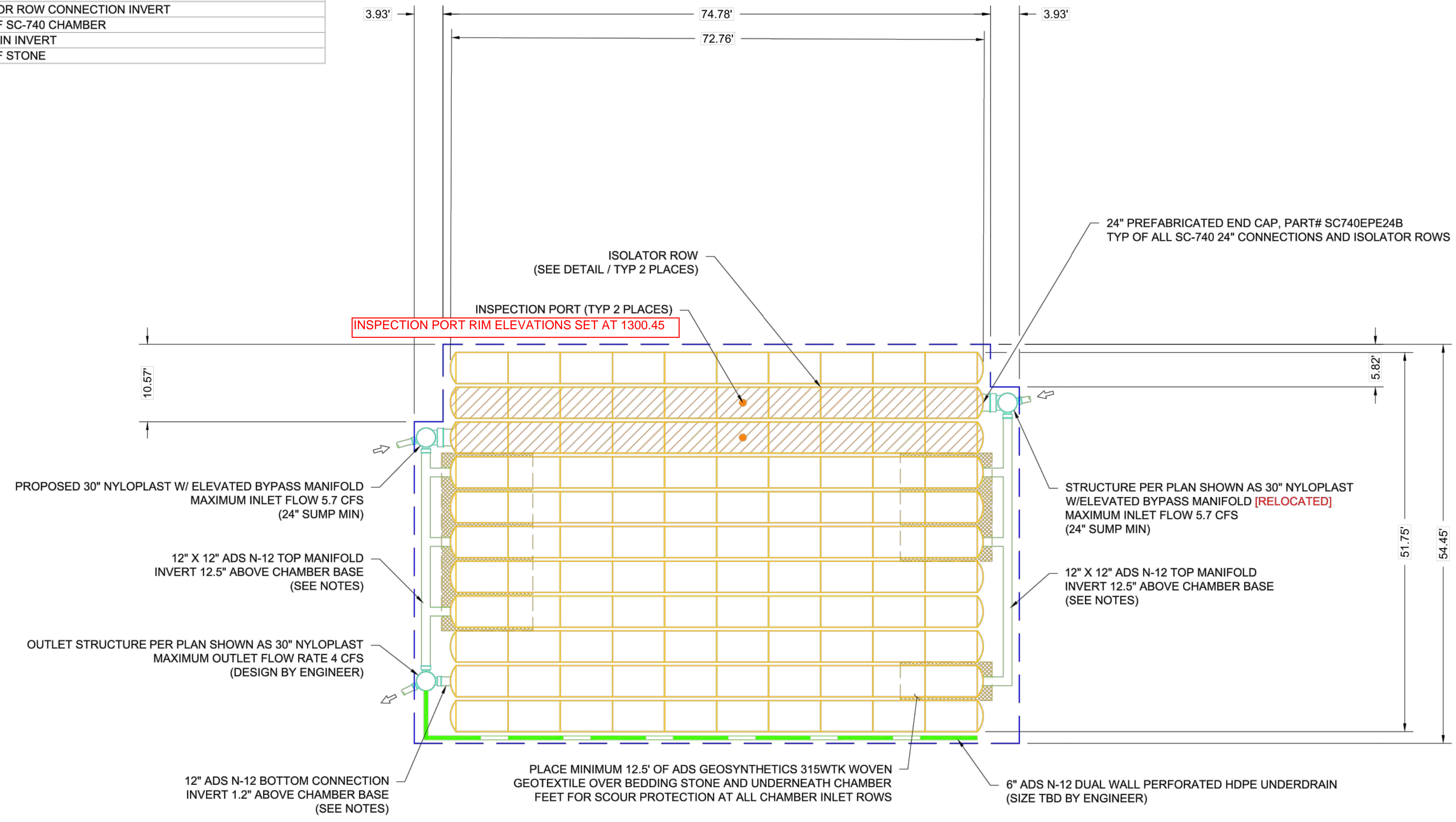
110	STORMTECH SC-740 CHAMBERS
22	STORMTECH SC-740 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
9242	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
4435	SYSTEM AREA (ft ²)
274	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

1304.90	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
1298.90	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
1298.40	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
1298.40	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
1298.40	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
1297.40	TOP OF STONE
1296.90	TOP OF SC-740 CHAMBER
1295.44	12" TOP MANIFOLD INVERT
1294.50	12" BOTTOM CONNECTION INVERT
1294.41	24" ISOLATOR ROW CONNECTION INVERT
1294.40	BOTTOM OF SC-740 CHAMBER
1293.90	UNDERDRAIN INVERT
1293.90	BOTTOM OF STONE

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



NAFTZGER PARK
 WICHITA, KS
 DATE: 9-13-18
 DRAWN: HB
 PROJECT #: S101153
 CHECKED: AMD

DATE	DRWN	CHKD	DESCRIPTION

StormTech
 70 INWOOD ROAD, SUITE 3 | ROCKY HILL, CT 06067
 860-529-5188 | 888-892-2894 | WWW.STORMTECH.COM

ADS
 4640 TRUEMAN BLVD
 HILLIARD, OH 43026

2 SHEET OF 6

REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS
 NAFTZGER PARK
 STORM WATER
 IMPROVEMENTS

Underground
 Detention
 Details

JOB NO.: 18267015
 DATE: FEB 2019
 DESIGNED BY: KWL
 DRAWN BY: KWL

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SHEET NUMBER **5** OF **9**

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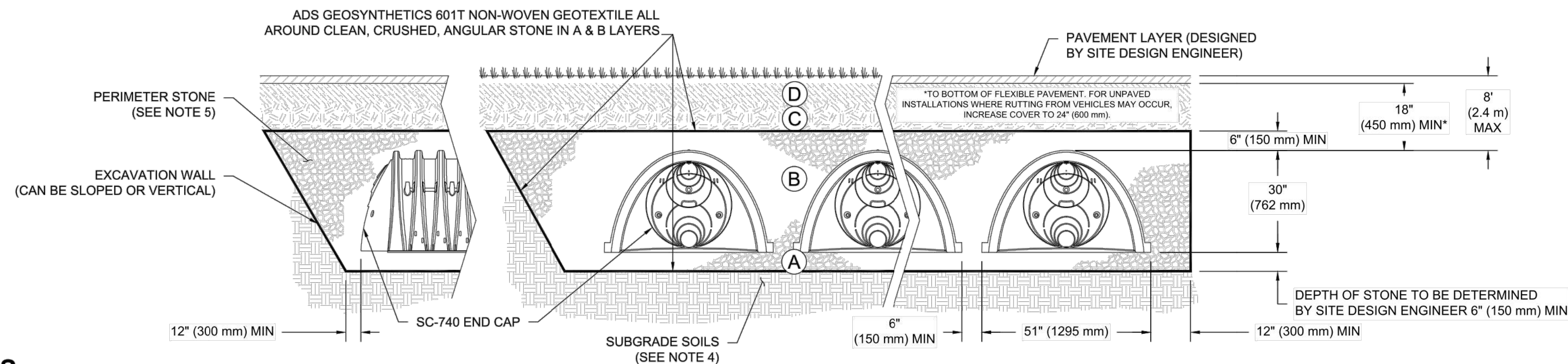
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ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

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NAFTZGER PARK WICHITA, KS	DRAWN: HB DATE: 9-13-18 PROJECT #: S101153 CHECKED: AMD
<p style="font-size: 8px;">70 INWOOD ROAD, SUITE 3 ROCKY HILL, CT 08687 860-529-6188 888-992-2864 WWW.STORMTECH.COM</p>	<p style="font-size: 8px;">4640 TRUEMAN BLVD HILLIARD, OH 43026 ADVANCED DRAINAGE SYSTEMS, INC.</p>
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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
WICHITA, KANSAS

NAFTZGER PARK
STORM WATER
IMPROVEMENTS

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Detention
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JOB NO.: 18267015
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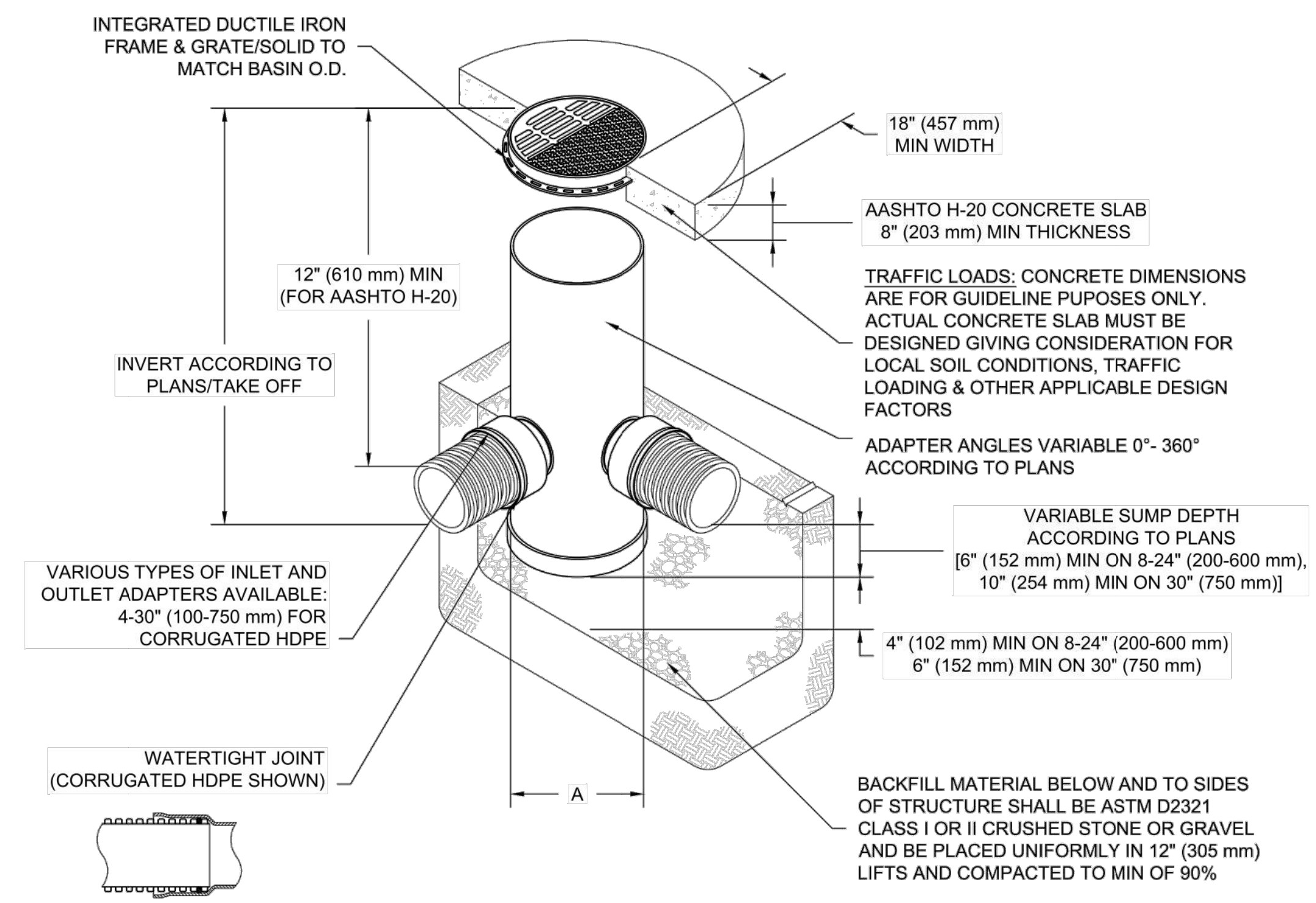
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NYLOPLAST DRAIN BASIN

NTS



NOTES

- 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION: WWW.NYLOPLAST-US.COM
- TO ORDER CALL: 800-821-6710

A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

NAFTZGER PARK
WICHITA, KS

DATE: 9-13-18 DRAWN: HB
PROJECT #: S101153 CHECKED: AMD

3130 VERONA AVE
BUPFORD, GA 30518
PHN (770) 832-2443
FAX (770) 832-2490
www.nyloplast-us.com

Nyloplast
ADVANCED DRAINAGE SYSTEMS, INC.

4640 TRUEMAN BLVD
HILLIARD, OH 43026

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6 SHEET OF 6

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