

GENERAL NOTES:

1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

Kansas One-Call (316)687-2470

The Contractor must notify the following in case of an emergency:

Cox Communications (316)262-4270
or (316)263-2061

Westar Energy/
Kansas Gas & Electric Company (800)482-4950
AT&T 1-555-1212
City of Wichita Water Department (316)268-4908
City of Wichita Sewer Department (316)268-4071
Aquila Natural Gas (316)941-1608
or (800)303-0357

2. Exist. utilities and their locations, as shown on the plans, represent the best information attainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company-provided field locations. The Contractor will be required to work around existing utilities which do not conflict with proposed constructions.

3. The Contractor to verify utility locations prior to construction of this project.

4. Utility service and installation shall be coordinated with the respective utility owner. Contacts are:

Kansas Gas Service Jim Coe (316)832-3126
Westar Energy Miles Capps (316)261-6251
Aquila Networks Calvin Briggs (316)942-8811
Wichita Water & Sewer Kerry Gibson (316)268-4555
AT&T Jim Toben (316)268-2759
Cox Communications Mark Anaya (316)262-4270

5. All lawn/turf areas disturbed by construction of proposed improvements shall be restored with the same grass as existing. Restoration of disturbed areas shall include, but not limited to, soil preparation, fertilizing, seeding, mulching (all seeded areas, outside the limits of erosion mat placement), and/or reseeding, and installation of erosion control mat. All seeding work shall be in accordance with the City of Wichita Standard Specifications and the City of Wichita Administrative Regulations No. AR 6.5 which governs cleanup and respiration or replacement following construction, all cost for the soil preparation, seeding and mulching (all seeded areas, outside the limits of erosion mat placement) shall be paid for through the lump sum bid item for "Seeding." All seeded areas within eight feet of the back of new curb shall be covered with an approved erosion mat, which shall be paid for by the measured quantity bid item "Back of Curb Protection (8' wide)."

6. Traffic affected by the construction of this project shall be handled in accordance with the latest edition of the Manual on Uniform Traffic Control Devices.

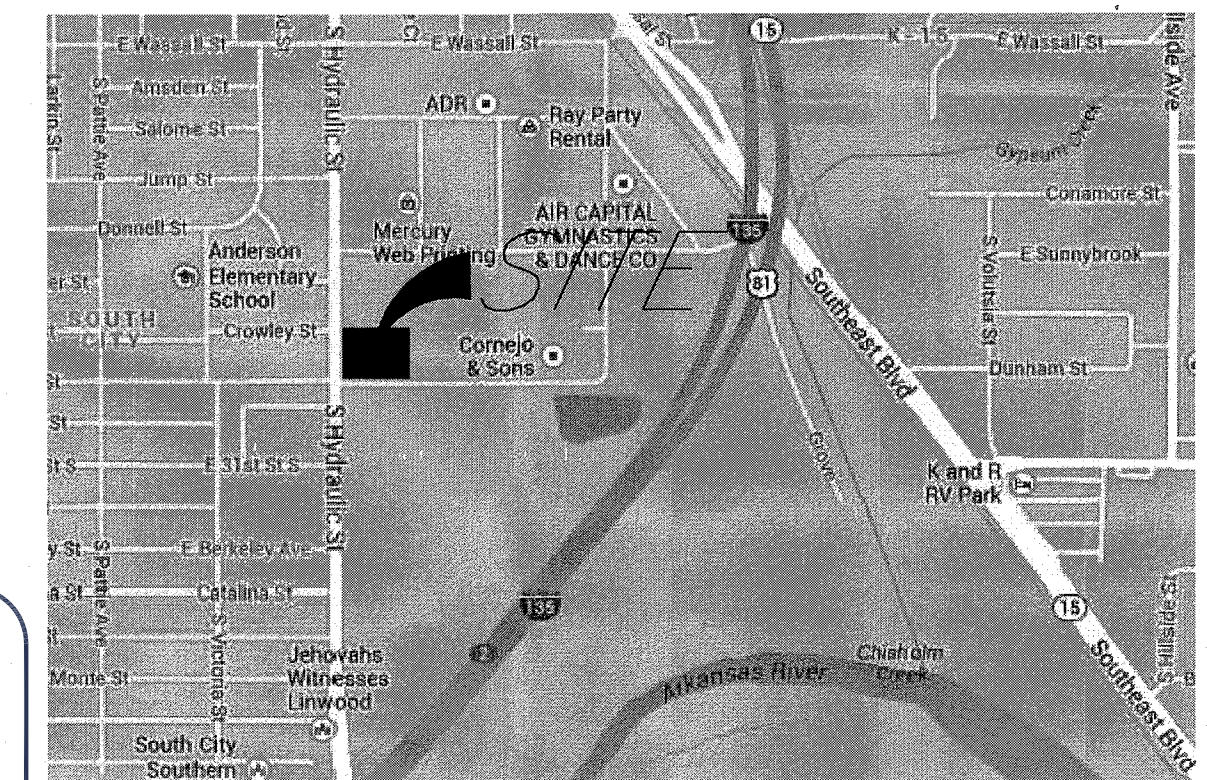
7. It is the contractor's responsibility to visit this site to better understand the extent of site clearing and restoration to be performed. Site Clearing and Restoration shall include all costs for removal of items which a pay item is not provided.

8. 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 the construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.

9. Properties within the project limits may have underground sprinkler systems in public right-of-way which conflict with new construction. Contractor will be required to remove such improvements should they not be removed by their owner at the time of construction of the project. The contractor will be required to salvage all sprinkler heads and/or valves and give such material to owner. Portions of underground sprinkler systems not in conflict with new construction shall be protected from damage and shall remain in place. All work in connection with underground sprinkler systems shall be considered as subsidiary to the contract pay items for work.

10. Cuts made in paved surfaces on public property will be repaired by the City's Contractor and charged against the contractor. Unit Repair prices are available from the city at 268-4418. A surcharge may be applicable. Call 268-4418 for details. Repair costs to be paid prior to release of utility service if utilities are effected.

DRAINAGE TO SERVE CASTLE METALS ADDITION 3050 S Hydraulic St. 0219 PPD (607861) CITY OF WICHITA, KANSAS Gary Janzen, P.E., City Engineer



LOCATION MAP
(For Visual Use Only)

Index of Sheets:

- 3.0 Cover Sheet
- 4.0 Drainage Plan
- 5.0 ERU Plan
- 6.0 Grading Plan
- 7.0 SWS Control Sheet
- 7.1 Plan and Profile Line 1
- 7.2 Std. Drop Inlet Details
- 7.3 Std. Manhole Details
- 7.4 Snout Details
- 8.0 Erosion Plan
- 8.1 Erosion Details
- 8.2 Erosion Details
- 8.3 Erosion Details
- 9.0 Copy of Plat

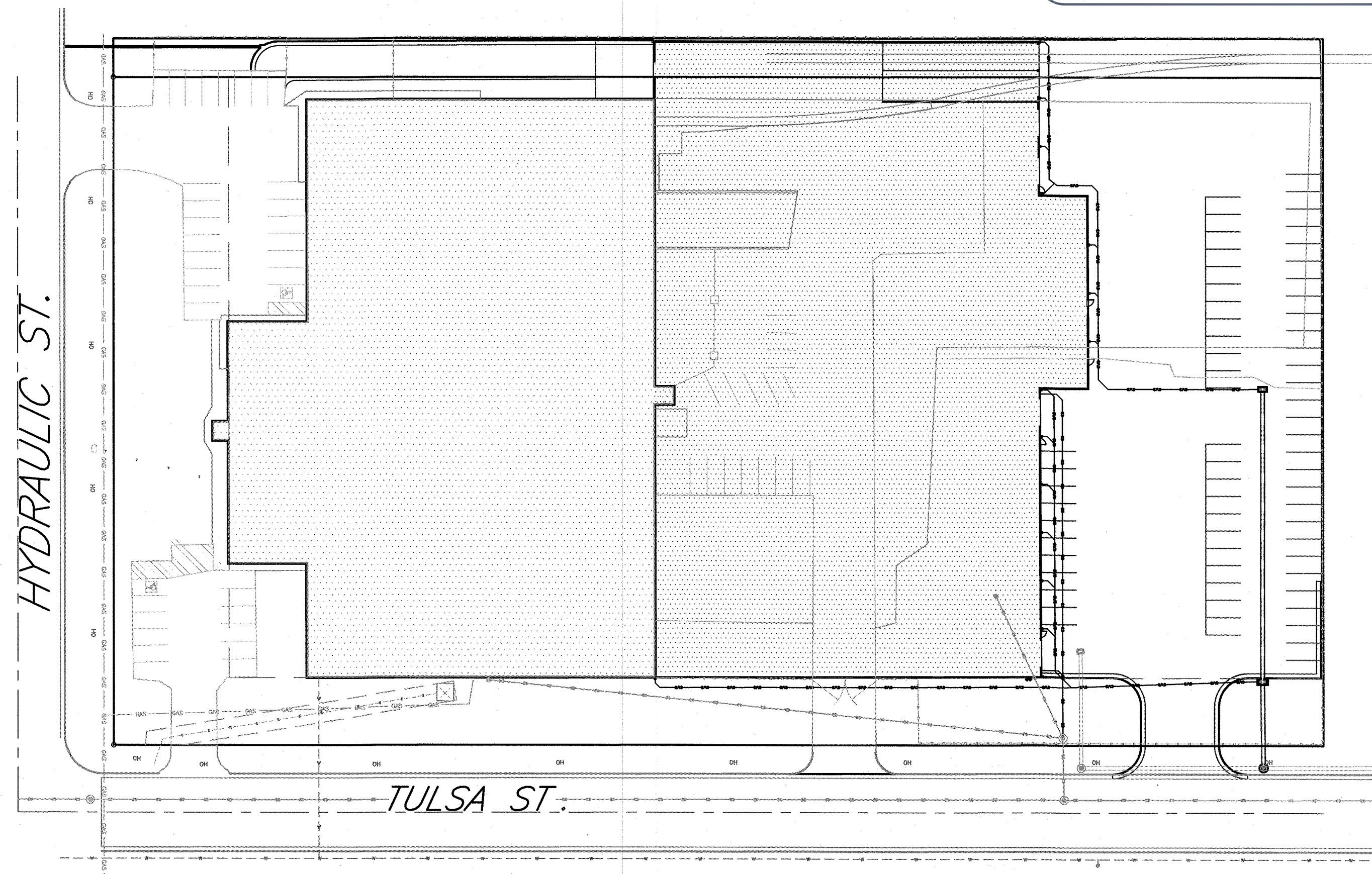
Stormwater Design Certification Statement

I, Gayendra Pokhrel of K.E. Miller Engineering, a Professional Engineer registered in the State of Kansas, hereby certify that this Stormwater Permit Application, the associated Construction Plan and all associated hydrologic and hydraulic analyses for was prepared by me (or under my direct supervision).

I further certify that the plans and analyses were prepared in accordance with the provisions of the stormwater management regulation (Regulation) of the appropriate governing locality (i.e., the City of Wichita Stormwater Management Ordinance 16.32 or the Sedgewick County Stormwater Management Resolution 196-10), and the policies and guidelines presented in the Wichita Sedgewick County Stormwater Manual (Manual). I further certify that all stormwater management components of the Development, including stormwater management facilities, water quality volume reduction areas, stormwater system components and erosion prevention and sediment control best management practices are designed to comply with the provisions of the Regulation and the Manual.

I understand that the City of Wichita, Kansas and/or Sedgewick County, Kansas does not, and will not, assume liability for drainage facilities designed by others unless such facilities are formally accepted for public ownership by the City or County.

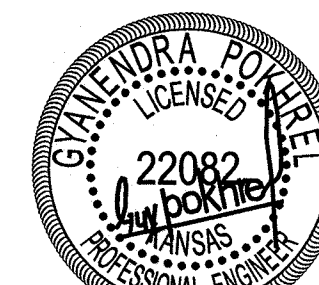
Three snouts in series are identified as Water Quality BMPs for this project.



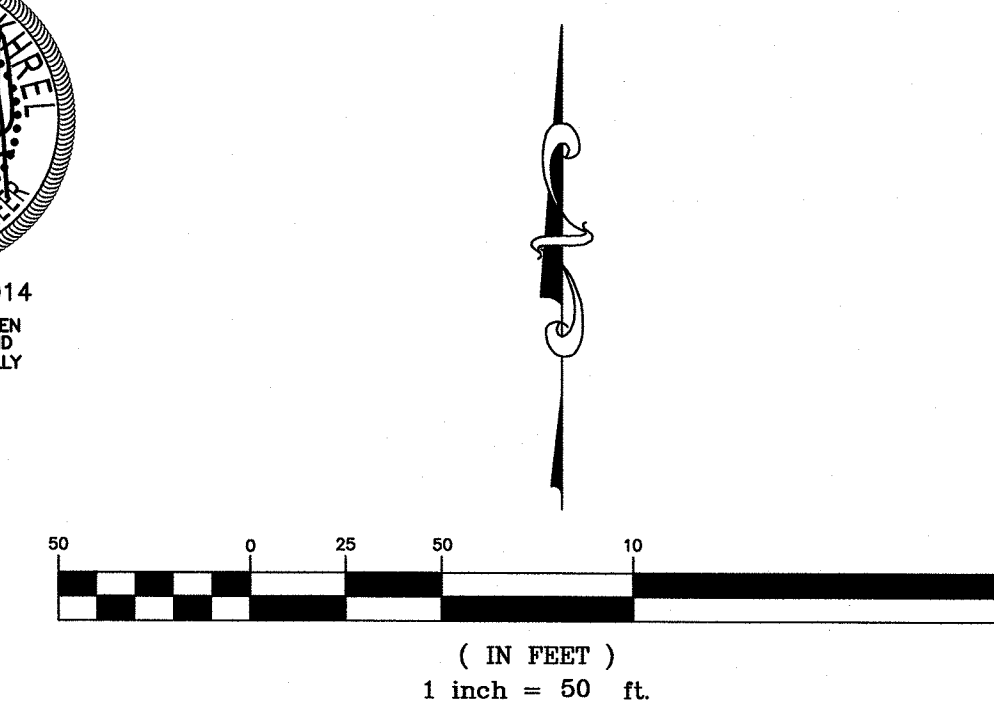
Benchmark:

City of Wichita disc located on the northeast corner of Wassal and Hydraulic on traffic signal base.

Elevation=1281.24 NAVD 88



DATE: 03.19.2014
THIS SHEET HAS BEEN
SIGNED, SEALED AND
DATED ELECTRONICALLY



APPROVED AS NOTED

Storm Water Utility Office: *[Signature]* 04/16/14

City Engineers: *[Signature]* 4/14
Office:

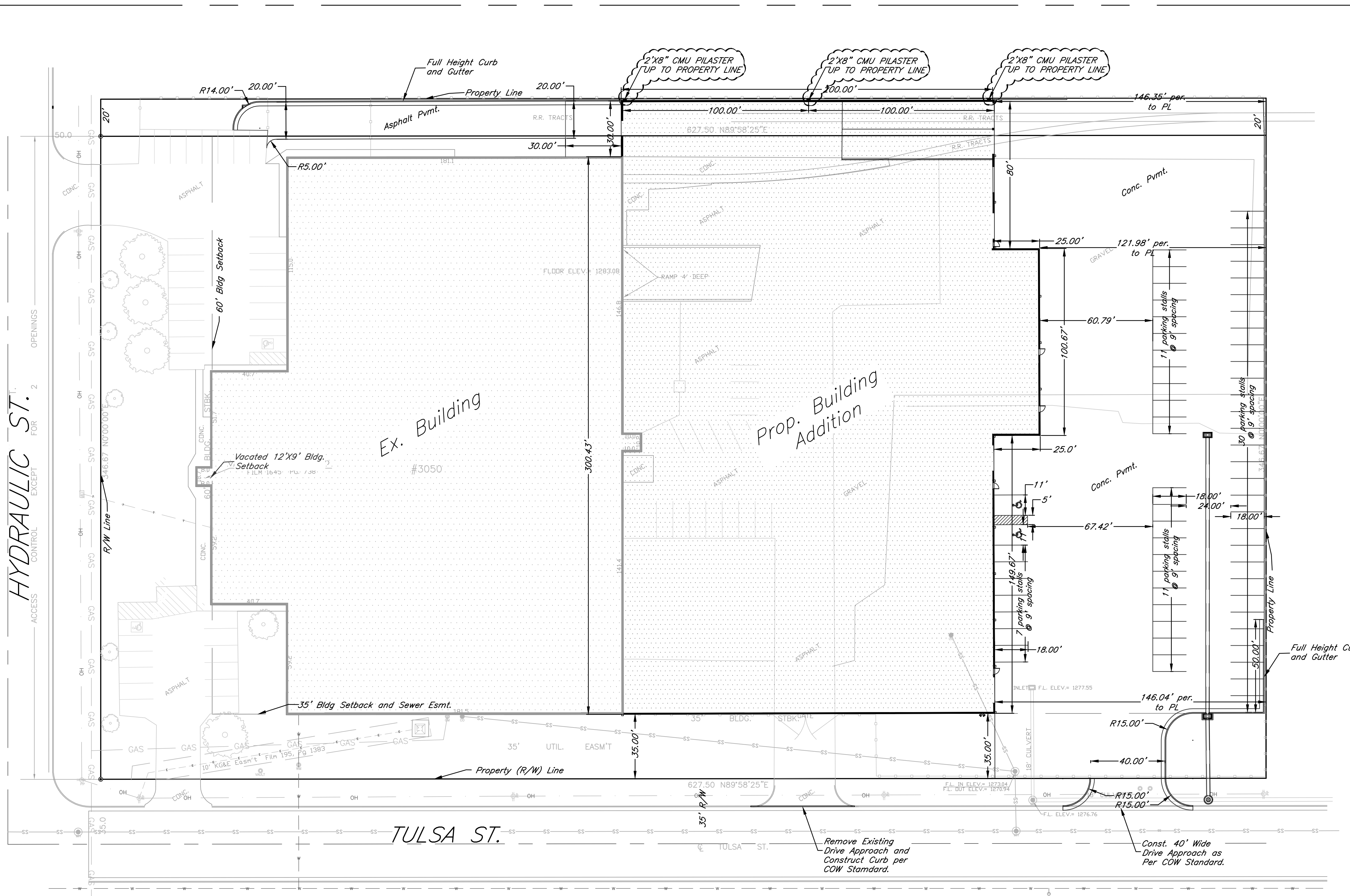
NOTE TO CONTRACTORS

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. No work shall be performed in dedicated easements or public right-of-way by 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 City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

KEMILLER
ENGINEERING PA
117 E. Lewis, Wichita, KS 67202 (316)264-0242

January 2014

HYDRAULIC ST. CONTROL EXCEPT FOR OPENINGS ACCESS



Legal Description:
 Lot 1, Block 1 and west 627.5 feet of Reserve C, Santa Fe Midland Industrial District, an Addition to Wichita, Kansas.

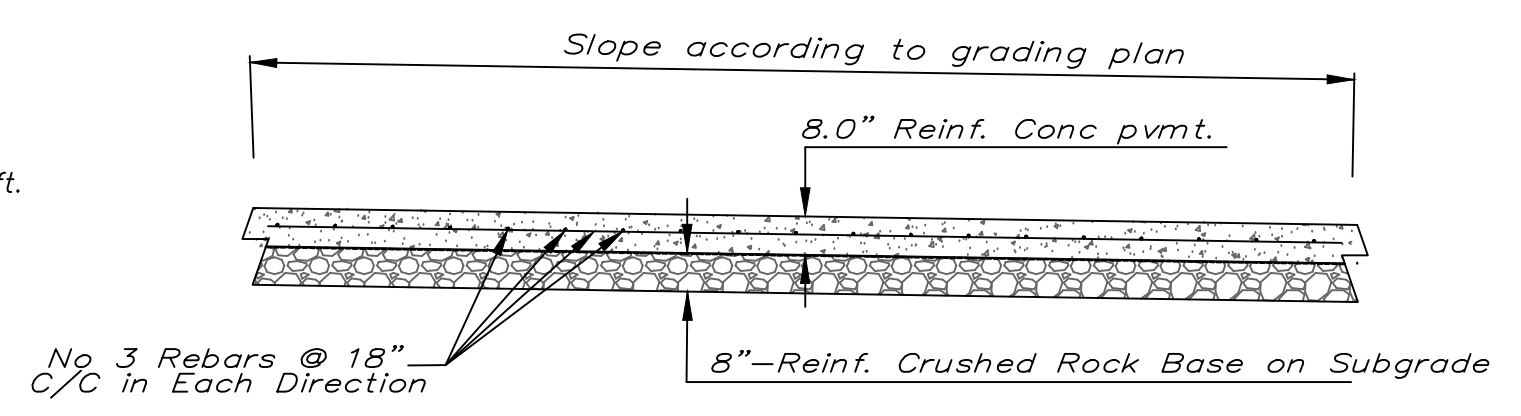
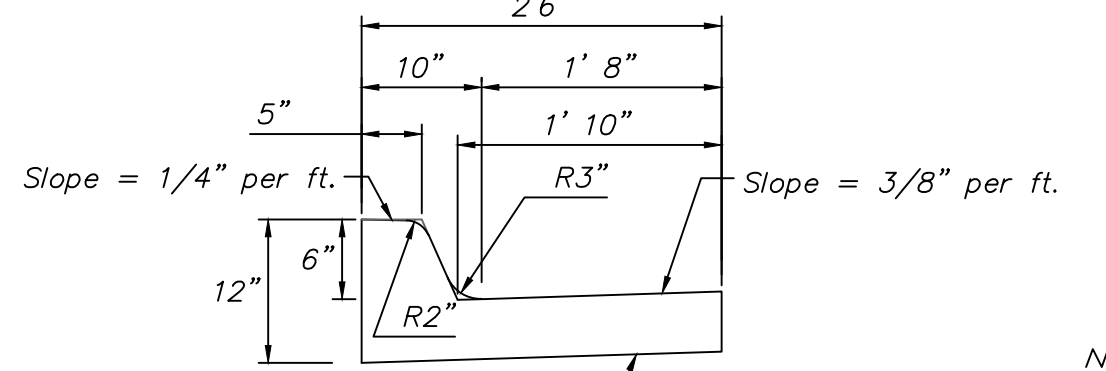
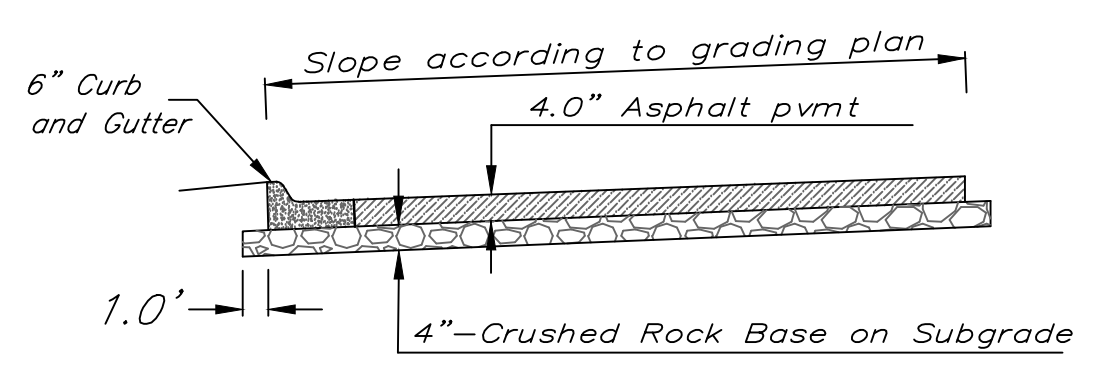
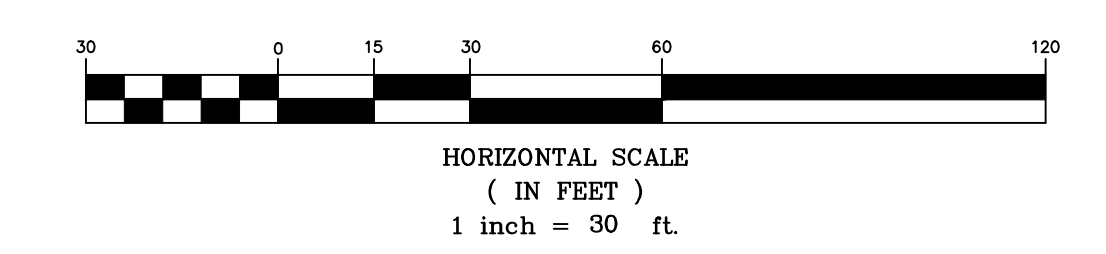
Parking Analysis:

Total Office Space = 7,300 SF
 Total Non Office Space = 120,439 SF
 Manufacturing Space = 40,146 SF (1/3rd of total non office space)
 Warehouse Space = 80,292 SF (2/3rd of total non office space)

Parking required for office space = 21.9 ≈ 22 stalls (1 every 333 SF)
 Parking required for manufacturing = 80.3 ≈ 81 stalls (1 every 500 SF)
 Parking required for warehouse space = 10 + 12.06 ≈ 22 stalls (1 every 2000 SF for 1st 20,000 SF then 1 every 5000 SF for additional space)
 Total Space required = 125 stalls
 After administrative adjustment @ 25% = 93.8 ≈ 94
 No of existing parking stalls = 33 stalls
 No of new stalls required = 61 stalls
 New available = 61 stalls
 HC stalls required = 2
 Ex. HC stalls = 2
 New HC stalls provided = 2



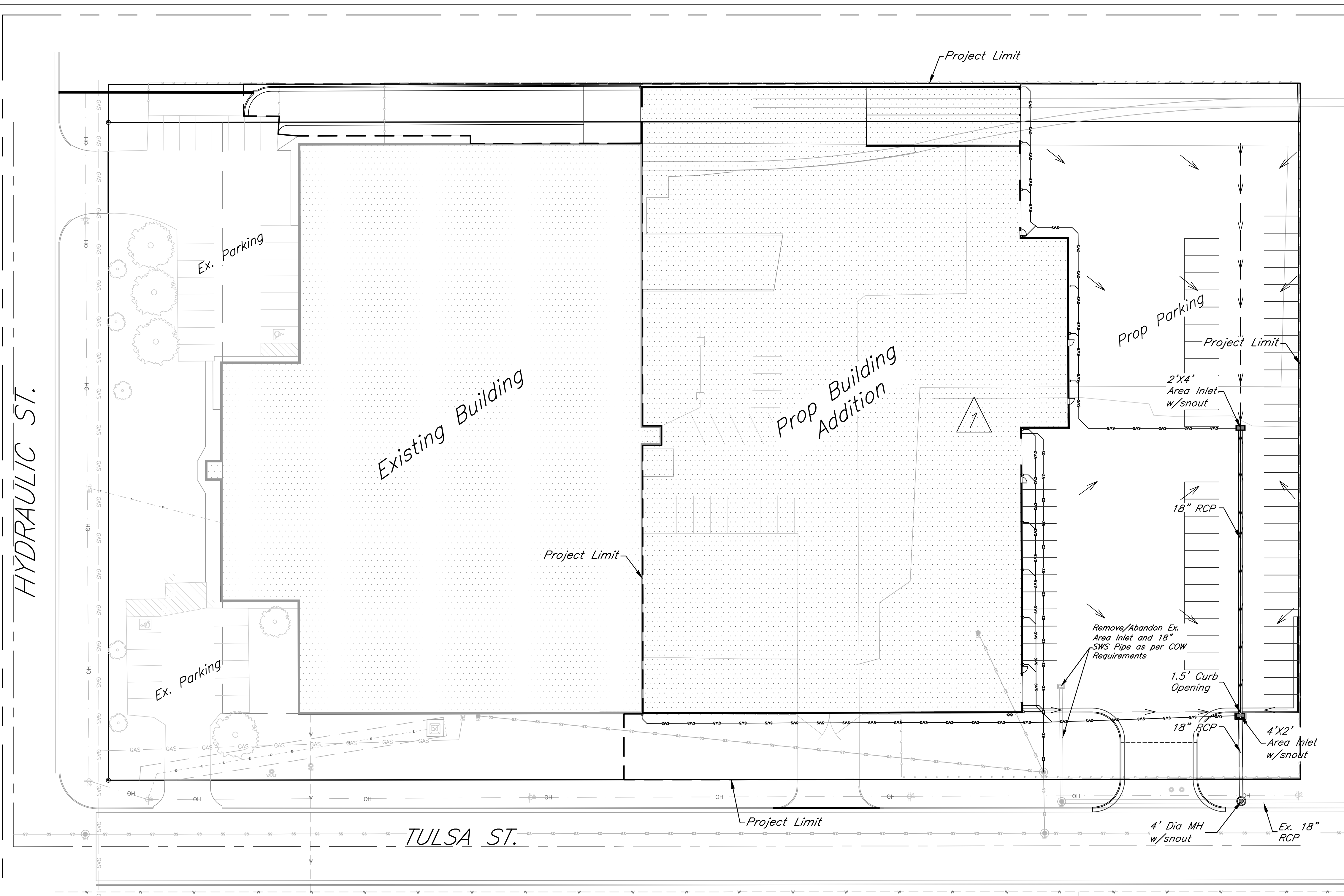
DATE: 04.25.2014
 THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY



Castle Metals
 Site Plan
 Wichita, Kansas

	KEM. NO. 13153	FILE	DATE 10/2013	SHEET 1.0
	DESIGN GP	DRAWN GP	REVISED 04/2014	

PROJECT NUMBER



HYDRAULIC ST.

TULSA ST.

Project Narrative:
 The site is located at northeast corner of Hydraulic and Tulsa St. The entire site is zoned as limited industrial and remains same in developed condition. The total acreage of lot 1, block 1 of Santa Fe Midland Industrial District including 20' north reserve is 5.28 acres. The site is already developed and has building, parking and other impervious areas. Only 2.93 east portion of the property is considered as project area in this case. Major portion of project area are paved. The millings/gravel storage area is considered as impervious for drainage analysis. There is an 18" storm sewer pipe available onsite. The existing drainage pattern indicates that the entire project area drains to the existing inlet located on east side of existing building. The collected runoff then drains to the pond at Cornejo property through city SWS system.

Water Quality and TSS Removal Calculation

The water quality volume and runoff for the proposed development will be handled through the snouts in series. Runoff from 30% of the redeveloped areas and 100% of newly developed area is proposed to treat in snouts in series. The following calculations show the WQv and corresponding flow from redeveloped and newly developed areas.

Water Quality Volume (WQv) Calculation-Redeveloped Area			
Calculation for water quality volume (WQv=P*RV*A/12)		Soil Group 'B'	
85th percentile storm event (1.2 inches), P =	1.20 inches	Calculation of Rv	
Total area, A =	2.05 acres		
Rainfall Coeff. Rv =	0.910	Coeff for undisturbed area, Rv _u =	0.03 0.00
Required Vol. for Water Quality =	0.187 ac-ft	Coeff for turf cover, disturbed, Rv _t =	0.20 0.11
Corresponding Water Quality Peak Flow =	2.59 cfs	Coeff for impervious area, Rv _i =	0.95 1.94
		Weighted, Rv = 0.910	

Water Quality Volume (WQv) Calculation-New Development			
Calculation for water quality volume (WQv=P*RV*A/12)		Soil Group 'B'	
85th percentile storm event (1.2 inches), P =	1.20 inches	Calculation of Rv	
Total area, A =	0.88 acres		
Rainfall Coeff. Rv =	0.831	Coeff for undisturbed area, Rv _u =	0.03 0.00
Required Vol. for Water Quality =	0.073 ac-ft	Coeff for turf cover, disturbed, Rv _t =	0.20 0.14
Corresponding Water Quality Peak Flow =	1.01 cfs	Coeff for impervious area, Rv _i =	0.95 0.74
		Weighted, Rv = 0.831	

TSS Removal Calculation:
 Total volume needs to be treated = 0.073+0.3*0.187=0.263
 Total flow needs to be treated = 1.01+0.3*2.59=1.79 cfs
 Three snouts in train are proposed for TSS removal.

Channel Protection Volume (CPV)

The Channel protection volume detention (1-yr storm for 24 hrs) is not required for this site as the total disturbance of proposed development does not exceed 5.0 acres.

Runoff Calculations (2-, 5-, 10-, 25-, and 100-yr)

EXISTING CONDITION:
 Total Area A = 2.93 acres (project area under consideration)
 Soil Group =B (as per COW HSG map)
 Impervious Area = 0.54%, Disturbed Pervious Area = 46%, CN = 90
 Time of Concentration (Tc) = 14.4 Minutes

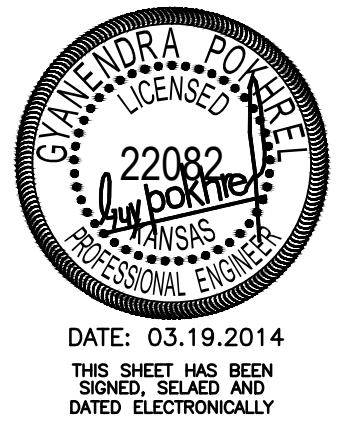
EXISTING SITE									
DRAINAGE AREA	ACRES	Tc Mins	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
On-site Basin (under consideration)	2.93	14.4	90	9.29	12.69	15.07	18.11	23.80	Draining to Ex. SWS System

DEVELOPED CONDITION:
 Total Area, A = 2.93 acres (project area under consideration)
 Soil Group =B (as per COW HSG map)
 Impervious Area = 90%, Disturbed Pervious Area = 10%, CN = 96
 Time of Concentration (Tc) = 5.2 Minutes

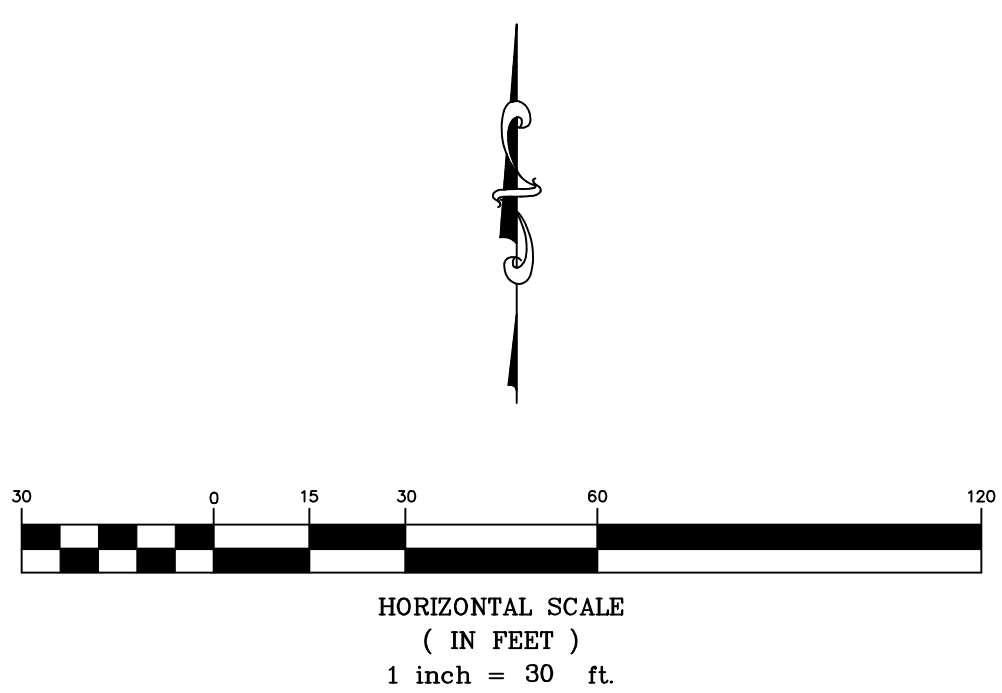
DEVELOPED SITE									
DRAINAGE AREA	ACRES	Tc Mins	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
On-site Basin (under consideration)	2.93	5.2	96	14.49	18.87	21.93	25.84	33.20	Draining to Ex. SWS System

Flood detention is not required as the increase in impervious surface area is less than an acre. The northeast portion of storage area is considered as impervious for the purpose of analysis. However small portion parking lot detention has been considered as an effort to reduce the runoff from the developed site to the existing sewer system. The site will overflow to the Tulsa St. in higher storm event.

- Notes:**
- Existing and developed flows are calculated using the SCS hydrograph method. "CN" & "Runoff Depth" values are established from "City of Wichita Stormwater Design Manual." Time of concentration (Tc) are calculated using TR-55 method.
 - The developed peak flows are calculated for the Type II rainfall distribution for 24 hours. The peak flows are routed to the existing sewer system.
 - The site is not in designated 100-yr floodplain (FIRM 20173C0365E, dated February 2, 2007).
 - The positive overflows from the entire site are maintained to the existing stormwater system and Tulsa Street.



DATE: 03.19.2014
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1 Onsite drainage basin, Area = 2.93 acres
 --- Drainage Basin Boundary

Castle Metals
Drainage Plan
 Wichita, Kansas

KEMILLER ENGINEERING PA 117 E. Lewis, Wichita, KS 67202 (316)264-0242	PROJECT NUMBER 0219 PPD (607861)			4.0
	KEM NO. 13153	FILE	DATE 01/2014	
DESIGN GP	DRAWN GP	REVISED		

HYDRAULIC ST.

Existing Building

Prop Building Addition

TULSA ST.

Install 101.7 LF of
2-6" PVC w/
Deteer Curb Castings
at Each End

CP#2
Rebar (Anderson Cap)
N= 1668015.27
E= 1654891.09

CP#1
Rebar (Anderson Cap)
N= 1667668.88
E= 1654891.09

VACATED BLDG. STRK (9'x12')
FILM 1645 PG. 738

Remove/Abandon Ex.
Area Inlet and 60± LF
of 18" SWS Pipe as
per COW Specs

Sta 00+00.00
Line 1

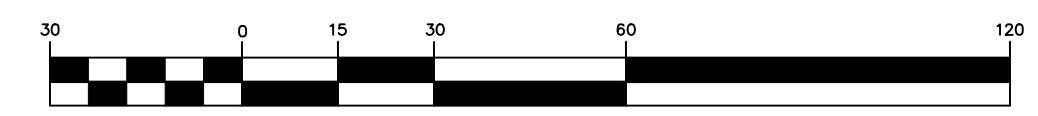
Sta 00+45.00
Line 1

Sta 01+96.50
Line 1

Benchmark:
City of Wichita disc located on the
northeast corner of Wassal and
Hydraulic on traffic signal base.
Elevation=1281.24 NAVD 88



DATE: 03.19.2014
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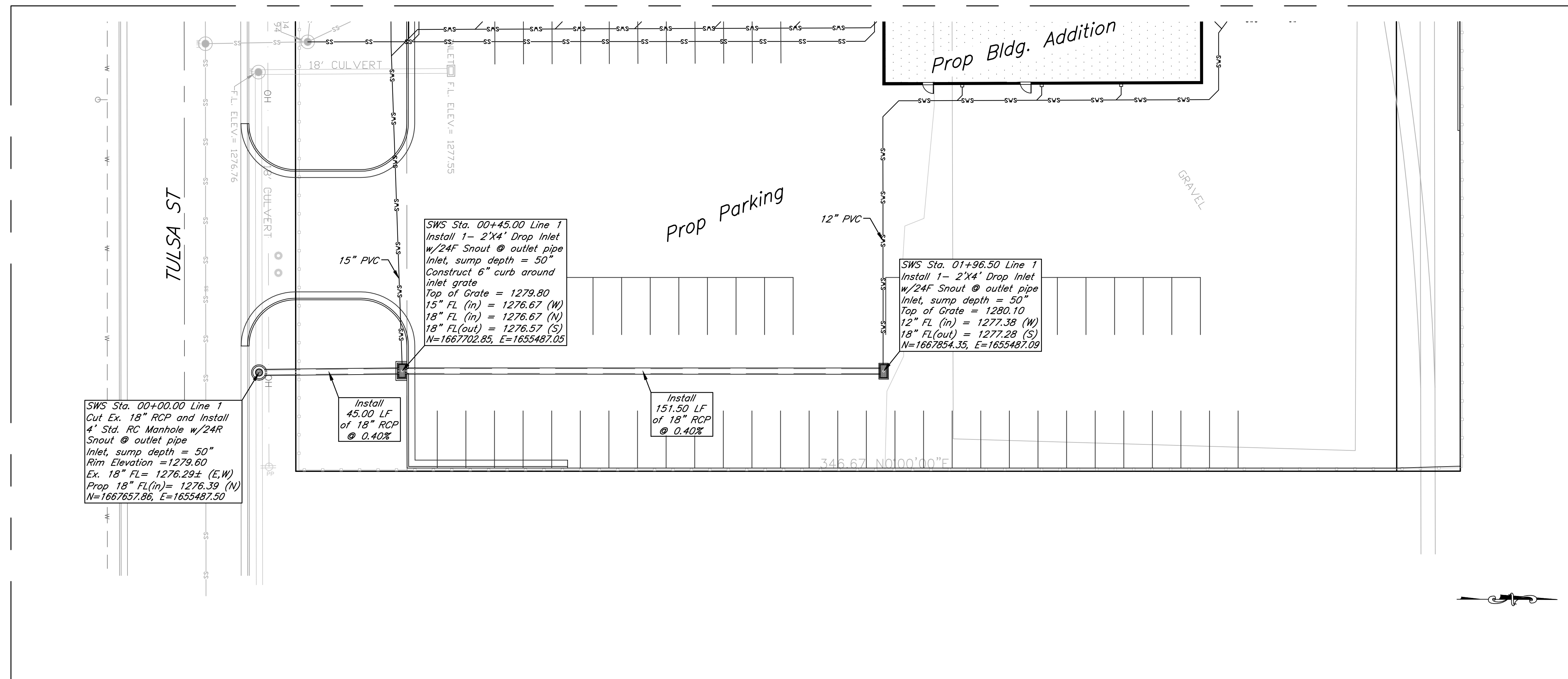


HORIZONTAL SCALE
(IN FEET)
1 inch = 30 ft.

Castle Metals
SWS Plan Sheet
Wichita, Kansas



PROJECT NUMBER 0219 PPD (607861)			SHEET 7.0
KEM NO. 1315.3	FILE	DATE 01/2014	
DESIGN GP	DRAWN GP	REVISED	

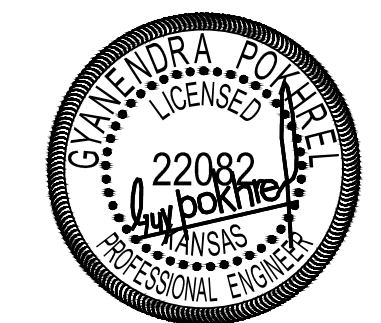
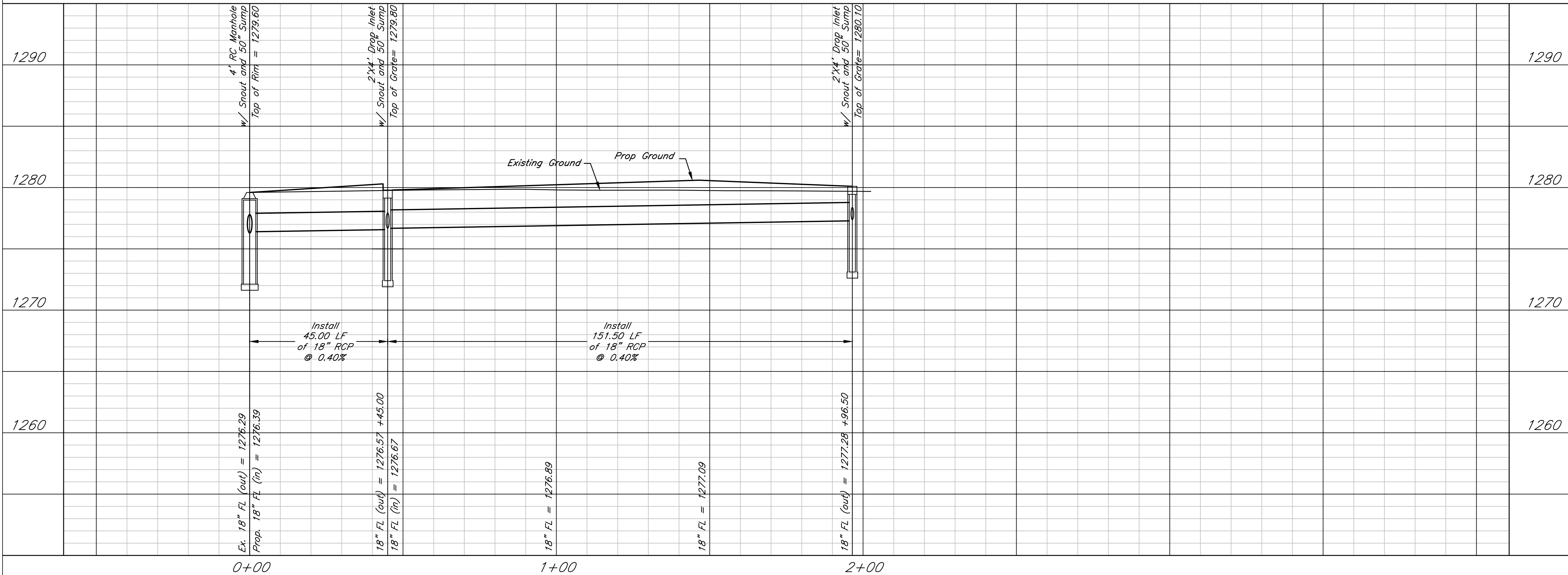


AS BUILTS

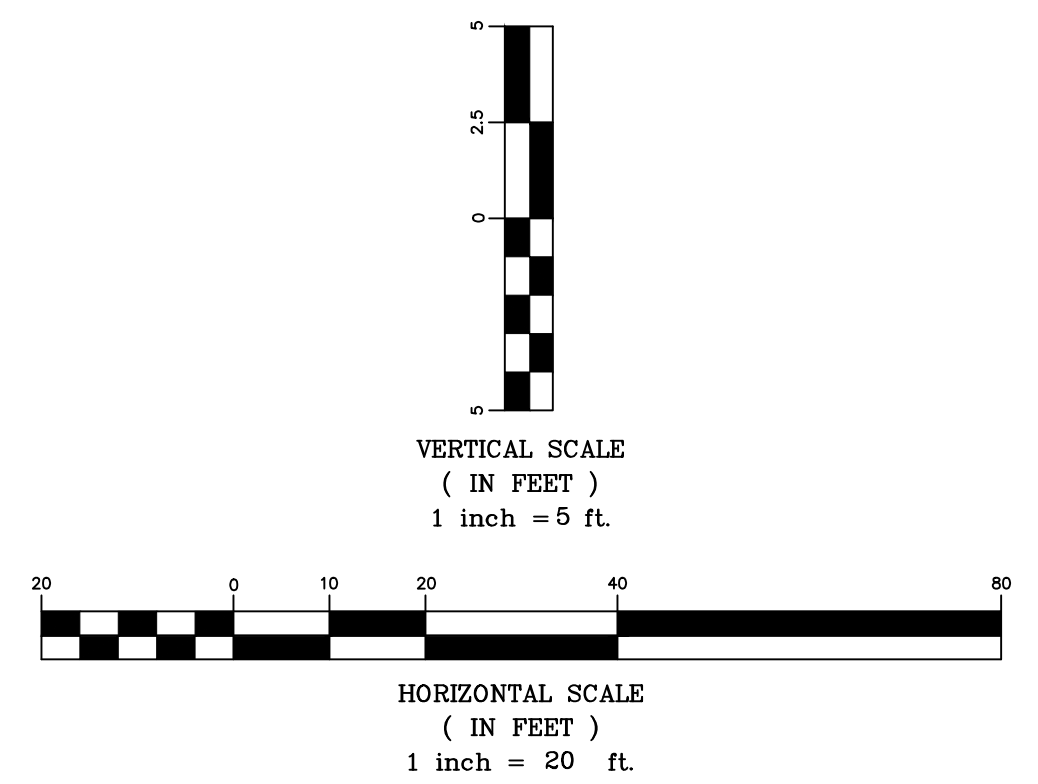
KEMILLER 
ENGINEERING PA

117 E. Lewis,
Wichita, KS 67202 (316)264-0242

Line 1



DATE: 03.19.2014
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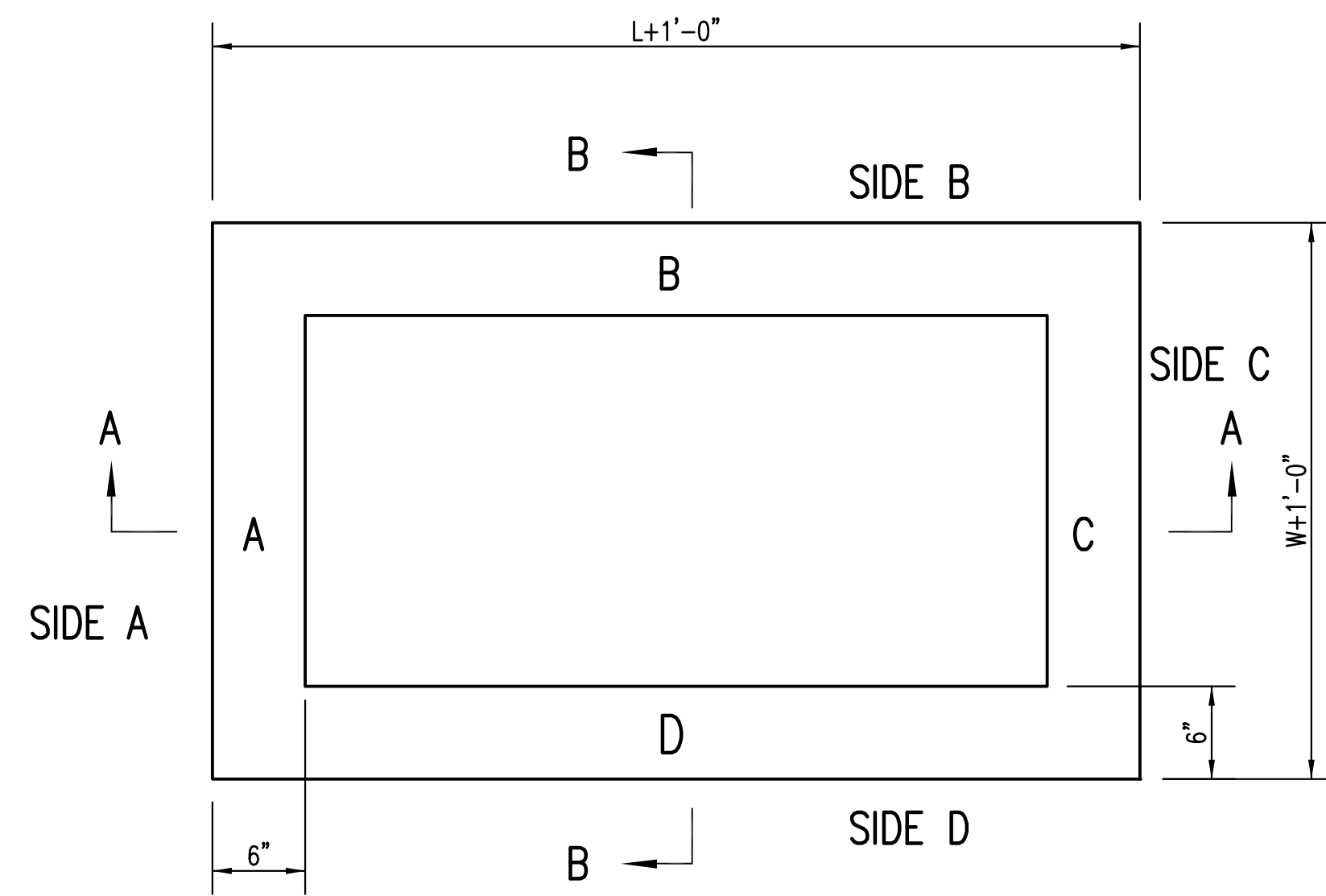


Castle Metals
SWS Line 1
Wichita, Kansas

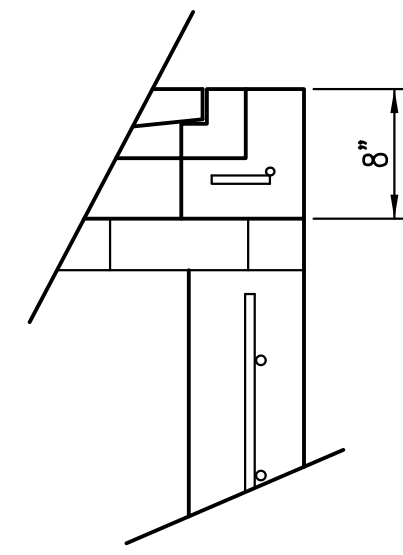


PROJECT NUMBER 0219 PPD (607861)			
KEM NO. 13153	FILE	DATE 01/2014	SHEET 7.1
DESIGN GP	DRAWN GP	REVISED	

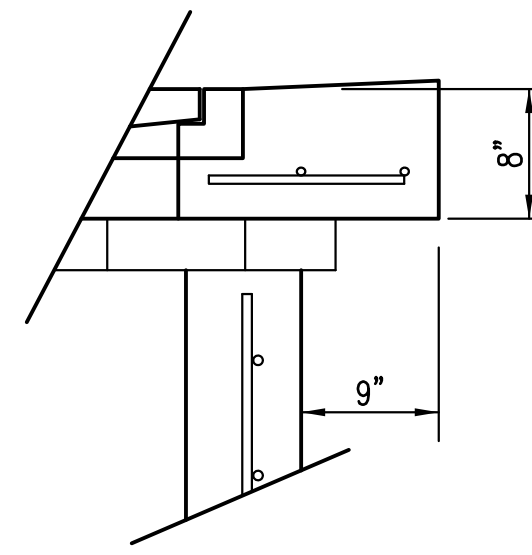
516 S. Market, Wichita, KS 67202 (316)264-0242



TOP VIEW

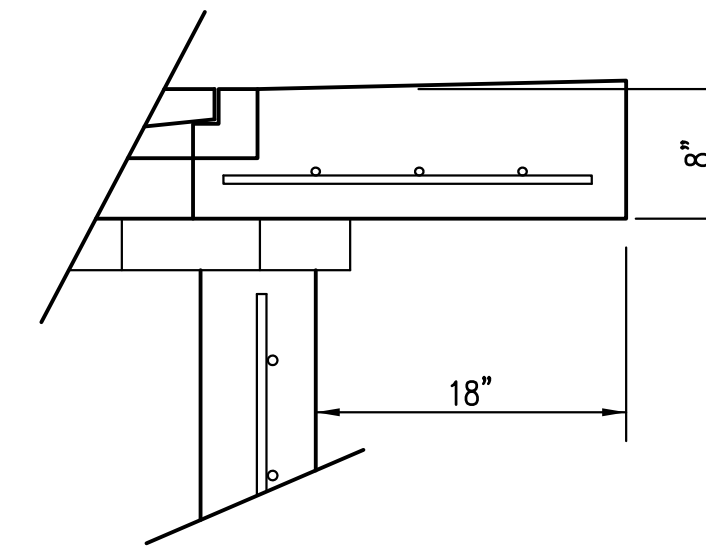


FLUSH STYLE TOP
NO APRON



9" APRON

* APRON TO EXTEND ON ALL 4 SIDES OF INLET.
DESIGNER TO DESIGNATE APRON SIZE.



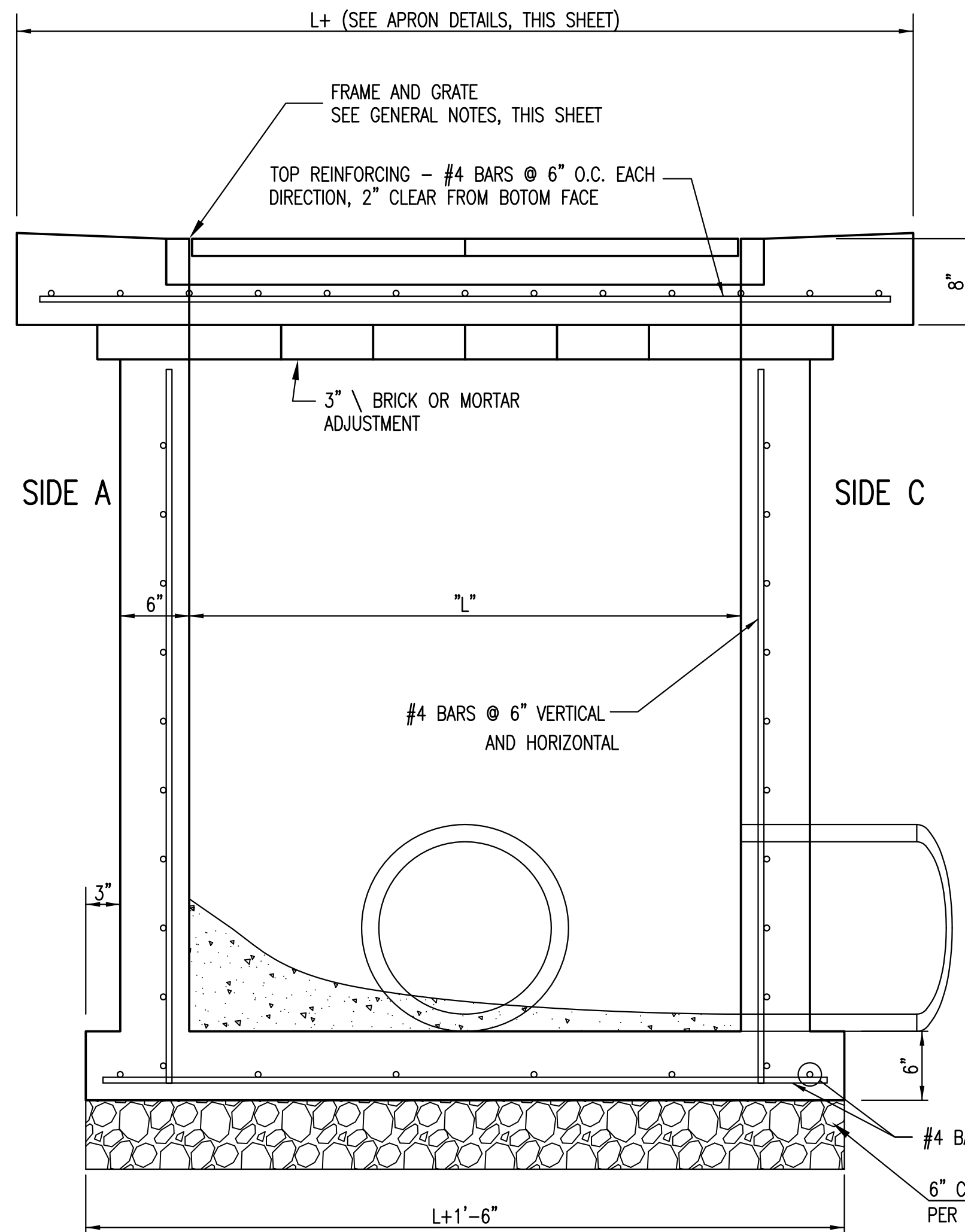
18" APRON

W=2' and L=2' for SINGLE DROP INLET
W=2' and L=4' for DOUBLE DROP INLET

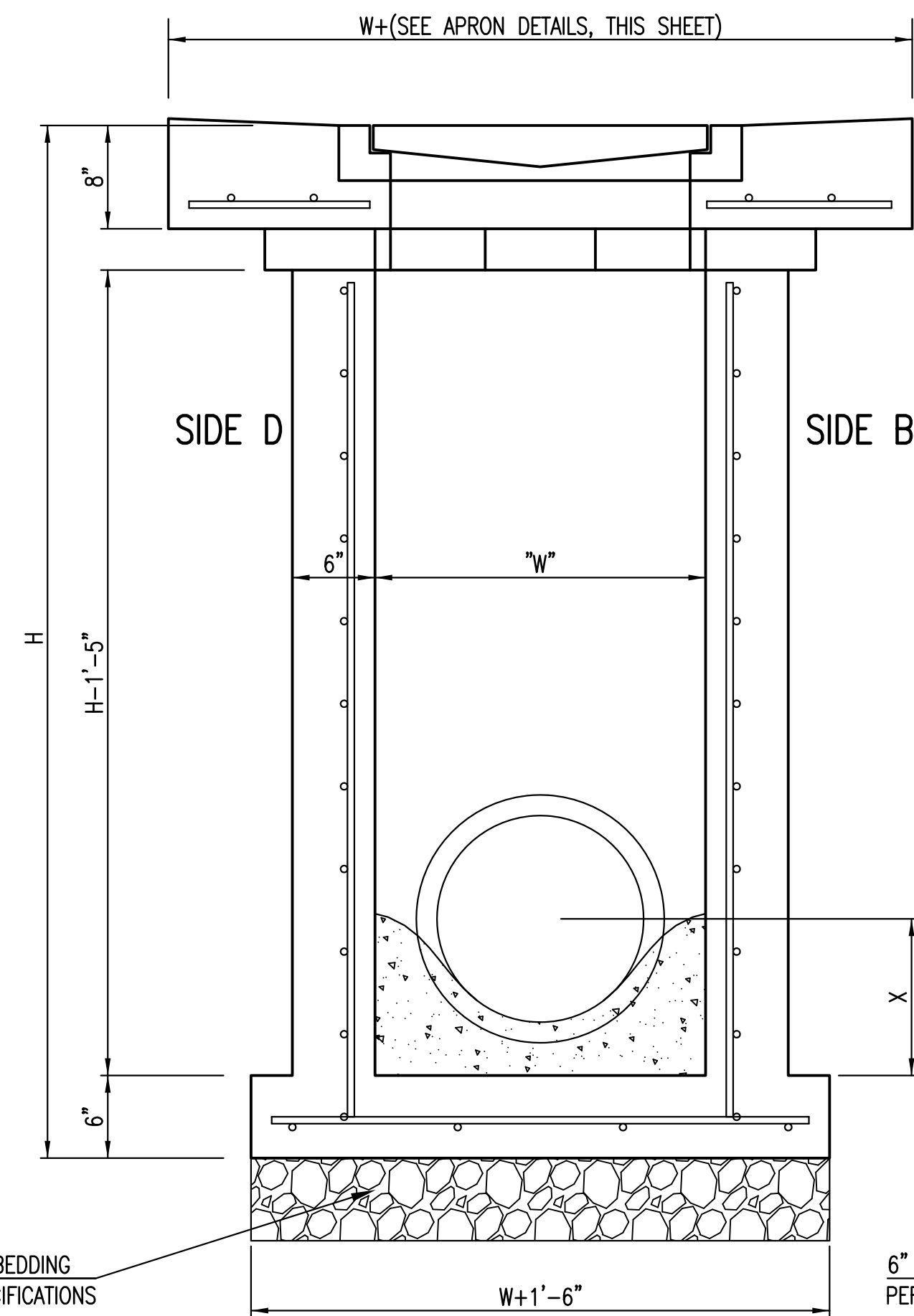
The structure(s) on this detail sheet are designed for HS-20 loading at these specific dimensions only.
If larger dimensions are required, the ENGINEER shall provide a project specific structure design for approval by the City Engineer's office.

GENERAL NOTES

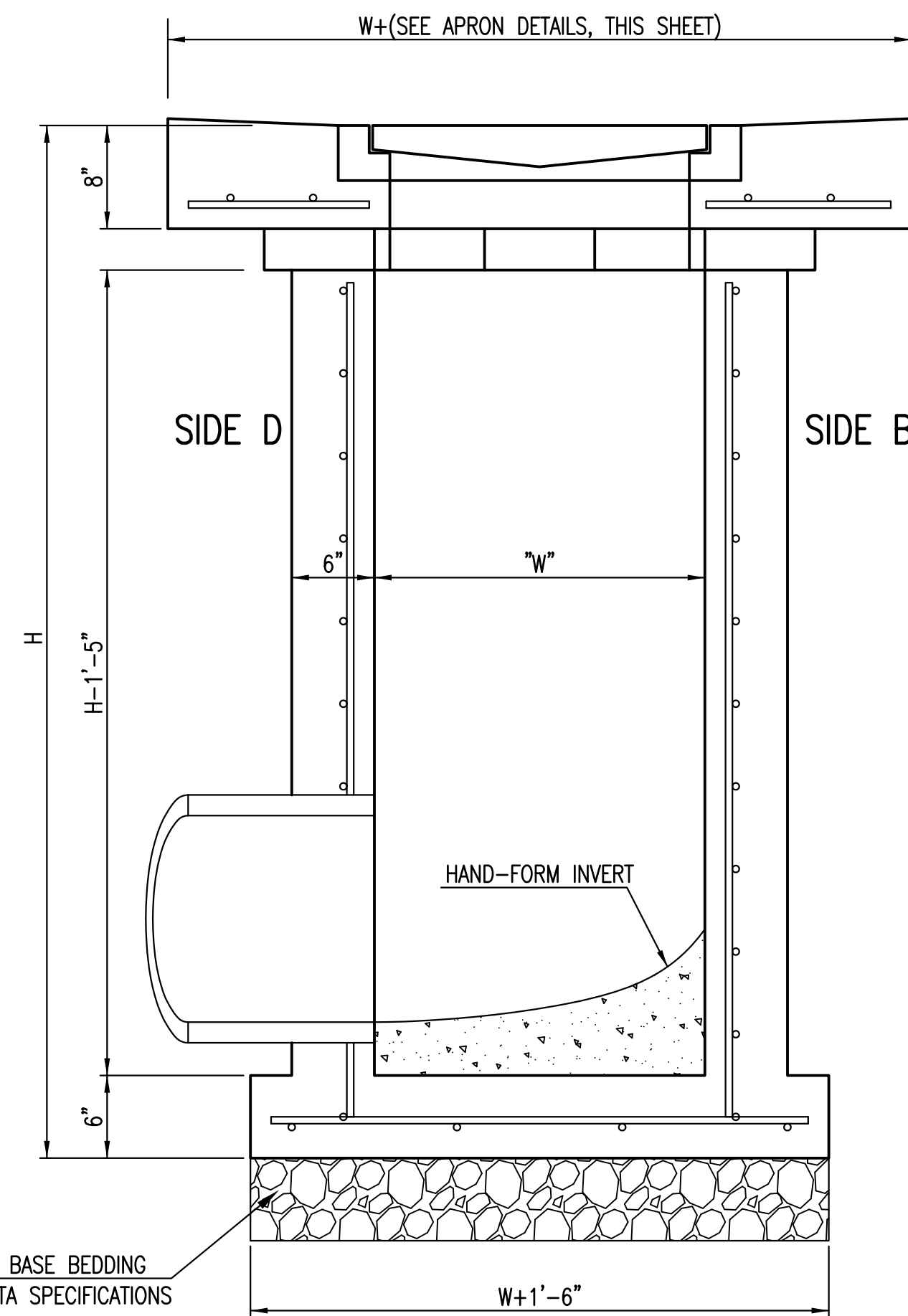
1. GRATE FRAME TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
4. INLET FRAME AND GRATE TO BE DEETER #2433, EJIW #5391-Z1 OR APPROVED EQUAL FOR 2'x2' SINGLE DROP INLET AND DEETER #2434, EJIW #5391 Z3 OR APPROVED EQUAL FOR 2'x4' DOUBLE DROP INLET.
5. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.



SECTION "A-A"



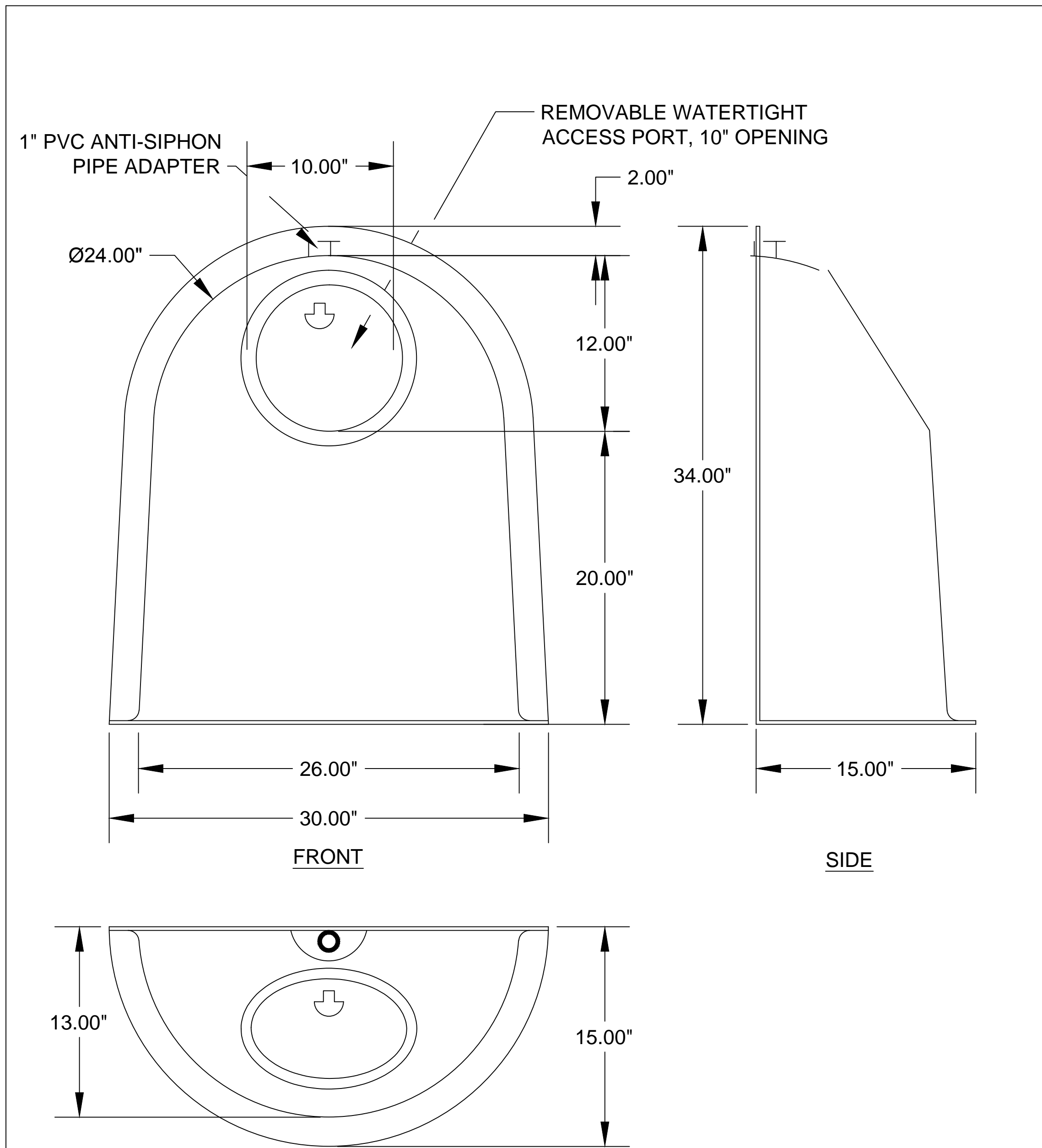
SECTION "B-B"
END OUTLET



SECTION "B-B"
SIDE OUTLET



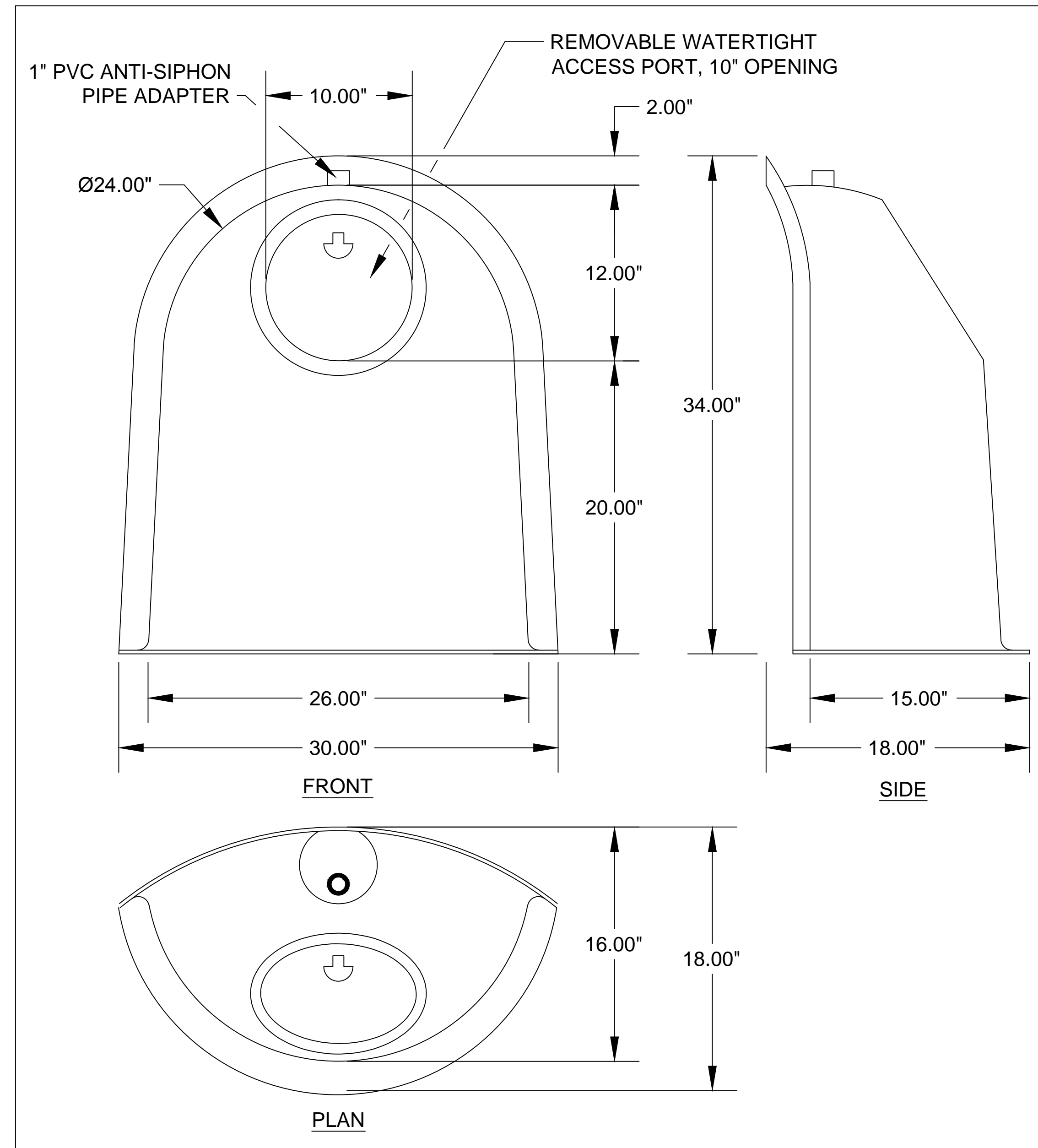
SINGLE/DOUBLE DROP INLET		
CITY ENGINEER GRAY JANZEN, P.E.		
PROJECT NUMBER -	OCA NUMBER	DATE 05/2011
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET



PLAN

U.S. PATENT #6126817 ADDITIONAL PATENTS PENDING

BMP, INC.		
53 MT. ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 FAX: (860) 434-3195		
DESCRIPTION	DATE	SCALE
24F SNOUT OIL & DEBRIS STOP	09/20/99	NONE
DRAWING NUMBER 24F		



PLAN

U.S. PATENT #6126817 ADDITIONAL PATENTS PENDING

DESIGNED TO FIT
48"-60" DIAM.
STRUCTURES
RECOMMENDED SUMP
DEPTH 2.5 TO 3X OUTLET
PIPE I.D.

BMP, INC.		
53 MT. ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 FAX: (860) 434-3195		
DESCRIPTION	DATE	SCALE
24R SNOUT OIL & DEBRIS STOP	09/13/99	NONE
DRAWING NUMBER 24R		

Castle Metals
Snout Details
Wichita, Kansas

KEMILLER ENGINEERING PA <small>117 E. Lewis, Wichita, KS 67202 (316)264-0242</small>	PROJECT NUMBER 0219 PPD (607861)			7.4
	KEM NO. 13153	FILE	DATE 01/2014	
DESIGN GP	DRAWN GP	REVISED		