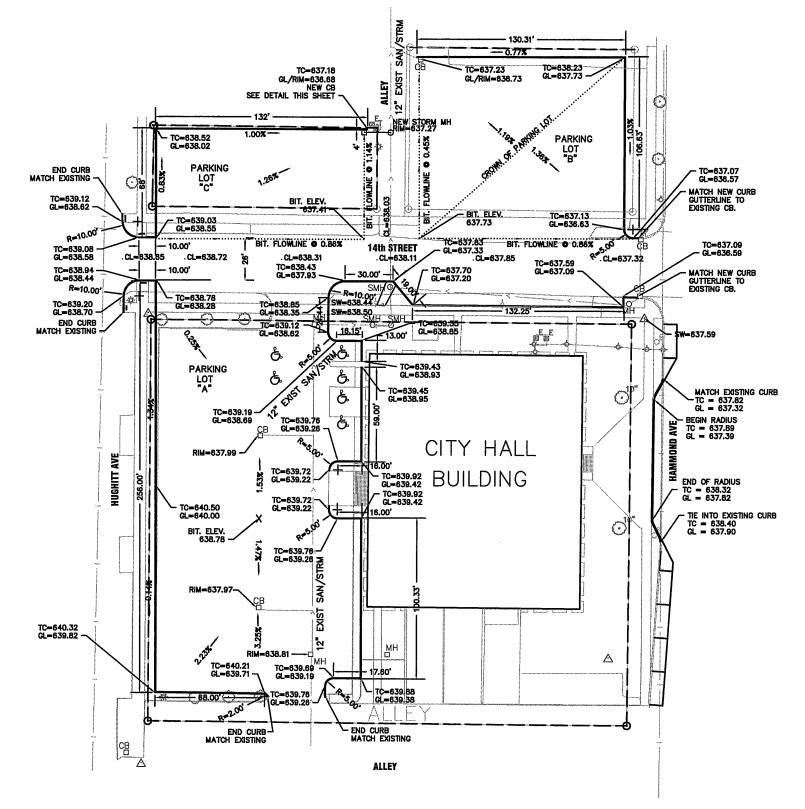


#### LEGEND

PROPERTY LINE FOUND PROPERTY MANHOLE POWER POLE SIGN TREE WATER MAIN

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXIST-ING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



MR DRAWN RY-MS DESIGNER: CHECKED BY: \_\_\_\_SW DESIGN TEAM NO. BY DATE REVISIONS

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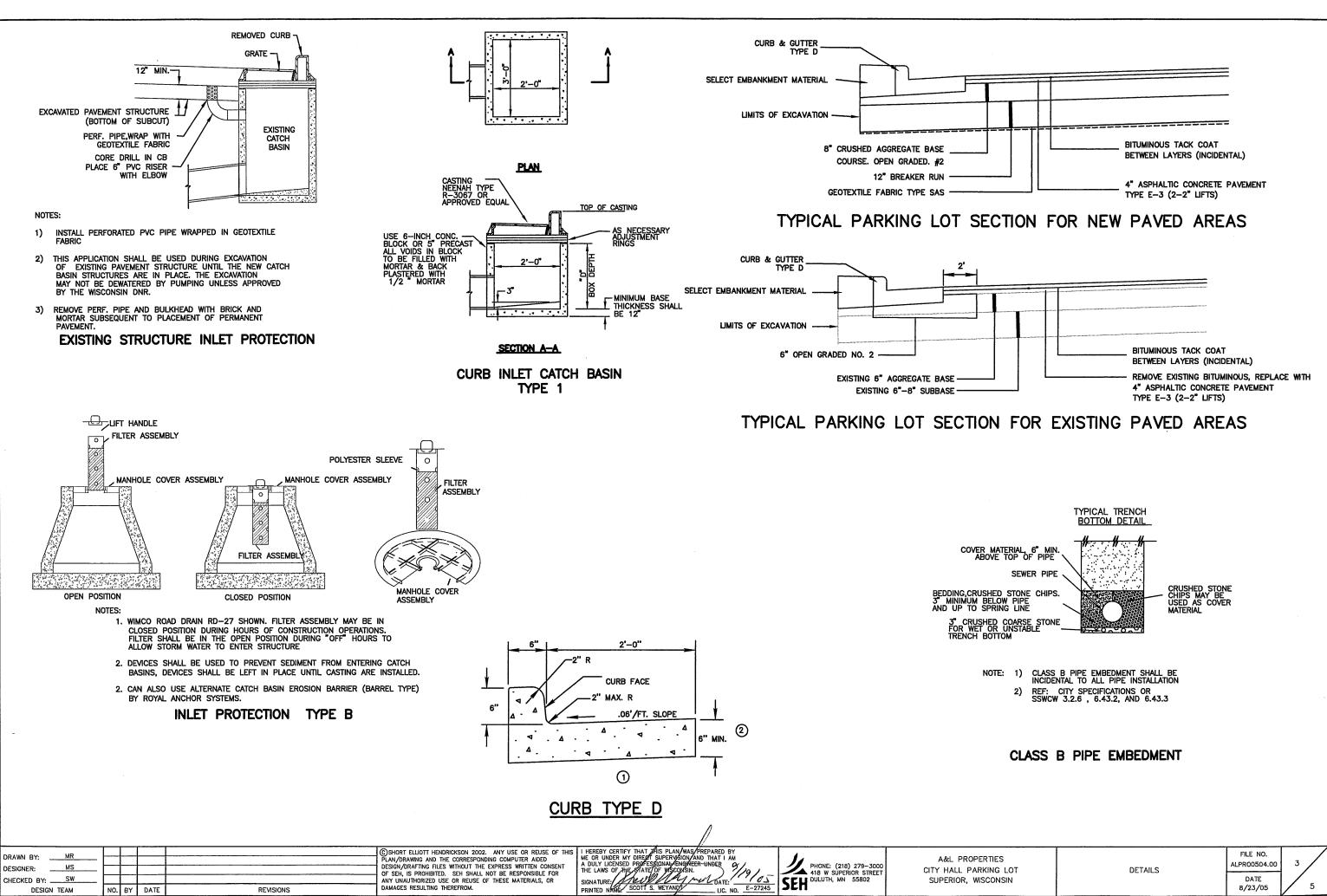
I HEREBY CERTIFY THAT THIS FLAN WAS PREPARED BY ME OF UNDER HE AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER 1 AM DILY LICENSED PROFESSIONAL ENGINEER UNDER 1 AD THE LAWS OF THE LAWS

A&L PROPERTIES CITY HALL PARKING LOT SUPERIOR, WISCONSIN

GRADING PLAN

ALPR00504.00 DATE

8/23/05



OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR

DAMAGES RESULTING THEREFROM.

CHECKED BY: \_\_

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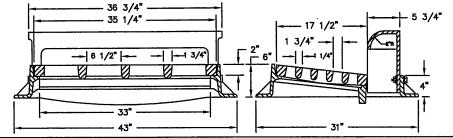
DESIGN TEAM

DATE 8/23/05

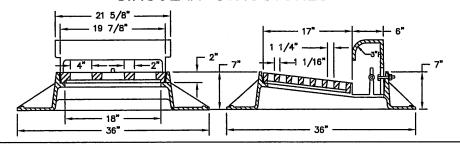
DETAILS

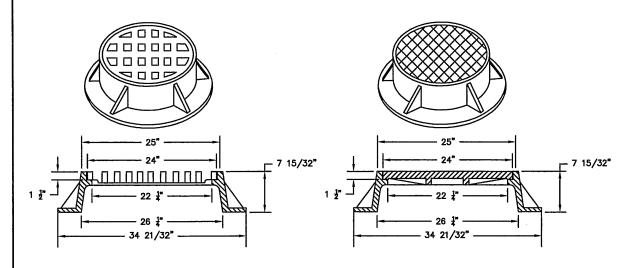
SUPERIOR, WISCONSIN

## TYPICAL CURB INLET CASTING DIMENSIONS FOR RECTANGULAR STRUCTURES



## TYPICAL CURB INLET CASTING DIMENSIONS **FOR** CIRCULAR STRUCTURES





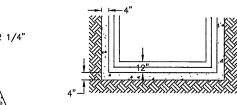
TYPE "C"

#### MANHOLE CASTING DIMENSIONS

NEENAH R-2500 OR APPROVED EQUAL

NEENAH R-1670 OR APPROVED EQUAL

TYPE I FRAME/CHIMNEY JOINT REQUIRED ON ALL SANITARY MANHOLES UNLESS OTHERWISE SPECIFIED. SONNEBORN HLM-5000-R ELASTOMERIC WATERPROOFING SEALER APPLIED TO EXTERIOR AND CRETEX INTERIOR CHIMNEY SEAL OR APPROVED ELASTOMERIC SEAL EQUAL.



EXTEND CRUSHED STONE CHIPS TO 6" ABOVE TOP OF PIPE

4" MIN, CRUSHED STONE CHIPS BELOW PRECAST BASE. ENGINEER OR WHERE SHOWN ON THE PLANS. ADJUST FRAME TO GRADE WITH BRICK OR CONCRETE RINGS OF VARIABLE THICKNESS, MAXIMUM RING HEIGHT

FLAT TOP SLAB MAY ONLY BE USED FOR 5'-0" AND 6'0"

DIA. MANHOLES AND WITH PERMISSION OF PROJECT

= 6", MINIMUM RING HEIGHT = 2". CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEP. THE CHIMNEY SHALL BE CONSTRUCTED SO THAT AS FEW ADJUSTING RINGS AS POSSIBLE SHALL BE USED TO BRING MANHOLE TO GRADE.

CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.

JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING BUTYL RUBBER GASKETS. ALL JOINTS SHALL CONFORM TO ASTM-C443 VARIATIONS IN DIAMETER, DEFECTIVE OR DAMAGED ENDS. OR OTHER CONDITIONS WHICH, IN THE OPINION OF THE PROJECT ENGINEER, PREVENT MAKING A SATISFACTORY JOINT SHALL BE CONSIDERED CAUSE FOR REJECTION.

AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ INCH PER LINEAL FOOT.

SPACE BETWEEN PIPE AND PRECAST MANHOLE WALL TO BE FILLED WITH BRICK MORTARED IN PLACE EXCEPT THAT AN APPROVED FLEXIBLE WATERTIGHT PIPE TO MANHOLE SEAL IS REQUIRED FOR ALL FLEXIBLE SANITARY SEWER CONNECTIONS. THE ANNULAR SPACE BETWEEN THE PIPE AND MANHOLE WALL SHALL BE FILLED WITH FLEXIBLE BUTYL RUBBER GASKET MATERIAL BELOW SURFACE OF BENCH SPRINGLINE.

3" MIN. CRUSHED STONE CHIPS UNDER CONCRETE BASE.

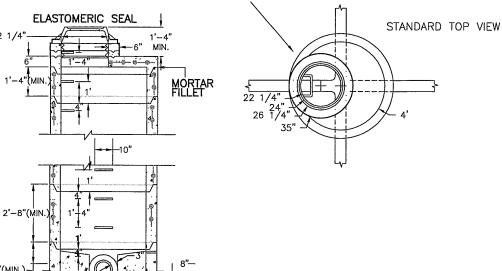
PRECAST BASE RISER SECTION WITH A SEPERATE PRECAST BASE SLAB SHALL NOT BE CONSIDERED GENERALLY ACCEPTABLE UNDER THIS SPECIFICATION.

THE FLOW CHANNEL THROUGH MANHOLES SHALL BE MADE TO CONFORM TO THE SHAPE AND SLOPE OF THE SEWERS AND SHALL EXTEND VERTICALLY FROM THE SPRINGLINE TO THE CROWN OF THE DISCHARGE PIPE.

BENCH SLOPE STORM MANHOLE 1" PER FOOT SANITARY MANHOLE 2" PER FOOT

CLASS "D" CONCRETE, 12" MIN. BELOW BOTTOM OF PIPE

THE STEPS, FRAME, AND COVER SHALL BE CENTERED OVER THE DISCHARGE PIPE.



(TYPE 1)

PRECAST MANHOLE

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\_ LIC. NO. \_E-27245

33" FOR 3'-6" MH

48" FOR 4'-0" MH

4 1/2"

3"(MIN.)-

CRUSHED STONE CHIPS

4"-

REINFORCING STEEL

SEE TABLE NO. 1

PHONE: (218) 279-3000 418 W SUPERIOR STREET SEH DULUTH, MN 55802

A&I PROPERTIES CITY HALL PARKING LOT SUPERIOR. WISCONSIN

**DETAILS** 

ALPRO0504.00

# STATEMENT OF ESTIMATED QUANTITIES \*

NOTE	ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	FINAL QUANTITY
	201.0120	CLEARING	EACH	3.00	
	201.0220	GRUBBING	EACH	3.00	
	204.0110	REMOVING ASPHALTIC SURFACE	SQ YD	6739.00	
	204.0150	REMOVING CURB & GUTTER	LF	873.00	
	204.0155	REMOVING CONCRETE SIDEWALK	SQ FT	3974.00	
	205.0100	EXCAVATION COMMON	CU YD	665.00	
1	310.0115	CRUSHED AGGREGATE BASE COURSE OPEN GRADED NO. 2	CU YD	275.00	
	311.0115	BREAKER RUN (P)	CU YD	337.00	
7	416.1010	CONCRETE SUFACE DRAIN	EACH	1.00	
	460.1103	ASPHALTIC CONCRETE PAVEMENT TYPE E-3	TON	1733.00	· · · · · · · · · · · · · · · · · · ·
	601.0411	CONCRETE CURB AND GUTTER, 30-INCH, TYPE D	LF	1353.00	
	602.0415	CONCRETE SIDEWALK 6-INCH	SQ FT	1848.00	
	602.0500	CURB RAMP DETECTABLE WARNING FIELD (DARK GRAY)	SQ FT	32.00	
	SPV.0165.01				
	611.0612	INLET COVERS TYPE C	EACH	1.00	
2	611.0103	CATCH BASIN TYPE 1	EACH	1.00	
2, 6	611.0201	MANHOLE TYPE 1	EACH	1.00	
	619.1000	MOBILIZATION	EACH	1.00	
3	625.0100	TOPSOIL	SQ YD	379.00	
4	628.7005	INLET PROTECTION TYPE B	EACH	7.00	
	631.1000	SOD LAWN	SQ YD	379.00	
	638.2600	INSTALL SIGN	EACH	3.00	
	643.0100	TRAFFIC CONTROL	EACH	1.00	
5	645.0140	GEOTEXTILE FABRIC TYPE SAS	SQ YD	998.00	
	646.0653	PAVEMENT MARKING PARKING LOT	LUMP SUM	1.00	
	690.0100	SAWING BITUMINOUS PAVEMENT	LF	146.00	

\*WISDOT "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" SHALL APPLY.

NOTES											
1	INCLUDES 50 C.Y. FOR GRADING MATERIAL UNDER NEW SIDEWALK AND PARKING LOTS A & B.										
2	SEE SHEET 3 AND 4 FOR DETAILS.										
3	A MINIMUM OF 4" OF TOPSOIL SHALL BE PLACED ON ALL AREAS										
	REQUIRING TURF ESTABLISHMENT.										
4	THE UNIT "EACH" INCLUDES ALL INSTALLATION, MAINTENANCE,										
	AND MATERIALS REQUIRED FOR THE PROTECTION OF INLETS.										
	SEE DETAILS ON SHEET 3.										
5	SEE TYPICAL SECTION ON SHEET 3 FOR PLACEMENT.										
6	ELASTOMERIC SEAL SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM, SEE DETAIL ON SHEET 4										
7	IT IS ESTIMATED THAT THIS ITEM WILL REQUIRE APPROXMATELY 0.79 C.Y. OF CONCRETE.										

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