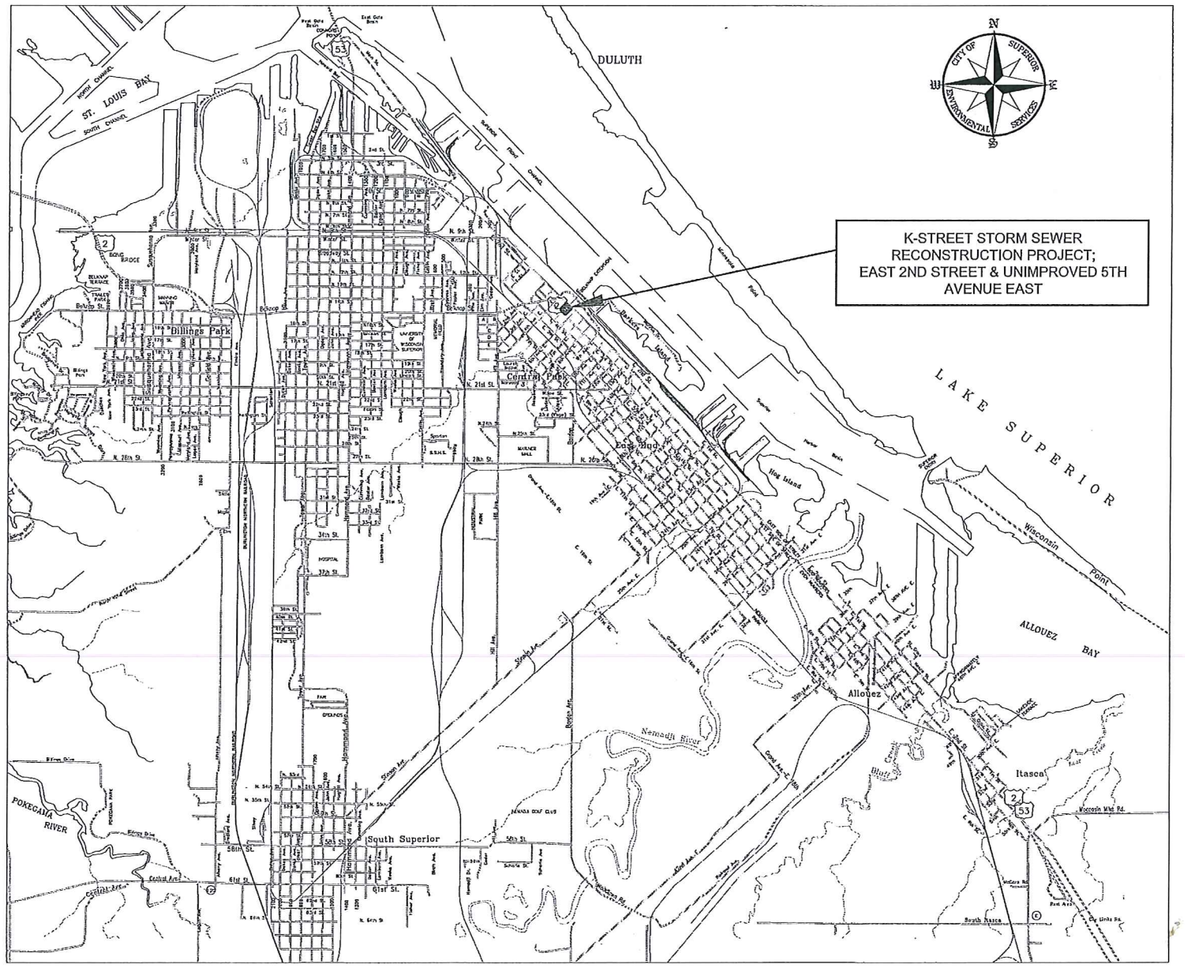
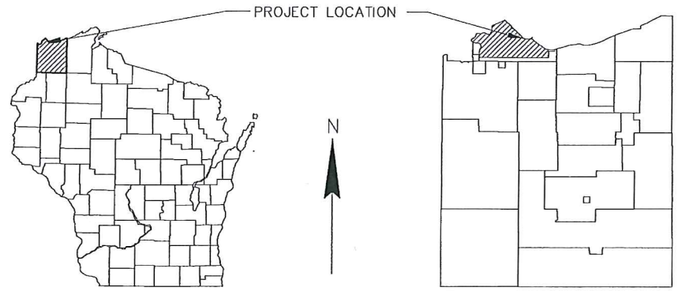
K-STREET STORM SEWER RECONSTRUCTION PROJECT

EAST 2ND STREET & UNIMPROVED 5TH AVENUE EAST

CONSTRUCTION PLAN FOR: STORM SEWER RECONSTRUCTION





INDEX OF SHEETS

APPROVED:
CITY OF SUPERIOR ENGINEERING DIVISION
DATE: JULY 2012
SIGNATURE:

WISCONSIN
JEFFREY S. GOETZMAN
E-40227
SUPERIOR WI
PROFESSIONAL ENGINEER

THE LOCATION 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 EXISTING 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.

FOR FIELD LOCATES
CALL: 1.800.242.8511
WWW.DIGGERSHOTLINE.COM

GOVERNING SPECIFICATIONS:
THE WISCONSIN DEPARTMENT OF TRANSPORTATION 2012 SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SHALL GOVERN THIS PROJECT

DESIGN TEAM: AMY HOMSTAD, STEVE ROBERTS

SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K-STREET STORM SEWER RECONSTRUCTION PROJECT	TITLE SHEET & PROJECT LOCATION	JULY 2012	DRAWN / APPROV'D	AMH / SGR	SHEET 1 OF 14

K-STREET STORM SEWER RECONSTRUCTION PROJECT

EAST 2ND STREET AND UNIMPROVED 5TH AVENUE EAST

BID ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY	NOTE
204.0150	REMOVING CURB & GUTTER	LF	30	
204.0245	REMOVING STORM SEWER (114")	LF	120	
601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	30	
619.1000	MOBILIZATION	EACH	1	
625.0100	TOPSOIL (MIN 4" DEPTH)	SY	2580	
627.0200	MULCHING	SY	2580	
628.1504	SILT FENCE	LF	700	
628.1520	SILT FENCE MAINTENANCE	LF	700	
628.7020	INLET PROTECTION TYPE D	EACH	1	
628.7560	TRACKING PAD	EACH	1	
630.0200	SEEDING TEMPORARY	LB	70	1
631.1000	SOD LAWN (PLAN)	SY	2580	2
645.0140	GEOTEXTILE FABRIC TYPE SAS	SY	226	
SPV.0060.05	CONNECT TO EXISTING MANHOLE, ITEM SPV.0060.05	EACH	2	
SPV.0090.01	STORM SEWER PIPE 114 -INCH, ITEM SPV.0090.01	LF	120	
SPV.0090.02	CONCRETE CURB & GUTTER CURE AND SEAL TREATMENT, ITEM SPV.0090.02	LF	30	
SPV.0090.03	REMOVE SANITARY SEWER (30-INCH), SPV.0090.03	LF	47	
SPV.0090.04	SANITARY SEWER PIPE, DUCTILE IRON, 30-INCH, ITEM SPV.0090.04	LF	47	
SPV.0090.05	SEWER FIELD QUALITY CONTROL - TELEVISING ITEM SPV.0090.05	LF	47	
SPV.0105.01	REMOVE & INSTALL CONCRETE ENCASED CAP & CRADLE & HEADWALL, ITEM SPV.0105.01	LS	1	

CONSTRUCTION NOTES:

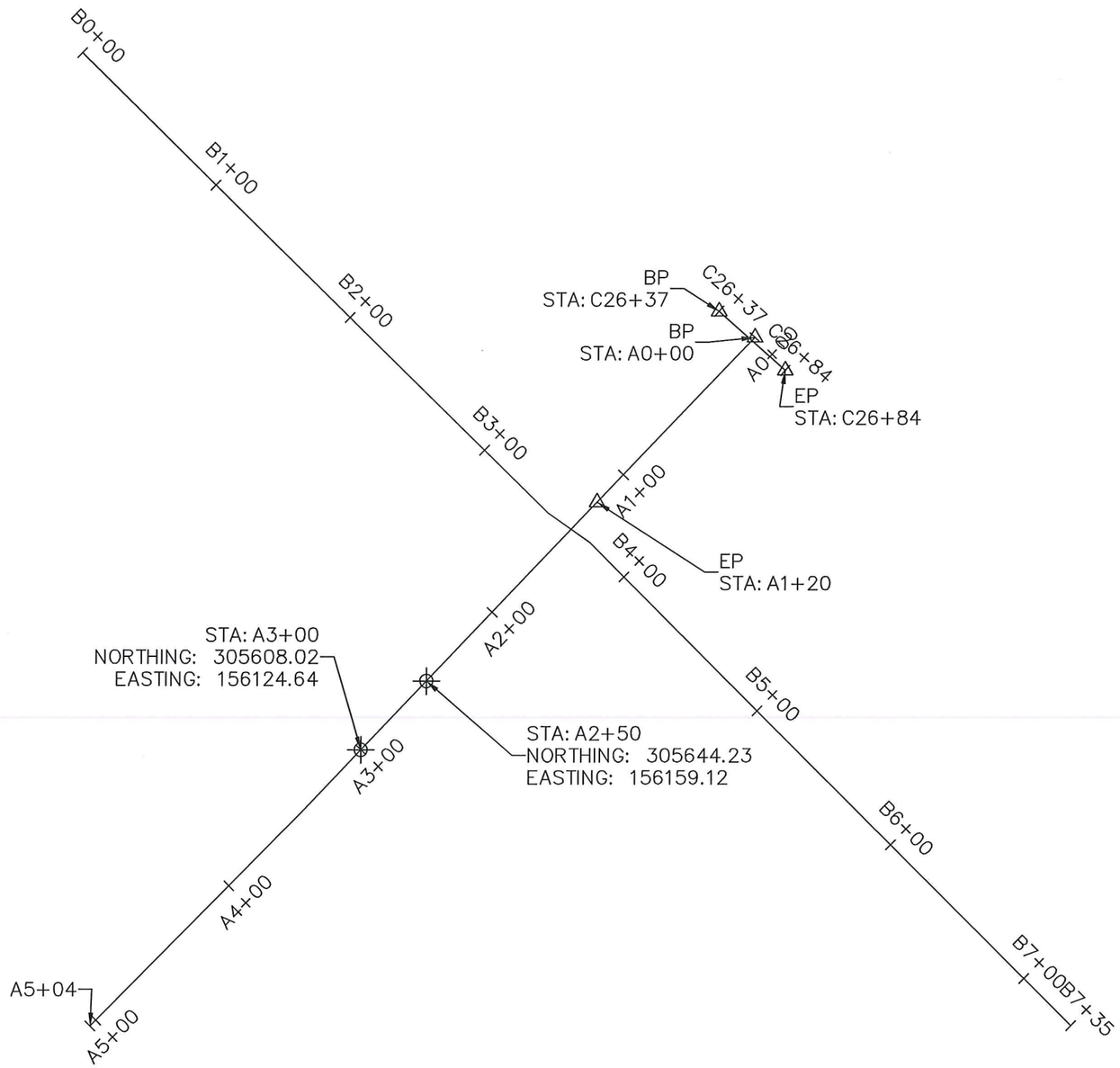
1 BASIS FOR QUANTITY: 100#/ACRE

2 PAYMENT BY PLAN QUANTITY ONLY

LEGEND			
SAN	SANITARY SEWER MANHOLE	☼	LIGHT POLE
ST	STORM SEWER MANHOLE	—o—	SIGN
CB	CATCH BASIN	—R/W—R/W—	RIGHT-OF-WAY LINE
	SANITARY SEWER PIPING		PROPERTY LINE
	STORM SEWER PIPING	— WATER —	WATER UTILITY LINE
	PROPOSED SEWER PIPING	—E—E—E—	3-PHASE ELECTRICAL
o	UTILITY POLE		SINGLE PHASE ELECTRICAL
+ + + + +	SOD		TRACKING PAD
—SILT—SILT—	SILT FENCE		WATER HYDRANT

KNOWN UTILITY COMPANIES:

UTILITY	COMPANY	CONTACT TELEPHONE
WATER	SUPERIOR WATER, LIGHT AND POWER	(715) 394-2200
GAS	SUPERIOR WATER, LIGHT AND POWER	(715) 394-2200
ELECTRIC	SUPERIOR WATER, LIGHT AND POWER	(715) 394-2200
SANITARY SEWER	CITY OF SUPERIOR ESD	(715) 394-0392
STORM SEWER	CITY OF SUPERIOR ESD	(715) 394-0392
LIGHTING	CITY OF SUPERIOR PW	(715) 395-7334
TELEPHONE	CENTURYLINK	(715) 392-0033

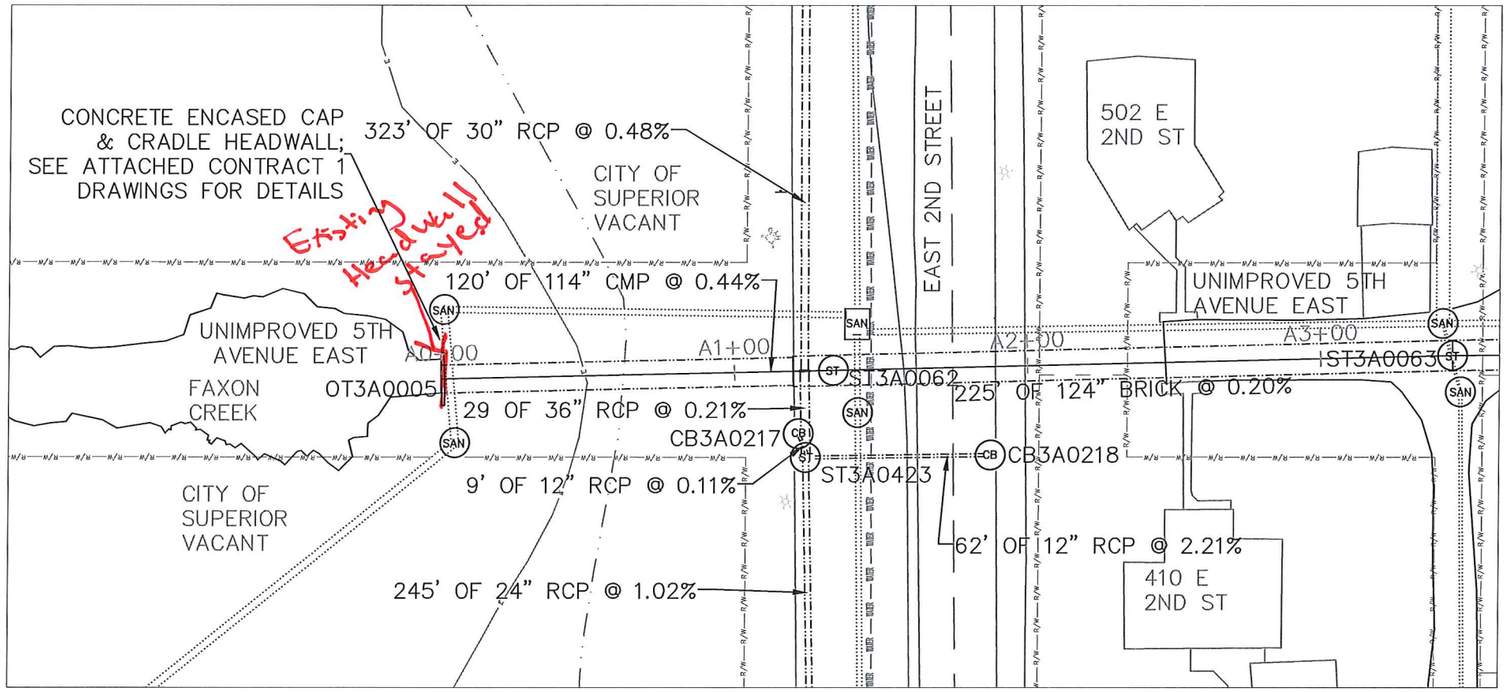


NOTE:
THE CITY OF SUPERIOR WILL PROVIDE TWO (2) CONTROL POINTS (PK NAILS) WITHIN THE PROJECT LIMITS AND ONE (1) BENCHMARK LOCATION. INFORMATION ON THESE LOCATIONS WILL BE AVAILABLE DURING THE PRE-CONSTRUCTION MEETING.

THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATION OF ALL CONTROL POINTS AND BENCHMARKS.

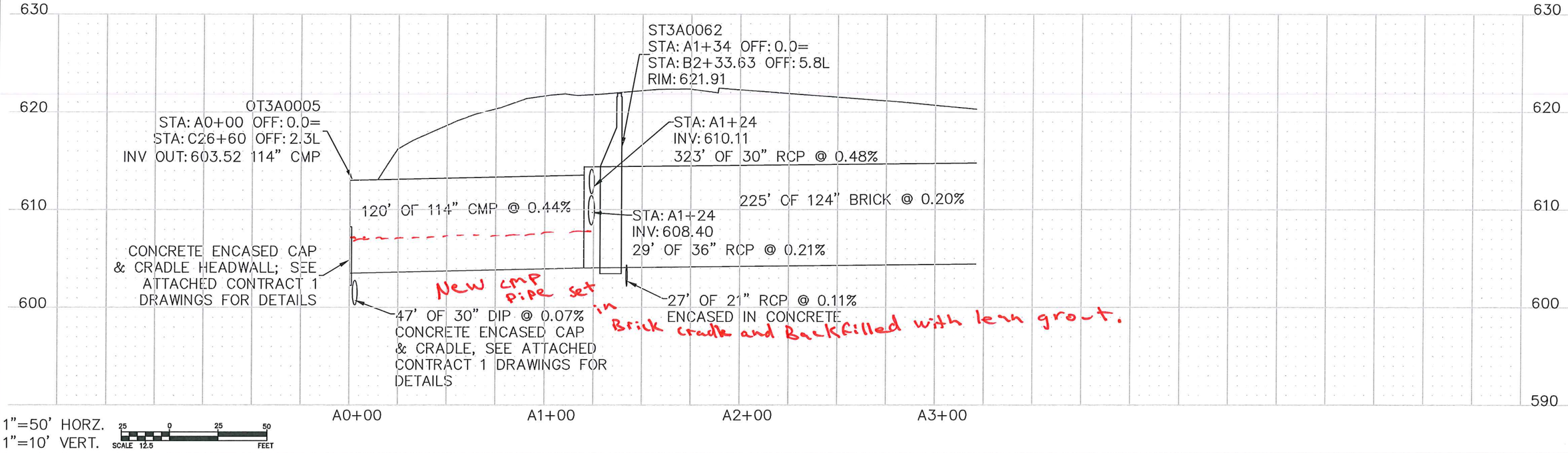
NTS

SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K-STREET STORM SEWER RECONSTRUCTION	ALIGNMENT DIAGRAM	JULY 2012	DRAWN AMH APPOV'D SGR	SHEET 3 OF 14



NOTES:
STA: A0+00 TO STA: A0+36 CMP ON PILING
STA: A0+36 TO STA: A0+39 CMP ON MASONRY.
SEE ATTACHED K–STREET ORIGINAL DRAWINGS FOR DETAILS (LABELED 3A–2 5TH AVENUE (K STREET) SEWER).

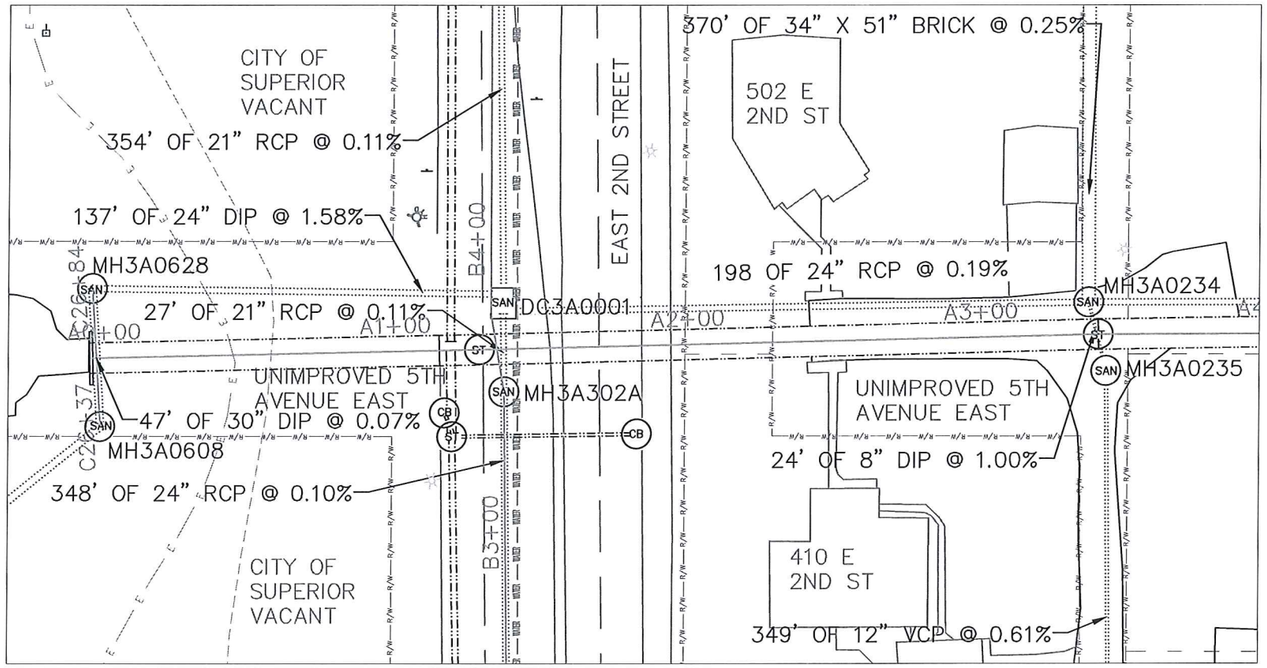
SANITARY SEWER CROSSES PROJECT LIMITS AT ST: A0+00 TO STA: A0+05. SEE ATTACHED CONTRACT 1 DRAWINGS FOR DETAILS.

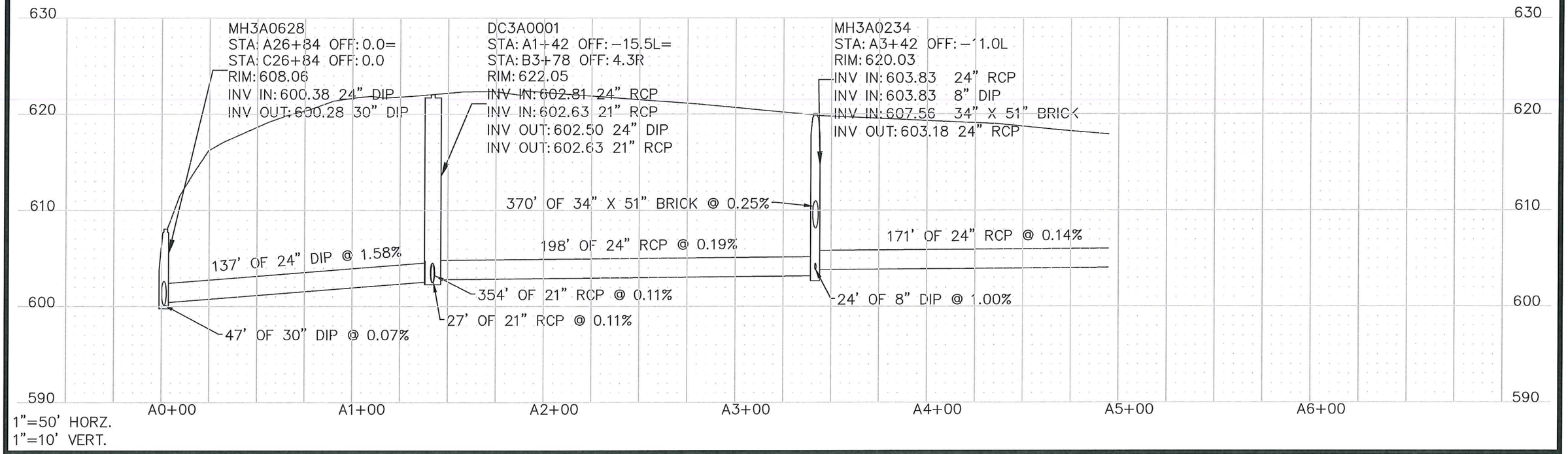


1"=50' HORZ.
1"=10' VERT.
SCALE 12.5 FEET

SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STORM SEWER RECONSTRUCTION	EXISTING STORM SEWER PLAN AND PROFILE	JULY 2012	DRAWN AMH / APPOV'D SGR	SHEET 4 OF 14

SANITARY SEWER CROSSES PROJECT LIMITS AT STATION: A0+00 TO STATION: A0+05

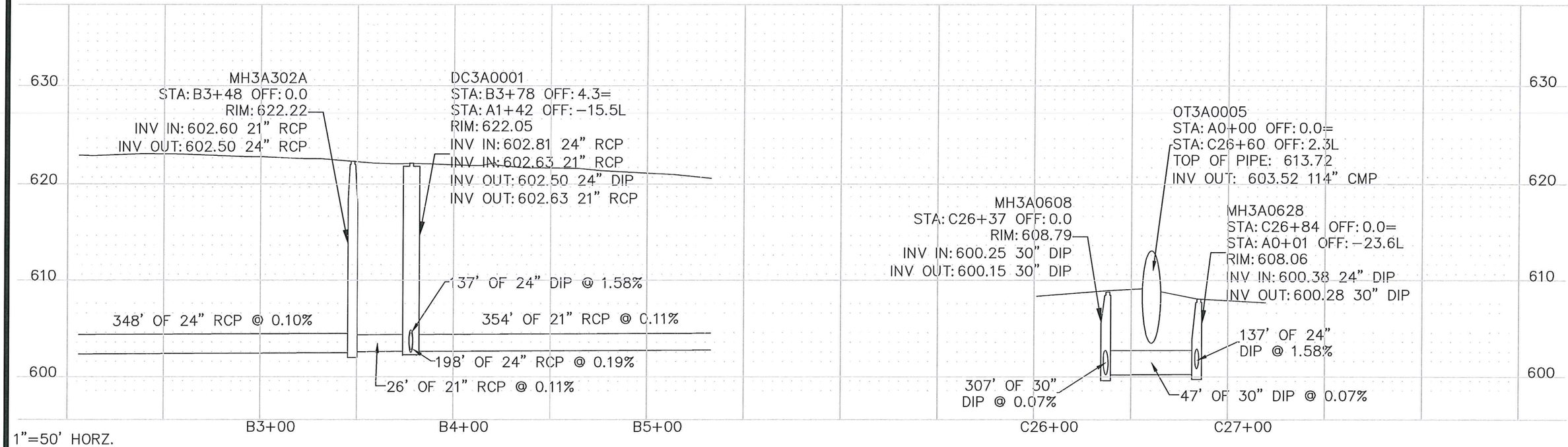




1"=50' HORZ.
1"=10' VERT.

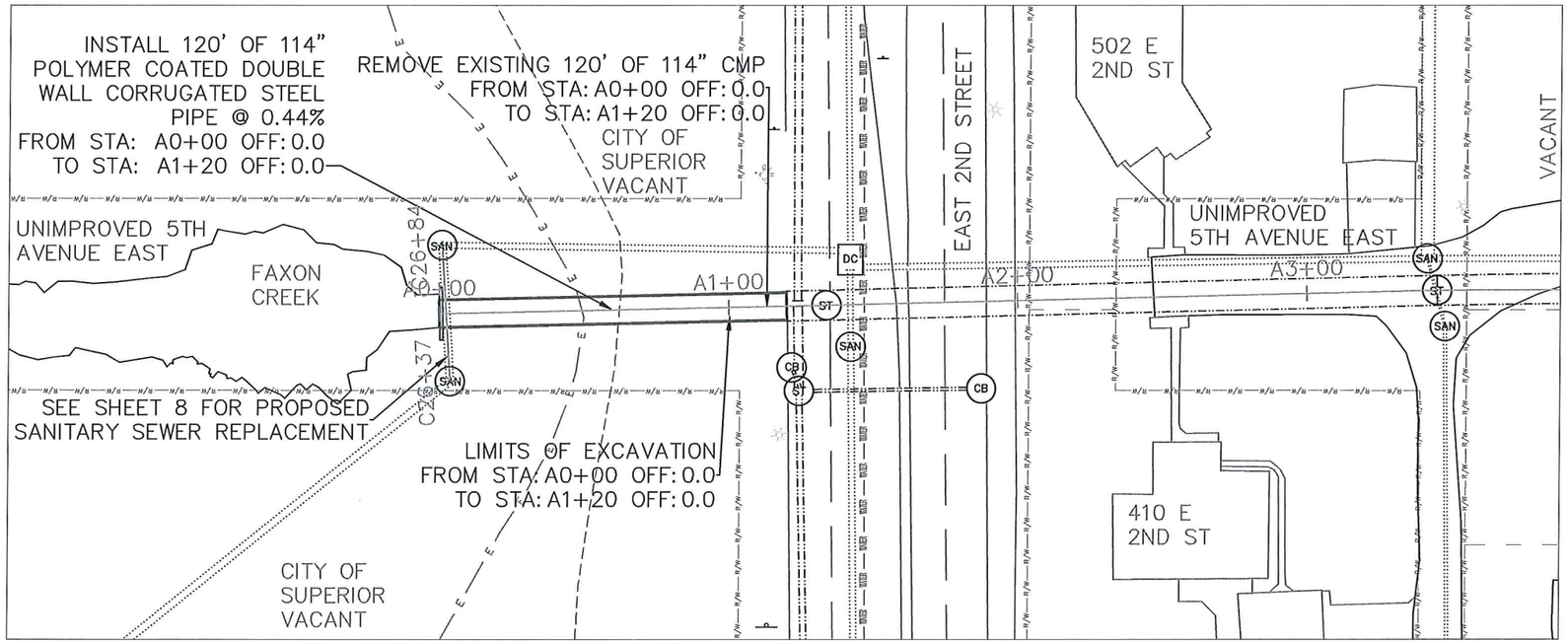
SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STORM SEWER RECONSTRUCTION	PLAN AND PROFILE EXISTING SANITARY SEWER	JULY 2012	DRAWN AMH / APPOV'D SGR	SHEET 5 OF 14

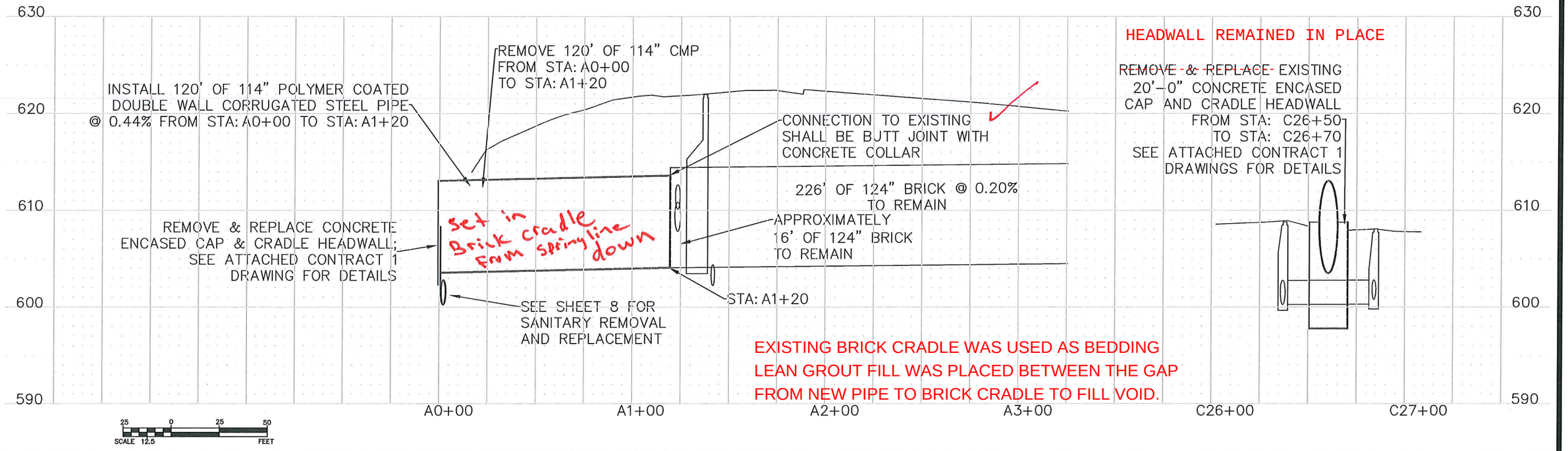
SEE SHEET 5 FOR EXISTING SANITARY SEWER PLAN VIEW



1"=50' HORZ.
1"=10' VERT.

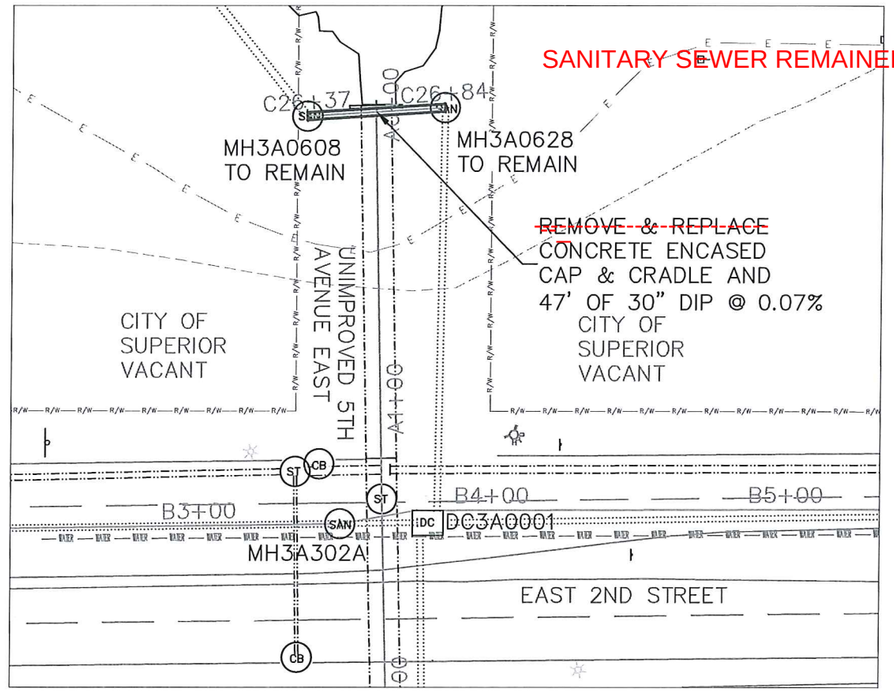
SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STORM SEWER RECONSTRUCTION	PROFILE EXISTING SANITARY SEWER	JULY 2012	DRAWN AMH / APPOV'D SGR	SHEET 6 OF 14

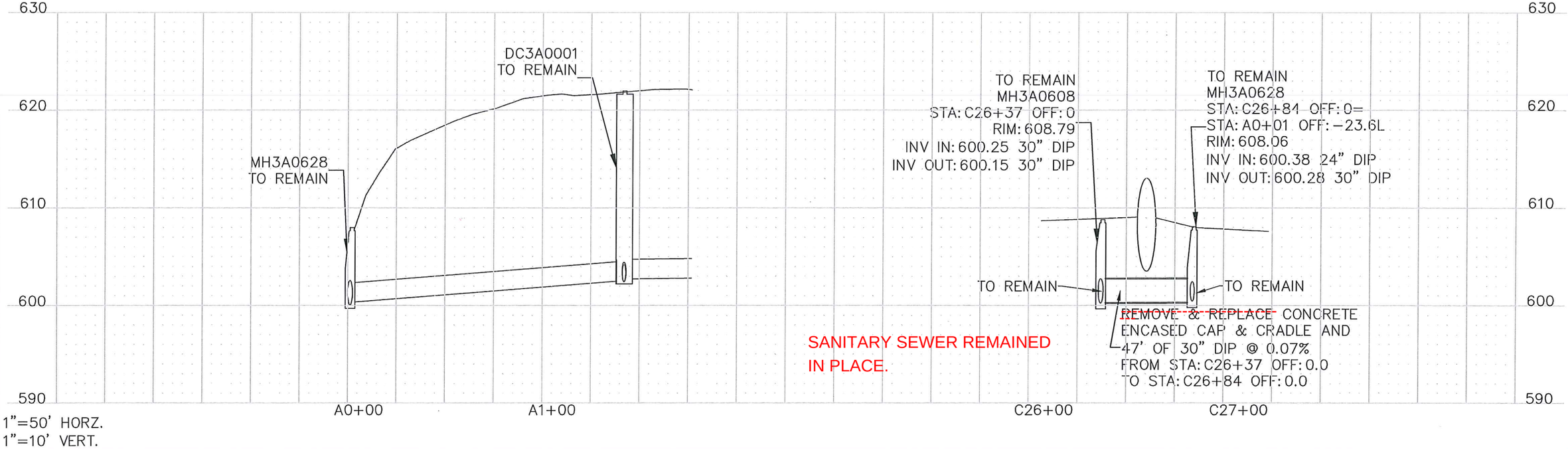




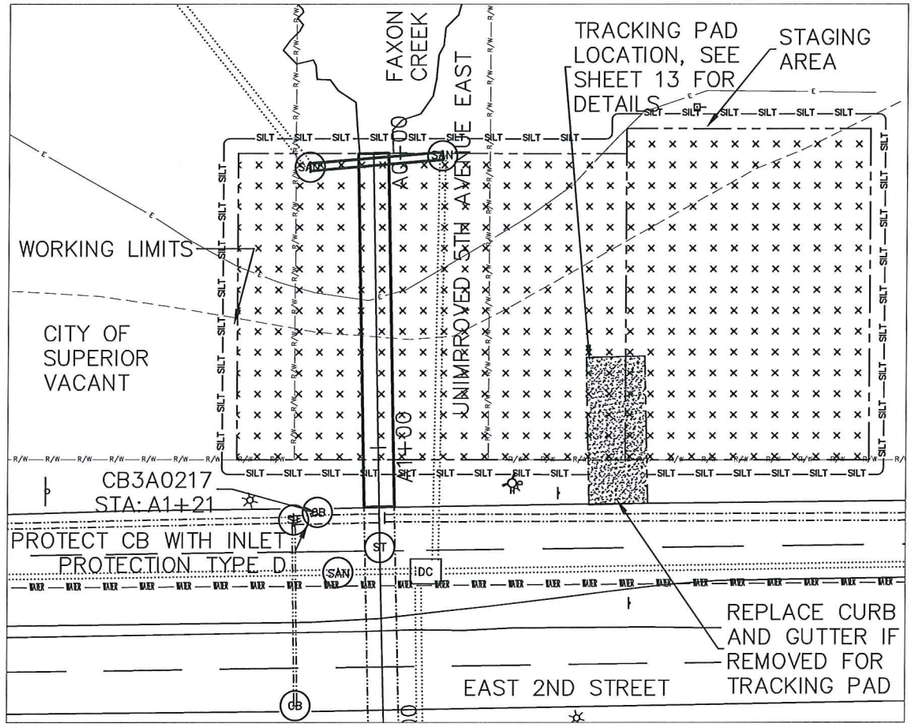
SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K-STREET STORM SEWER RECONSTRUCTION PROJECT	PROPOSED STORM SEWER PLAN & PROFILE	JULY 2012	DRAWN AMH / APPV'D SGR	SHEET 7 OF 14

SANITARY SEWER CROSSES PROJECT LIMITS AT STATION:
A0+00 TO STATION: A0+05





SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STORM SEWER RECONSTRUCTION	PLAN AND PROFILE PROPOSED SANITARY SEWER	JULY 2012	DRAWN AMH / APPOV'D SGR	SHEET 8 OF 14



LEGEND			
SAN	SANITARY SEWER MANHOLE		LIGHT POLE
ST	STORM SEWER MANHOLE		SIGN
CB	CATCH BASIN	R/W	RIGHT–OF–WAY LINE
	SANITARY SEWER PIPING	WATER	WATER UTILITY LINE
	STORM SEWER PIPING		3–PHASE ELECTRICAL
	PROPOSED SEWER PIPING		SINGLE PHASE ELECTRICAL
	UTILITY POLE		TRACKING PAD
	SOD		WATER HYDRANT
SILT	SILT FENCE		

NOTES:
TEMPORARY SEEDING SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND–DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 7 DAYS.

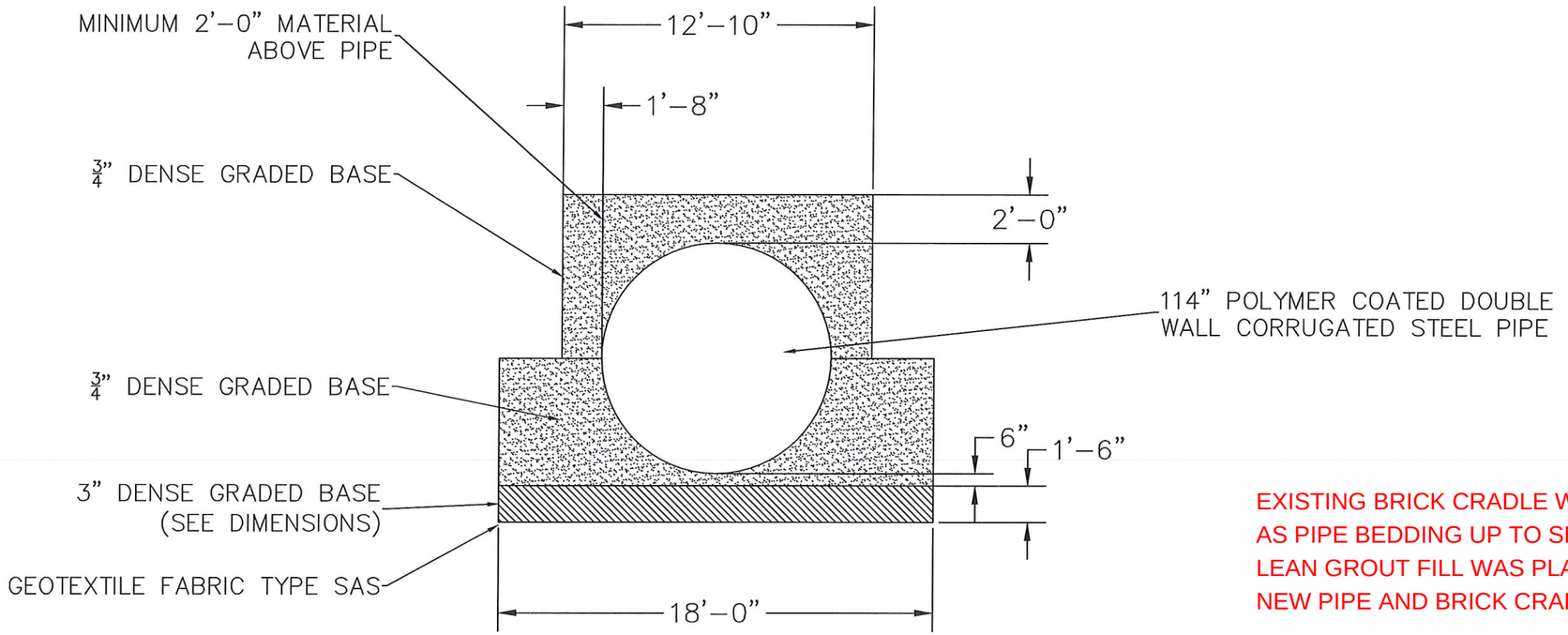
DISCHARGE MATERIAL OR OTHER INCIDENTAL DISTURBANCE TO FAXON CREEK IS NOT ALLOWABLE.

EROSION CONTROL MEASURES SHALL BE INSTALLED, INSPECTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE WDNR STORMWATER MANAGEMENT TECHNICAL STANDARDS INCLUDING BUT NOT LIMITED TO 1056, 1057, 1058, 1059, AND 1060.

25 0 25 50
SCALE 12.5 FEET

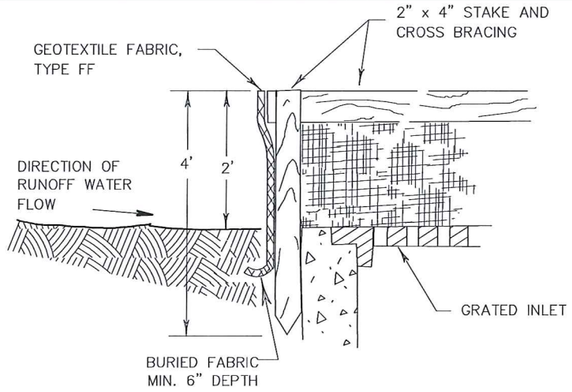
SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STORM SEWER RECONSTRUCTION PROJECT	EROSION CONTROL	JULY 2012	DRAWN AMH APPOV'D SGR	SHEET 9 OF 14

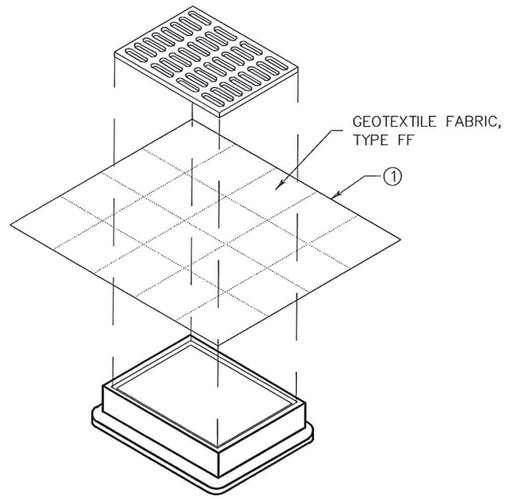
TYPICAL PIPE EMBEDMENT DETAIL



EXISTING BRICK CRADLE WAS USED
AS PIPE BEDDING UP TO SPRING LINE
LEAN GROUT FILL WAS PLACED BETWEEN
NEW PIPE AND BRICK CRADLE

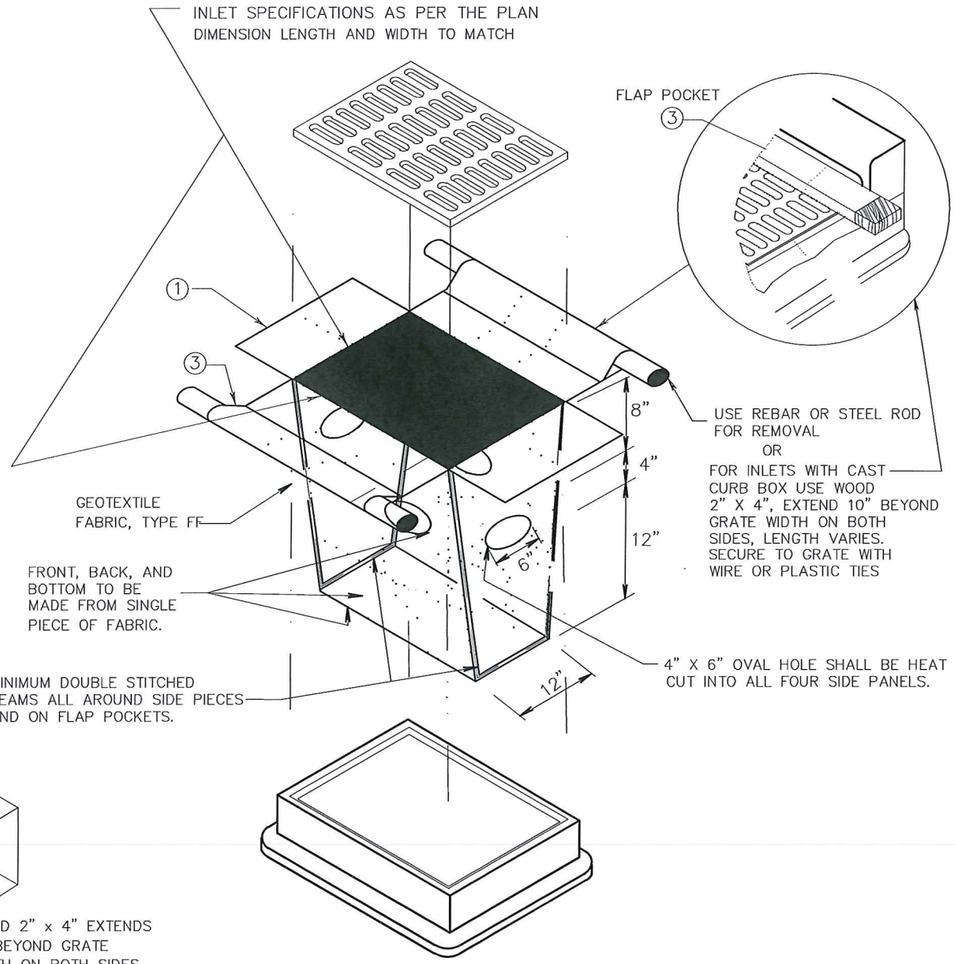
SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STORM SEWER RECONSTRUCTION PROJECT	TYPICAL PIPE EMBEDMENT DETAIL	JULY 2012	DRAWN AMH APPOV'D SGR	SHEET 10 OF 14

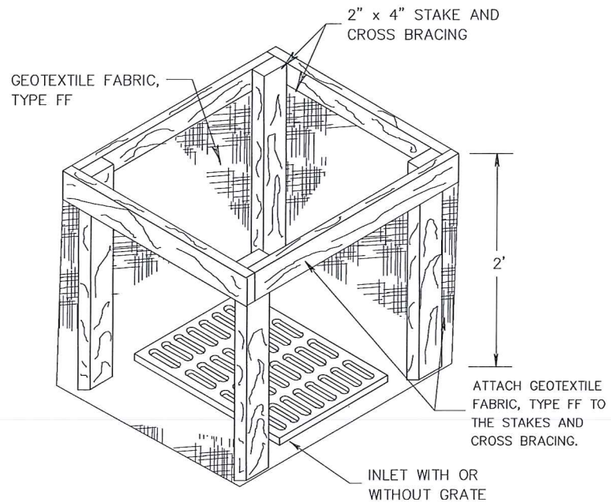




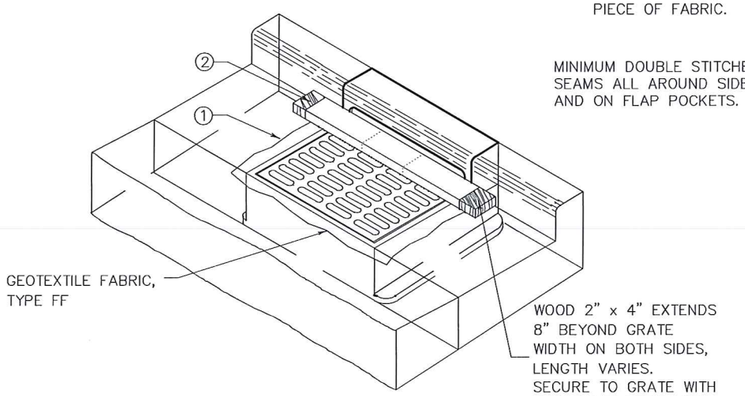
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)





INLET PROTECTION, TYPE A



INLET PROTECTION, TYPE C (WITH CURB BOX)

INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

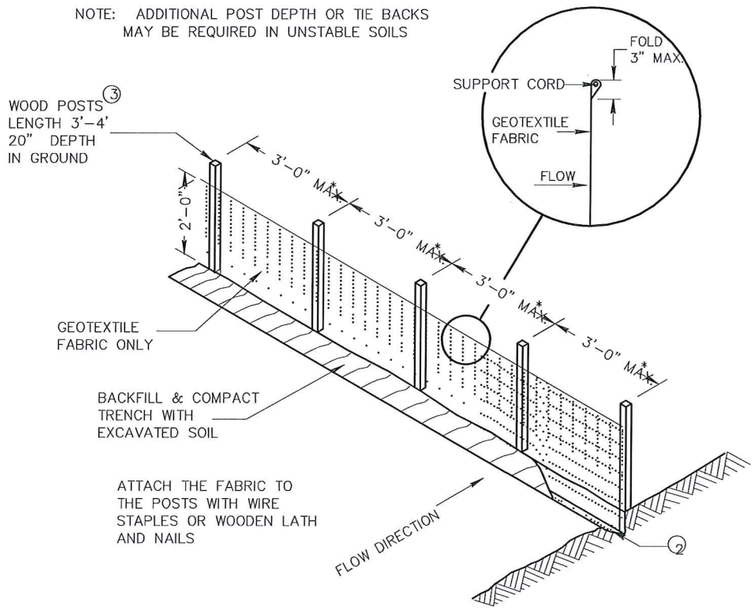
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

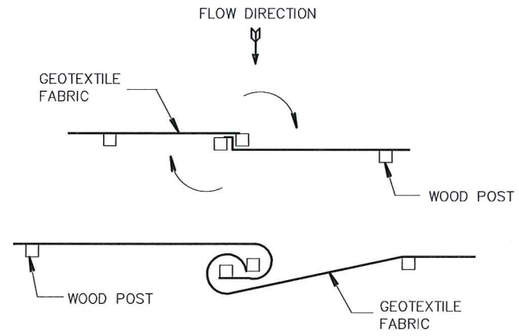
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

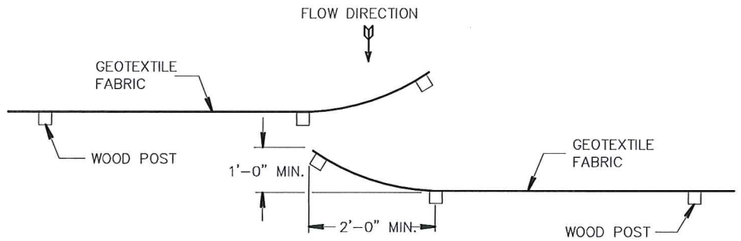


* NOTE: 8'–0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

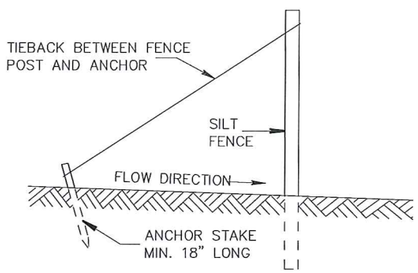


TWIST METHOD

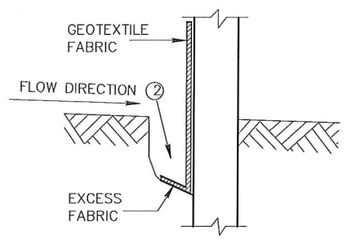


HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)



TRENCH DETAIL

GENERAL NOTES

① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1?" X 1?" OF OAK OR HICKORY.

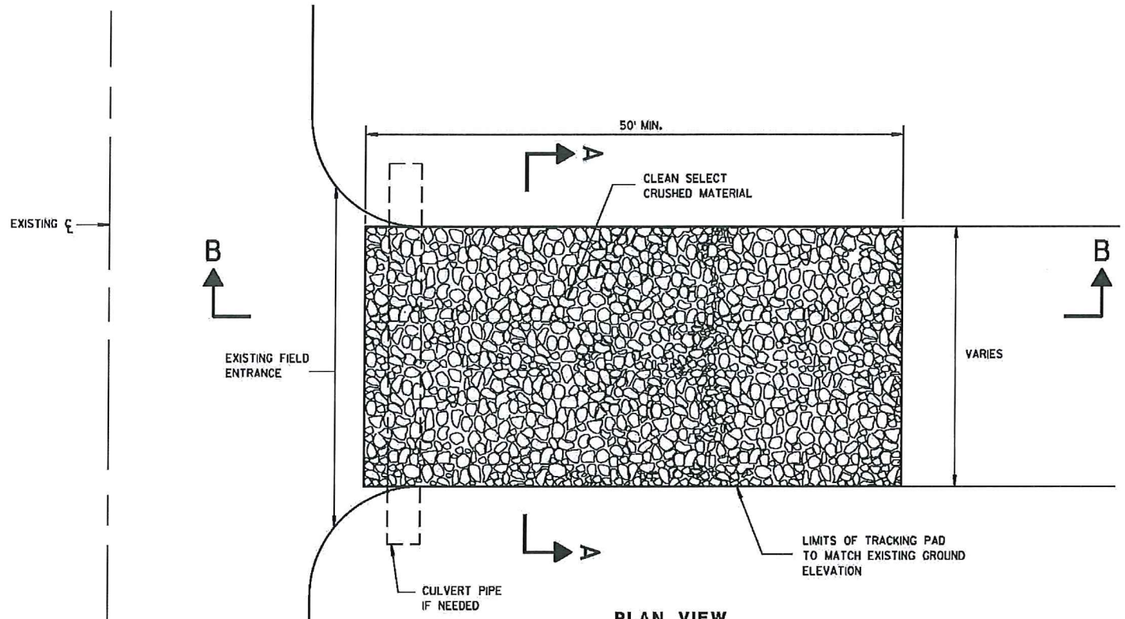
④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

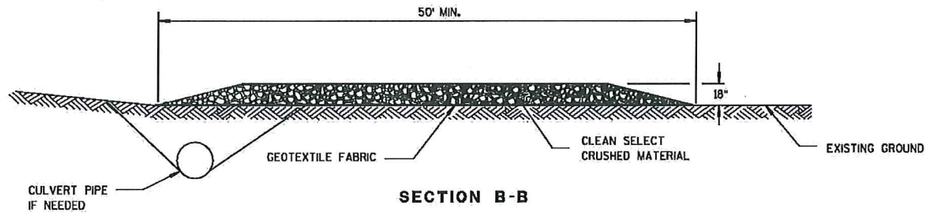
This drawing based on Wisconsin Department of Transportation Standard Detail Drawing 8 E 9–6.

SILT FENCE

8E14: Tracking Pad



PLAN VIEW



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

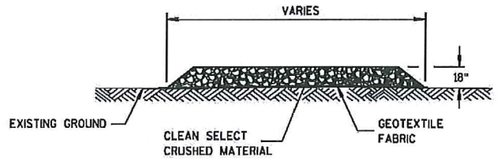
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zagg ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

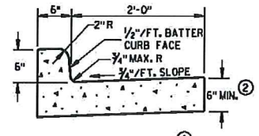
S.D.D. 8 E 14-1

6

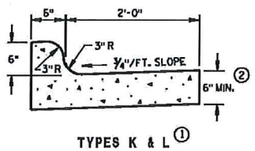
S.D.D. 8 E 14-1

SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STROM SEWER RECONSTRUCTION	TRACKING PAD DETAILS	JULY 2012	DRAWN / APPOV'D	AMH / SGR	SHEET 13 OF 14

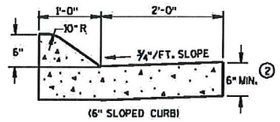
8D1: Concrete Curb, Concrete Curb & Gutter and Ties



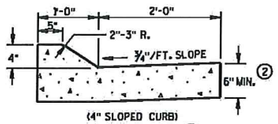
TYPES A & D ①



TYPES K & L ①

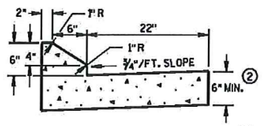


(6" SLOPED CURB)

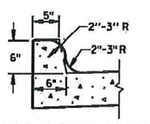


(4" SLOPED CURB)

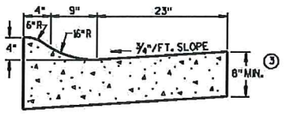
TYPES A & D ①



6" SLOPED CURB TYPES G & J ①

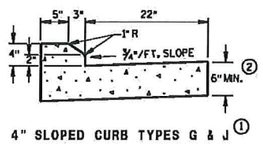


OPTIONAL CURB SHAPE FOR TYPES K & L ①



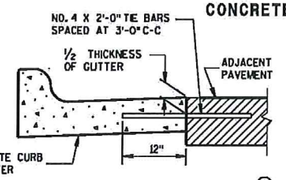
4" SLOPED CURB TYPES R & T ①④

CONCRETE CURB & GUTTER 36"

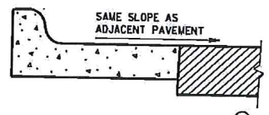


4" SLOPED CURB TYPES G & J ①

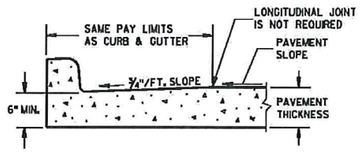
CONCRETE CURB & GUTTER 30"



TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

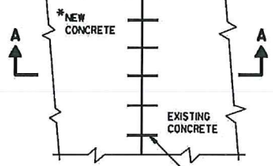
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

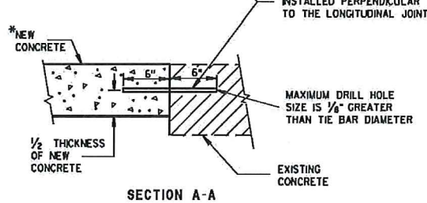
④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



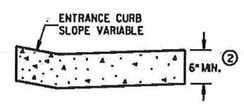
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

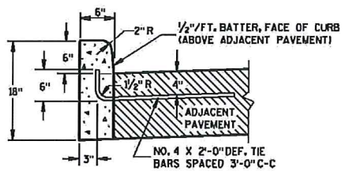


SECTION A-A

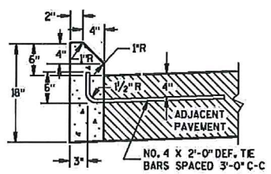
TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

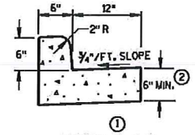


① TYPES A & D

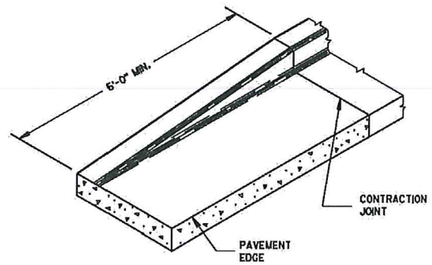


① TYPES G & J

CONCRETE CURB



① TYPES A & D
CONCRETE CURB & GUTTER 18"



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 9/4/08 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 D 1-17

SCALE 12.5: 25 0 25 50 FEET

SUPERIOR	CITY OF SUPERIOR, WI – ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS	K–STREET STORM SEWER RECONSTRUCTION PROJECT	CURB AND GUTTER DETAILS	JULY 2012	DRAWN / APPOV'D	AMH / SGR	SHEET 14 OF 14