

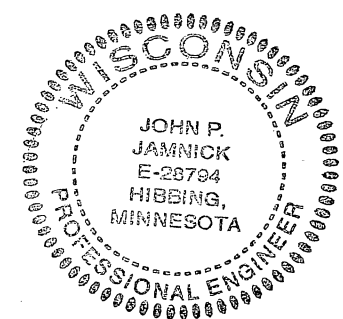


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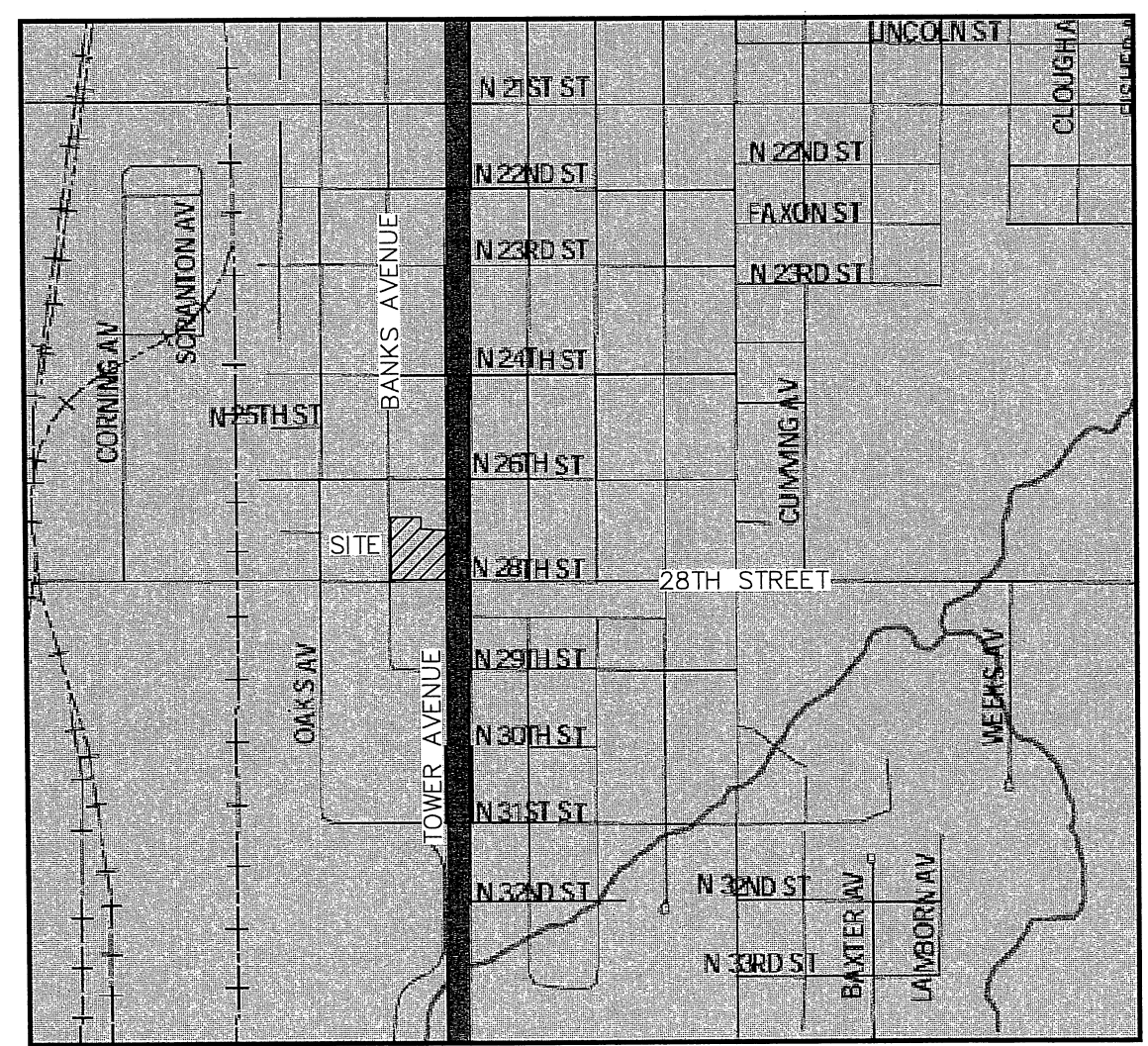
802 Garfield Avenue • Suite 106 • Duluth, MN 55802



PLANS

for
Site, Removals, Grading, Drainage,
Erosion Control, Utilities and Landscaping

for
CVS PHARMACY
TOWER AVE. & 28TH ST. N.
SUPERIOR, WISCONSIN



SHEET INDEX

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C6.0	GRADING PLAN
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CITY REVIEW PLANS

CVS
pharmacy

RIGHT HAND ENTRANCE
NWC
TOWER AVENUE
AND
28TH STREET NORTH
CVS CS#
CVS STORE #07261
CITY OF SUPERIOR
DOUGLAS COUNTY, WI

SURVEYED	ZZ
DESIGNED	SAR
DRAWN	SAR
CHECKED	JPJ

REVISIONS	

THE VELMEIR COMPANIES
7201 WEST 78TH STREET, SUITE 205
BLOOMINGTON, MN 55439

SHEET #	C1.0/22
PROJECT #	110B4
	CVS TOWER AVENUE AND 28TH STREET NORTH SUPERIOR, WISCONSIN
	TITLE SHEET

ALTA/ACSM Land Title Survey

VELMEIR ACQUISITION SERVICES

7201 West 78th Street, Suite 205
Bloomington, MN 55439

CVS SITE NO. 7261

CVS - SURVEYORS CERTIFICATION

The undersigned certifies to CVS Caremark Corporation; CVS 6891 MN, L.L.C., a Delaware limited liability company; Hincley, Allen and Snyder, LLP; Velmeir Acquisitions Services, LLC; Chicago Title Insurance Company; Northwest Land Title, Inc.; Holmberg Investments, Inc., a Wisconsin corporation; M & R Business Properties, LLC; Kerry D. Loberg, husband and wife; Brigitte A. Kiejeski; Brian G. Skorich; Walter E. Krivnichuk and Jacklene M. Krivnichuk, husband and wife; James S. Tomczak and each of their affiliates and subsidiaries and their successors, nominees and assigns, as of the date of this Survey, that to the best of the undersigned's professional knowledge, information and belief:

A. This is to certify that this map or plot and the survey on which it is based were made in accordance with the "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys" jointly established and adopted by ALTA and NSPS in 2005. Pursuant to the Accuracy Standards as adopted by ALTA and NSPS and in effect on the date of this certification, undersigned further certifies that in my professional opinion, as a land surveyor registered in the State of Wisconsin, the Relative Positional Accuracy of this survey does not exceed that which is specified therein and shows:

1. A fixed and determinable position and location of the land (the "Property") described on this Survey (including the position of the point of commencement (if any) and the point of beginning);
2. The location of all visible buildings, visible structures, and other visible, above-ground improvements situated on the Property; and
3. All driveways or other cuts in the curbs along any street upon which the Property abuts; and that

B. Observable evidence of easements and/or servitudes of all kinds, such as those created by roads; rights-of-way; water courses; drains; telephone, telegraph, or electric lines; water, sewer, oil or gas pipelines on or across the surveyed property and on adjoining properties if they appear to affect the surveyed property have been shown hereon;

C. The character and location of all walls, buildings, fences, and other visible improvements within five feet of each side of the boundary lines have been shown.

The encroachments, protrusions, overlaps or overhangs of visible improvements located on the Property that exist upon easements encumbering or appurtenant to the Property, rights-of-way or adjacent lands or that are located on adjacent land that exist upon the Property or easements encumbering or appurtenant to the Property, that I am aware of, are shown hereon and are as follows:

- (*) encroachments (no obvious encroachments)
- D. This Survey reflects boundary lines of the Property which close by calculation;
- E. Without intending to limit any of the foregoing certifications, the undersigned made a specific examination with respect to the following items (i -ix) and reports as follows:
 - (i) Rights-of-way, old highways, or abandoned roads, lanes or driveways and visible drains, sewer, water, gas or oil pipe lines across the Property (as shown hereon);
 - (ii) Visible, above-ground springs, streams, rivers, ponds, lakes, swamps or drainage ditches located, bordering on or running through the Property (none known to me);
 - (iii) Visible, above-ground cemeteries or family burial grounds located on the Property (none known to me);
 - (iv) Visible, above-ground telephone, telegraph, electric power or other utility poles, wires, lines or transformers overhanging or crossing or located on the Property (as shown hereon);
 - (v) Joint driveways or walkways and party walls or visible rights of support affecting the Property (none known to me);
 - (vi) Physical evidence of boundary lines of the Property (as shown hereon);
 - (vii) Proposed changes in street lines (none known to me);
 - (viii) Disputed boundaries (none known to me);
 - (ix) Curbing and curb cuts (as shown hereon);

All of the same found to exist are shown upon the Survey in the locations described above.

G. The current zoning for the premises for parcels 1 & 2 is C-2 (Highway Commercial) and for parcels 3, 4, 5, 6, and 7 is R-2, per the City of Superior planning department.

H. The following provisions of the zoning ordinance (Per City of Superior, Superior Code 122:46) apply to the Premises:

- C-2
 4. Front yard set back: 25 feet
 - Rear yard set back: none (see Superior Code 122:46 for abutting residential)
 - Side yard set back: none (see Superior Code 122:46 for abutting residential)
 5. Maximum height: 45 feet
 - Maximum bulk coverage (f.a.r.): unknown
 - Maximum area coverage: unknown
 3. Minimum lot size: see Art. IV, division 10
 - Minimum frontages: unknown
 4. On-Site parking requirements: unknown

- R-2 (one-family)
 1. Front yard set back: 25 feet
 - Rear yard set back: 5 feet, aggregate side 12 feet
 - Side yard set back: 25 feet
 2. Maximum height: 45 feet
 - Maximum bulk coverage (f.a.r.): unknown
 - Maximum area coverage: unknown
 3. Minimum lot size: 5,000 sq. ft
 - Minimum frontages: 50 feet
 4. On-Site parking requirements: unknown

I. The Premises shown on the Survey has access to and from Tower Avenue, Banks Avenue, North 28th Street and Alley, dedicated public roadways contiguous to the Premises.

J. Water supply, sanitary water, sanitary sewer, storm drainage, electricity, gas and other utilities shown hereon are based on Wisconsin Diggers Hotline, Inc. Please note that we have shown buried structures and utilities on and/or serving the site to the best of our ability, subject to the following restrictions:

- (a) Utility operators do not consistently respond to locate requests through the Wisconsin Diggers Hotline, Inc. service for boundary purposes such as this.
- (b) Those utility operators that do respond often will not locate services from their main line to the customer's structure or facility - they consider those segments private installations that are outside their jurisdiction. If a private service to an adjointer's site crosses this site or a service to this site crosses an adjointer, it may not be located since most operators will not mark such "private" services.
- (c) Snow and ice conditions during winter months may obscure otherwise visible evidence of a buried structure or utility.
- (d) Maps provided by operators, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive.
- (e) EXTREME CAUTION MUST BE EXERCISED BEFORE AN EXCAVATION TAKES PLACE ON OR NEAR THIS SITE. BEFORE DIGGING, YOU ARE REQUIRED BY LAW TO NOTIFY Wisconsin Diggers Hotline, Inc. AT LEAST 48 HOURS IN ADVANCE AT 851/484-0002.
- (f) Per Wisconsin Diggers Hotline, Inc. Ticket No. 20111707931, the following utilities and municipalities were notified: Magellan Midstream Partners, Charter Communications, City of Superior, Centurytel.

K. All easements and other rights in the Premises appearing in the title report submitted to the undersigned, or of which the undersigned has been advised, which are capable of location on a survey have been located on the Survey.

L. The undersigned has reviewed the Flood Insurance Rate Map Issued by the Federal Emergency Management Agency under the National Flood Insurance Program applicable to the Premises and has determined that the Premises is contained in Zone C, (area of minimal flooding) per Flood Insurance Rate Map, Community Penal No. 550116 0001 C, City of Superior, effective date of Feb. 25, 1978.

M. The land owner's names were obtained as per Schedule A of Commitment to Chicago Title Insurance Company, File No. 3509M, dated 8/22/2010; Fee Simple estate or Interest in the land is vested in (Parcel 1) Holmberg Investments, Inc., (Parcel 2) M & R Business Properties, LLC, (Parcel 3) Kerry D. Loberg and Anne M. Loberg, (Parcel 4) Brigitte A. Kiejeski, (Parcel 5) Brian G. Skorich, (Parcel 6) Walter E. Krivnichuk and Jacklene M. Krivnichuk, (Parcel 7) James S. Tomczak

N. I am not aware as to whether or not the Property is located in an area subject to a moratorium or rationing of water.

O. I am not aware as to whether or not the Property is located in a historical or restricted parking district.

P. Pursuant to the Accuracy Standards as adopted by ALTA and NSPS and in effect on the date of this certification, undersigned further certifies that in my professional opinion, as a land surveyor registered in the State of Wisconsin, the Relative Positional Accuracy of this survey does not exceed that which is specified therein.

Dated as of: May 13, 2011

Daniel A. Holman
Daniel A. Holman, WI Registration No. 2393



PROPERTY DESCRIPTION

(As per Schedule A of Commitment to Title from Chicago Title Insurance Company, File No. 3509M, dated 8/22/2010.)

Parcel 1: Lots 15 through 20 Inclusive, Block 19, Wemyss's Addition to West Superior Except part deeded for highway purposes in Vol. 593, pg. 111, City of Superior, Douglas Co., Wisconsin. 07-807-02856-00

Parcel 2: Lots 10 through 14 Inclusive, Block 19, Wemyss's Addition to West Superior, City of Superior, Douglas Co., Wisconsin. 07-807-02851-00

Parcel 3: Lots 21 through 23 Inclusive, Block 19, Wemyss's Addition to West Superior, City of Superior, Douglas Co., Wisconsin. 07-807-02864-00

Parcel 4: Lots 24 through 26 Inclusive, Block 19, Wemyss's Addition to West Superior, City of Superior, Douglas Co., Wisconsin. 07-807-02866-00

Parcel 5: Lots 27 and 28, Block 19, Wemyss's Addition to West Superior, City of Superior, Douglas Co., Wisconsin. 07-807-02867-00

Parcel 6: Lots 29 and 30, Block 19, Wemyss's Addition to West Superior, City of Superior, Douglas Co., Wisconsin. 07-807-02870-00

Parcel 7: Lots 31 and 32, Block 19, Wemyss's Addition to West Superior, City of Superior, Douglas Co., Wisconsin. 07-807-02871-00

TITLE COMMITMENT NOTES

The property depicted on this survey and the easements of record shown hereon are the same as the property and easements described in that Commitment for Title Insurance issued by Chicago Title Insurance Company, File No. 3509M, dated 8/22/2010.

In schedule B-II, Exceptions of the above mentioned title commitment:

- a) Items a. through l. and k. through r. are not survey related.
- b) (1) Item 1 - Property subject to Easement granted by Frank M and Josephine Genovesi, his wife, to Wisconsin Telephone Company, dated March 10, 1964, recorded June 24, 1964, in the Office of the Registrar of Deeds for Douglas County in Vol. 278, pg. 417 as Document No. 468585. (Parcel 3) (affects Lot 21 in Parcel 3, but no marks or maps were provided by cable telephone company per Wisconsin Diggers Hotline ticket no. 20111707931.)

BASIS OF BEARINGS

For the purposes of this survey the east line of Block 19, WEMYSS'S ADDITION TO WEST SUPERIOR, according to the recorded plat thereof, Douglas County, Wisconsin is assumed to bear S00°25'07"W.

BENCHMARKS

- BM-1 (TIN=top nut hydrant)
 - located in the northwest quadrant of tower avenue and north 28th street, see map
 - Elev.=661.91 feet (NAVD 88).
- BM-2 (TIN=top nut hydrant)
 - located west of bank avenue and south of alley, see map
 - Elev.=661.14 feet (NAVD 88).

Station Name: SUPERIOR GPS
-monument located at the bang/superior airfield in superior, wisconsin.
Elev.= 673.59 feet (NAVD 88).

Station Name: A 208
-monument located in front lawn by flag pole at the new u.s. post office at superior, located at the junction of belknap and fisher street.
Elev.= 632.11 feet (NAVD 88).

NOTES

A. Total Area of property is 1.77 acres.

LEGEND

- = CITY MONUMENT FOUND
- = IRON MONUMENT FOUND
- SMH = SANITARY SEWER MANHOLE
- SMH = STORM SEWER MANHOLE
- CB = CATCH BASIN
- H = HYDRANT
- GV = GATE VALVE
- WC = WATER CURB STOP
- SB = SOIL BORING
- EP = ELECTRIC POWER POLE
- GW = GUY WIRE
- TS = TRAFFIC SIGNAL
- TE = TELEPHONE BOX
- UV = UTILITY VAULT
- S = SIGN
- EM = ELECTRIC METER
- LP = LIGHT POLE
- GM = GAS METER
- GP = GUARD POST
- MW = MONITORING WELL
- AS = AUTO SPRINKLER
- ACU = AIR CONDITIONING UNIT
- EMH = ELECTRIC MANHOLE
- MB = MAIL BOX
- M = MEASURED DISTANCE
- P = PLAT DISTANCE
- X 000.00 = SPOT ELEVATION
- Δ = BENCHMARK LOCATION
- = DECIDUOUS TREE
- ☀ = EVERGREEN TREE
- = BITUMINOUS SURFACE
- = CONCRETE SURFACE
- = LANDSCAPED AREA
- = GRAVEL SURFACE
- > = SANITARY SEWER LINE
- >> = STORM SEWER LINE
- | = WATER LINE
- UG = UNDERGROUND GAS LINE
- UT = UNDERGROUND TELEPHONE LINE
- UE = UNDERGROUND ELECTRIC LINE
- OE = OVERHEAD ELECTRIC LINE
- X—X— = FENCE LINE

CITY REVIEW PLANS

REVISIONS:

BOOK#	PAGE #	DRAWN	CHECKED
108		KEH	

AN ALTA/ACSM LAND TITLE SURVEY LOCATED IN PART OF BLOCK 19, WEMYSS'S ADDITION TO SUPERIOR, SUPERIOR, WISCONSIN

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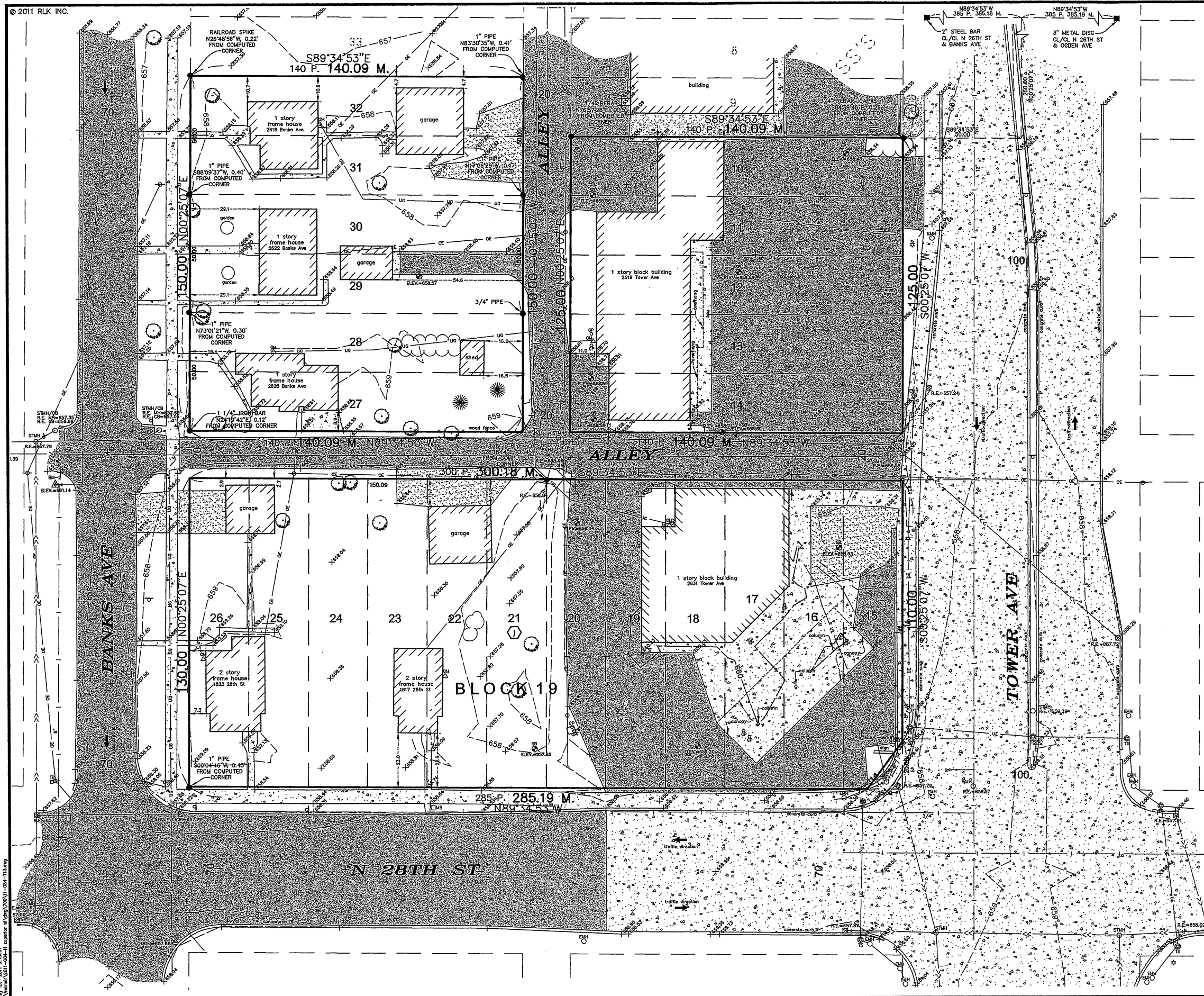
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Land
Title Survey**

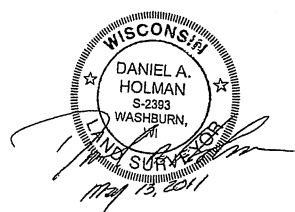
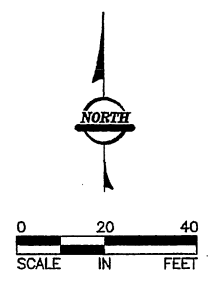
for

**VELMEIR
ACQUISITION
SERVICES**

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Bloomington, MN 55439

of

**CVS SITE
NO. 7261**



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BOOK#	108
PAGE #	
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REVISIONS

AN ALTA/ACSM LAND TITLE
SURVEY LOCATED IN PART OF
BLOCK 19, WEMYSS'S ADDITION TO
SUPERIOR, SUPERIOR, WISCONSIN

VELMEIR ACQUISITION SERVICES
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CVS SITE NO. 7261

SHEET #
2/2
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DESIGNED BY: *John P. Jammick*
DRAWN BY: JOHN P. JAMNICK
CHECKED BY: JPU
DATE: 12/11/11

REVISIONS
THE VELMEIR COMPANIES
7201 WEST 78TH STREET, SUITE 205
BLOOMINGTON, MN 55439

CVS TOWER AVENUE
AND 28TH STREET NORTH
SUPERIOR, WISCONSIN
SITE PLAN
EXISTING CONDITIONS
SHEET #
C3.0/22
PROJECT #
11084

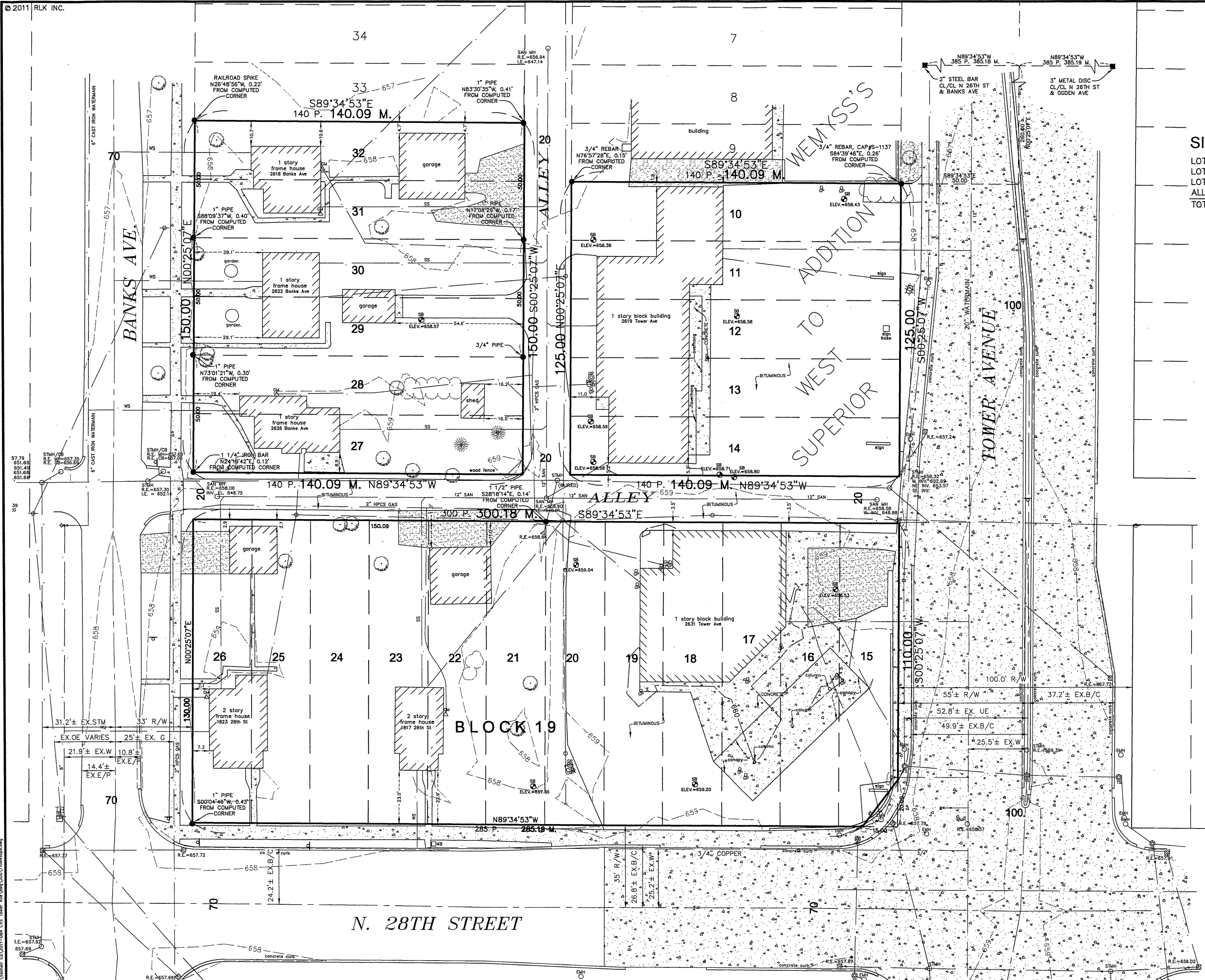
SITE SUMMARY

LOTS 10-14, BLOCK 19	17,512 SF OR 0.40 AC
LOTS 15-26, BLOCK 19	38,874 SF OR 0.89 AC
LOTS 27-32, BLOCK 19	21,014 SF OR 0.48 AC
ALLEY RIGHT OF WAY	8,504 SF OR 0.19 AC
TOTAL AREA	85,904 SF OR 1.97 AC

CITY REVIEW PLANS



CVS
pharmacy
LEFT HAND ENTRANCE
TOWER AVE (HWY 35)
AND
28TH STREET N
CVS STORE # 07281
CITY OF SUPERIOR
DOUGLAS COUNTY, WI



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NOTE: THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA.

NOTE: ANY PUBLIC UTILITIES SHOWN ON THIS PLAN ARE ONLY APPROXIMATE IN DEPTH AND LOCATION AND MUST BE VERIFIED BY THE CONTRACTOR

811 Know what's below. Call before you dig.

REMOVAL NOTES

CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE COMMENCEMENT OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT 811 FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO EXCAVATION.

ALL EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO REMOVALS.

CONTRACTOR TO REMOVE/RELOCATE EXISTING PRIVATE UTILITIES AS NECESSARY. CONTRACTOR TO COORDINATE ACTIVITIES WITH UTILITY COMPANIES.

CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF HARD SURFACES, STRUCTURES AND RELATED APPURTENANCES, AND ALL REMOVALS NOTED ON PLANS. ALL PERMITS, APPLICATIONS, AND FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

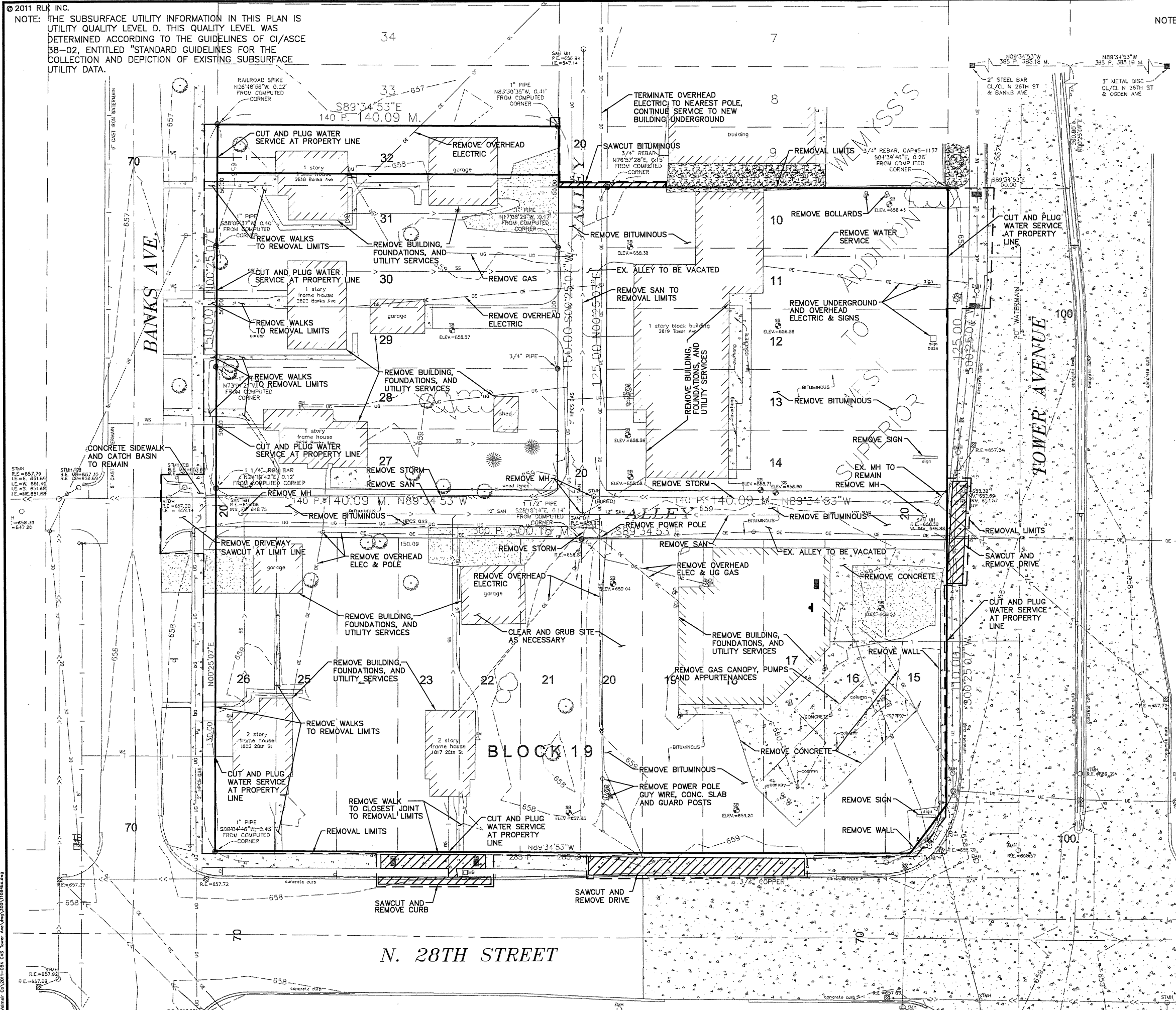
ALL PATCHING IN CITY STREETS MUST BE HEAVY DUTY TYPE PAVEMENT, OR MATCH EXISTING, WHICHEVER IS GREATER.

BUILDING REMOVALS TO INCLUDE FOUNDATIONS AND ALL UTILITY SERVICES FROM BUILDING TO THE MAIN UNLESS OTHERWISE NOTED.

REMOVALS SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE MASTER SPECIFICATIONS AND DESIGN GUIDELINES FOR DEMOLITION SECTION 02 41 13.

SITE CLEARING SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE MASTER SPECIFICATIONS AND DESIGN GUIDELINES FOR SITE CLEARING SECTION 31 10 00.

NOTE: CLEAR AND GRUB TREES.



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Hibbing, MN
Minnetonka, MN
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John F. Jamnick
JOHN F. JAMNICK
DATE: 12/11/11

Table with columns: SURVEYED, DESIGNED, DRAWN, CHECKED. Rows: ZZ, SAR, SAR, JPU.

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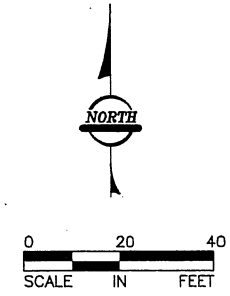
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BLOOMINGTON, MN 55439

CVS TOWER AVENUE
AND 28TH STREET NORTH
SUPERIOR, WISCONSIN
SITE PLAN
REMOVALS

SHEET #
C4.0/22
PROJECT #
11084

CITY REVIEW PLANS

CVS pharmacy
LEFT HAND ENTRANCE
TOWER AVE (HWY 35)
28TH STREET N
CVS STORE # 07281
CITY OF SUPERIOR
DOUGLAS COUNTY, WI



N. 28TH STREET



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John J. Javanick
JOHN P. JAVANICK
DATE 12/19/11

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DESIGNED	SAR
DRAWN	SAR
CHECKED	JPJ

SITE NOTES

CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE COMMENCEMENT OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.

ALL DIMENSIONS ARE SHOWN TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

BUILDING DIMENSIONS REFER TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.

TYPICAL FULL SIZE 90' PARKING STALL IS 9' X 20' UNLESS OTHERWISE NOTED.

ALL CURB RADII SHALL BE 2.0' UNLESS OTHERWISE NOTED.

ALL CURB AND GUTTER TO BE B618 UNLESS OTHERWISE NOTED.

ALL PATCHING IN CITY STREETS MUST BE HEAVY DUTY TYPE PAVEMENT.

CURB AND GUTTER SHALL BE PER WSDOT STD DTL DRAWINGS SHT 8d1 TYPE A & D CONCRETE CURB AND GUTTER 18".

PEDESTRIAN RAMPS PER WSDOT STD DTL DRAWINGS SHT 8d5 CURB RAMP TYPES 3, 4A, AND 4B.

SITE SUMMARY - ZONING CODE

1. SETBACKS		
FRONT (TOWER AVE)	BUILDING 25'	PARKING 5'
SIDE	25'	5'
REAR	25'	15' (RES.) BUFFER
SIDE	25' (RES)	15' (RES)
	0' (COMM)	0' (COMM)

2. ZONING	
EXISTING	C-2
PROPOSED	C-2

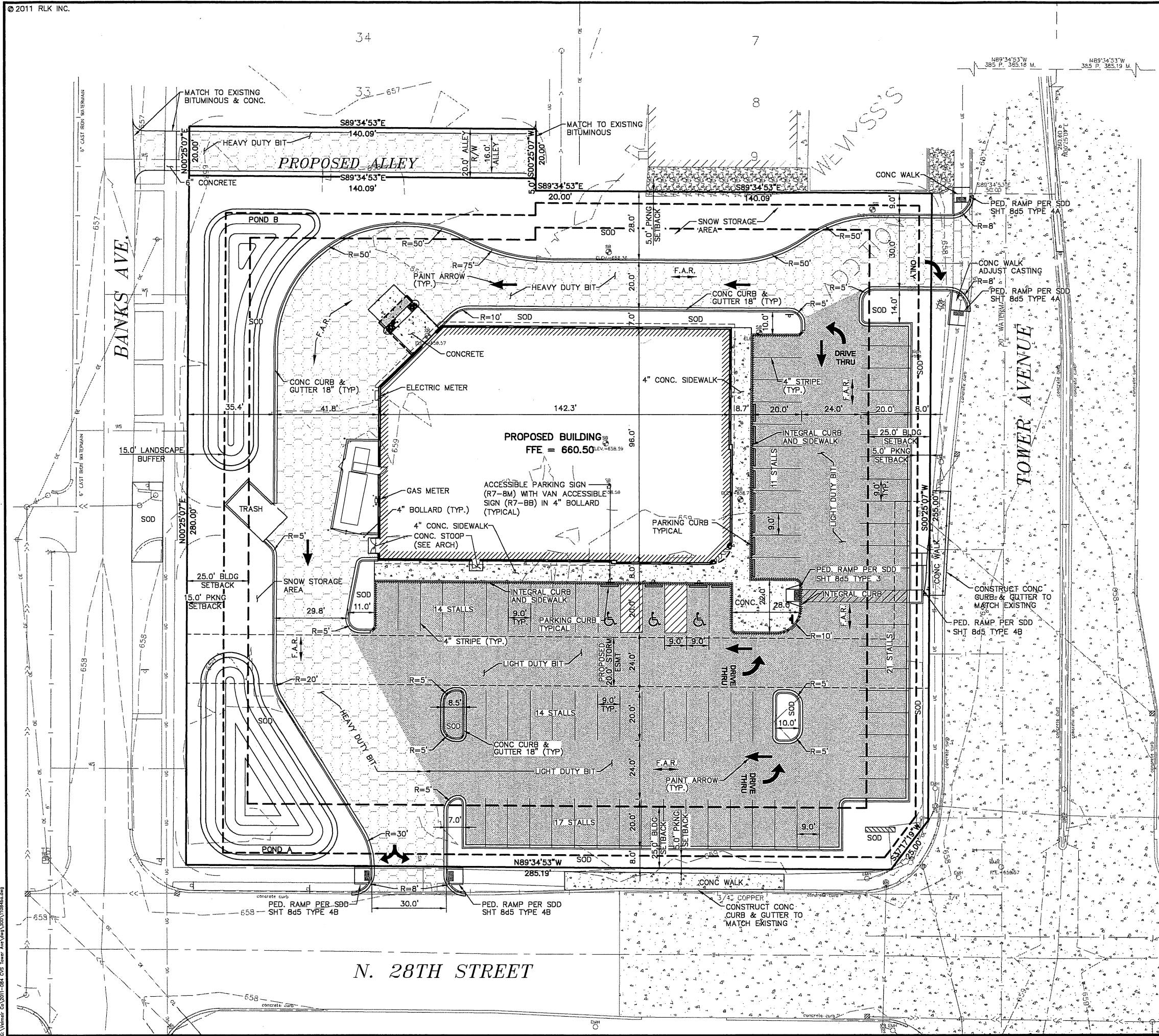
3. PARKING	
REQUIRED:	44 (1 SPACE PER 300 SF)
PROVIDED:	78

LEGEND

F.A.R. = FIRE ACCESS ROAD
BIT = BITUMINOUS
TYP = TYPICAL

PROPOSED LEGAL DESCRIPTION

LOTS 10-31, BLOCK 19, VACATED ALLEYS IN WEMYSS'S ADDITION TO WEST SUPERIOR.



CITY REVIEW PLANS

REVISIONS

THE VELMER COMPANIES
7201 WEST 78TH STREET, SUITE 205
BLOOMINGTON, MN 55439

CVS TOWER AVENUE
AND 28TH STREET NORTH
SUPERIOR, WISCONSIN
PROJECT # 11084

CVS
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LEFT HAND ENTRANCE
TOWER AVE (HWY 35)
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CVS CS# TBD
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CITY OF SUPERIOR
DOUGLAS COUNTY, WI

Dec 27, 2011 10:00am
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John P. Janknick
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REVISIONS

THE VELMER COMPANIES
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CVS TOWER AVENUE
 AND 28TH STREET NORTH
 SUPERIOR, WISCONSIN

SHEET #
 C6.0/22
 PROJECT #
 11084

CITY REVIEW PLANS



LEFT HAND ENTRANCE
 TOWER AVE (HWY 35)
 AND
 28TH STREET N
 CVS CS# TBD
 CVS STORE # 07281
 CITY OF SUPERIOR
 DOUGLAS COUNTY, WI

GRADING NOTES

CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE COMMENCEMENT OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "811" FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO EXCAVATION.

CONTRACTOR SHALL STRIP, STOCKPILE AND RE-SPREAD SUFFICIENT TOPSOIL TO PROVIDE A MINIMUM 4 INCH DEPTH (COMPACTED) TO ALL DISTURBED AREAS TO BE SODDED OR SEEDED.

THE SITE GRADING OPERATIONS, WHEN COMPLETED, SHALL RESULT IN ALL AREAS BEING GRADED TO "PLAN SUBGRADE ELEVATION". THIS "PLAN SUBGRADE ELEVATION" SHALL BE CONSISTENT WITH THE GEOTECHNICAL REPORT FOR BUILDING AND PAVEMENT AREAS. THE "PLAN SUBGRADE ELEVATION" IN THE PARKING LOT AND DRIVEWAY AREAS SHALL BE DETERMINED BY CHECKING THE PAVEMENT SECTION DETAILS AND REFERRING TO PAVING PLAN FOR LOCATIONS AND LIMITS OF VARIOUS PAVEMENT SECTIONS.

ALL SPOT ELEVATIONS REPRESENT FINISHED SURFACE OR GUTTER LINE GRADES UNLESS OTHERWISE NOTED.

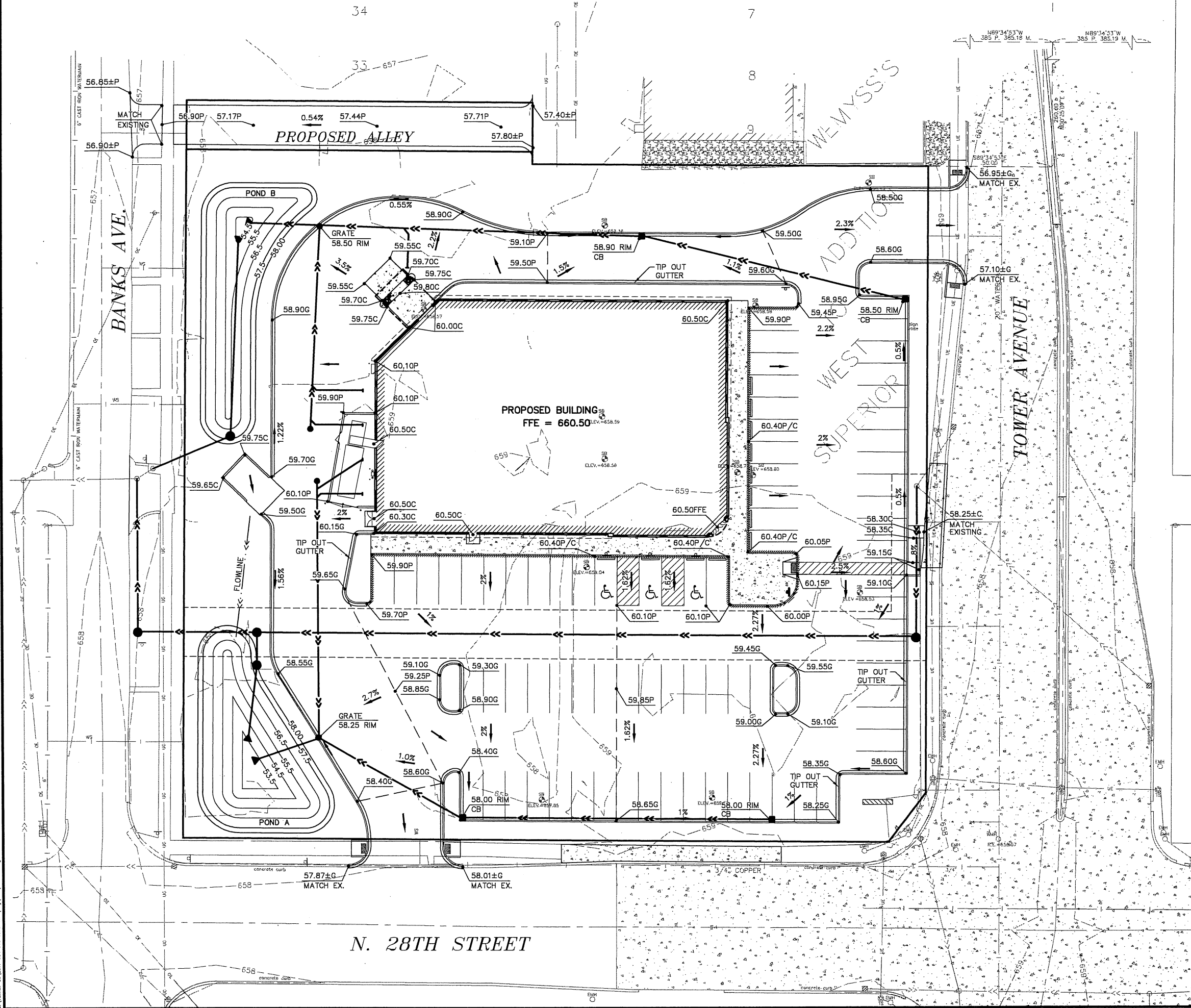
REFER TO SITE PLAN FOR CURRENT HORIZONTAL SITE DIMENSIONS AND LAYOUT.

EXISTING TOPOGRAPHY PROVIDED BY RLK, INC.

REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

LEGEND

- P = PAVEMENT ELEVATION
- C = CONCRETE ELEVATION
- G = GUTTER ELEVATION
- FG = FINISHED GRADE ELEVATION
- RIM = RIM/GRATE ELEVATION
- INV = INVERT ELEVATION



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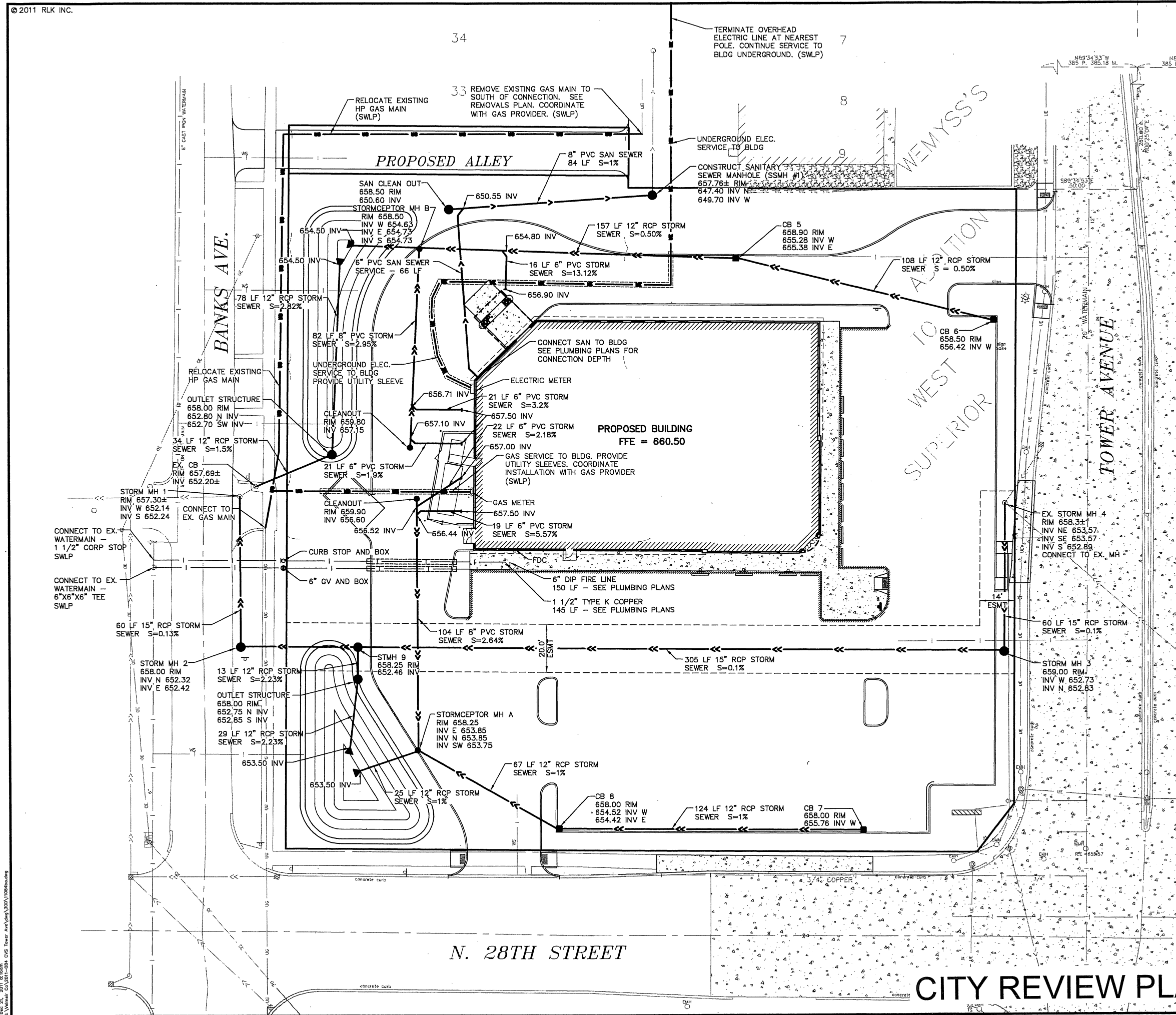
REVISIONS

NO.	DESCRIPTION
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THE VELMEIR COMPANIES
7201 WEST 78TH STREET, SUITE 205
BLOOMINGTON, MN 55439

CVS TOWER AVENUE
AND 28TH STREET NORTH
SUPERIOR, WISCONSIN
UTILITY PLAN

SHEET #
C7.0/22
PROJECT #
11084



UTILITY NOTES

CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE COMMENCEMENT OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT 811 FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO EXCAVATION.

WATER MAIN, SANITARY SEWER & STORM SEWER CONSTRUCTION SHALL CONFORM TO THE CURRENT CITY OF SUPERIOR SPECIFICATIONS AND WISCONSIN ADMINISTRATIVE CODE MASTER SPECIFICATIONS AND DESIGN GUIDELINES (MS&DG).

CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.

ALL WATER MAIN TO BE DUCTILE IRON. ALL WATER MAIN PIPES TO BE WRAPPED ACCORDING TO WISCONSIN ADMINISTRATIVE CODE MS&DG SECTION 33 07 00. ALL RUBBER GASKETS FOR WATER MAIN SHALL MEET REQUIREMENTS OF ANSI/AWWA C111/A21.11.

A MINIMUM OF 7.5 FEET OF COVER IS REQUIRED OVER ALL WATER MAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES.

A MINIMUM OF 6" VERTICAL SEPARATION FOR WATER OVER SEWER OR STORM, 18" VERTICAL SEPARATION FOR WATER UNDER SEWER OR STORM, AND 8 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.

SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE MS&DG SECTION 33 30 00.

ALL SANITARY SEWER PIPE TO BE POLYVINYL CHLORIDE PIPE (P.V.C.) SDR 35 UNLESS OTHERWISE NOTED.

INSULATE PIPES LESS THAN 5.5' DEEP. DO NOT INSULATE UNDERNEATH ANY PIPES.

ALL UTILITY MATERIALS AND INSTALLATIONS SHALL MATCH EXISTING UNLESS EXISTING MATERIALS ARE CLAY OR CAUSING PROBLEMS, INCLUDING BUT NOT LIMITED TO MANHOLE FRAMES, COVERS, AND PIPES.

ALL STORM PIPE TO BE REINFORCED CONCRETE PIPE (RCP) CLASS III UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.

CONTRACTOR TO CONSTRUCT SLEEVES FOR GAS, ELECTRICAL AND TELEPHONE SERVICE FOR CONSTRUCTION OF THESE UTILITIES BY OTHERS.

SWLP TO PROVIDE WATER SERVICE AND FIRE SERVICE TO THE PROPERTY LINE. CONTRACTOR TO CONSTRUCT WATER PIPES WITHIN PROPERTY. COORDINATE WITH SWLP.



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CVS TOWER AVENUE
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UTILITY CROSSING PLAN
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PROJECT #
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UTILITY NOTES

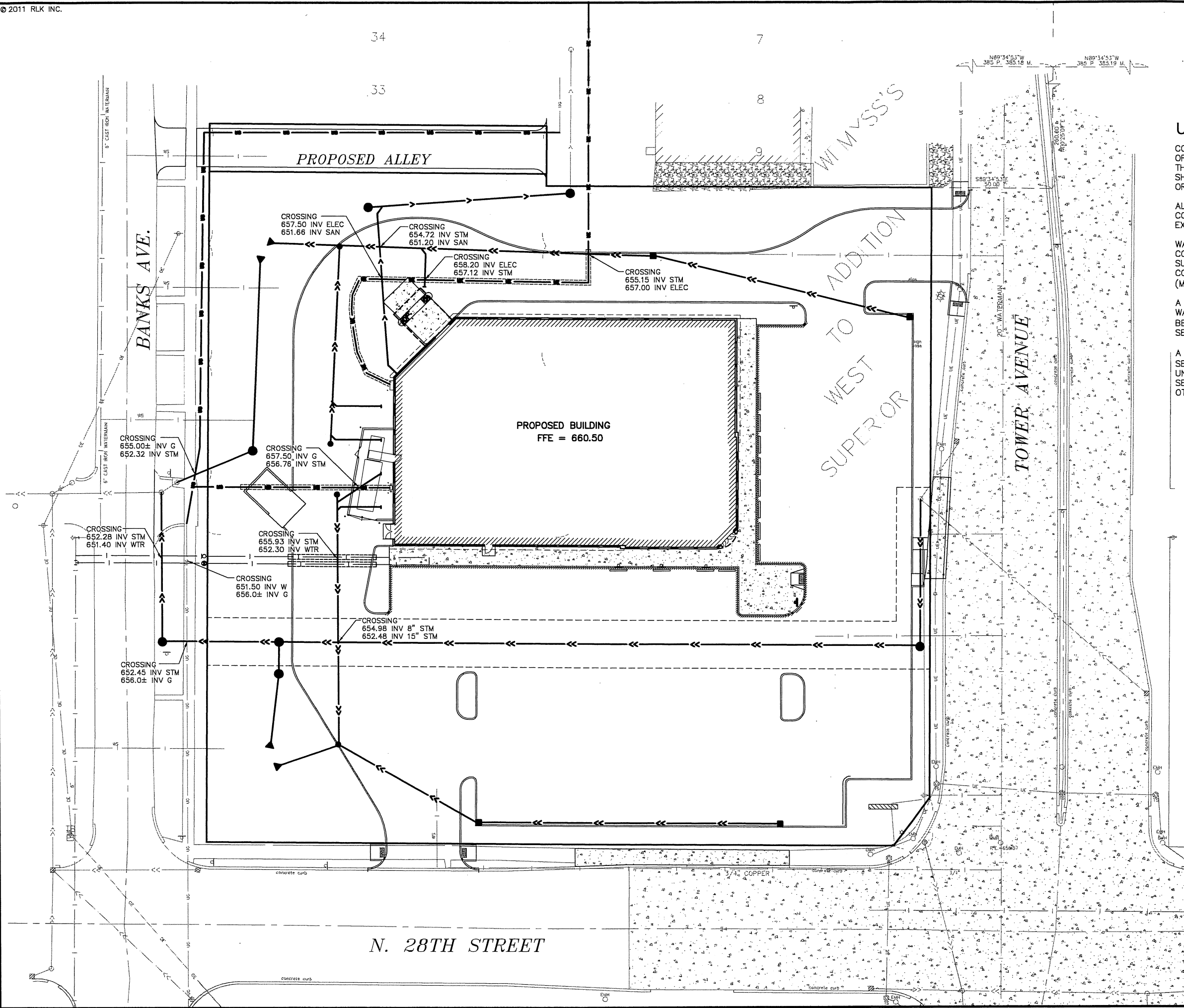
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A MINIMUM OF 6" VERTICAL SEPARATION FOR WATER OVER SEWER OR STORM, 18" VERTICAL SEPARATION FOR WATER UNDER SEWER OR STORM, AND 8 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.



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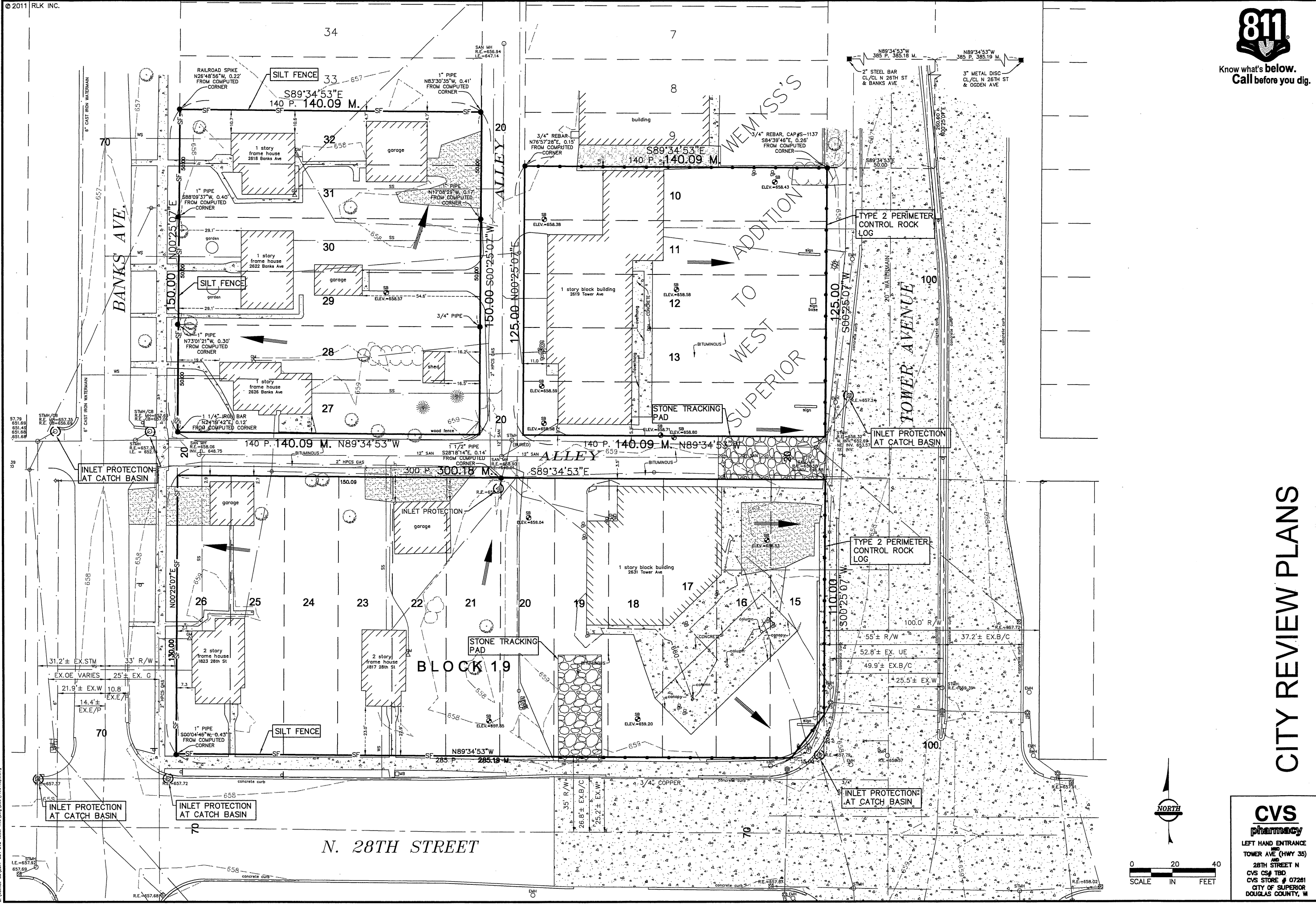
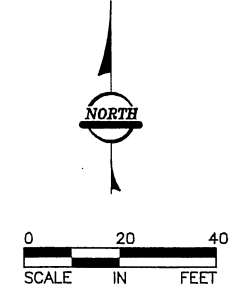
CVS TOWER AVENUE
AND 28TH STREET NORTH
SUPERIOR, WISCONSIN
EXISTING CONDITIONS
PHASE - TEMPORARY
EROSION CONTROL PLAN

SHEET #
C8.0/20
PROJECT #
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CVS TOWER AVENUE
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SUPERIOR, WISCONSIN
EROSION CONTROL PLAN

SHEET #
C8.1/22
PROJECT #
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EROSION CONTROL NOTES

ALL EROSION CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING OPERATIONS AND BE MAINTAINED UNTIL ALL DISTURBED AREAS ON THE SITE HAVE BEEN RESTORED.

ALL STONE TRACKING PADS SHALL BE SURFACED WITH CRUSHED ROCK ACROSS FULL WIDTH, FROM ENTRANCE POINT TO 50 FEET INTO CONSTRUCTION ZONE. (REFER TO DETAIL)

ALL SLOPES 3:1 OR STEEPER, NOT TO BE SODDED AND GREATER THAN 8 FEET IN HEIGHT, SHALL HAVE EROSION CONTROL FABRIC INSTALLED ON SLOPE PER MNDOT SPEC. 3885. VERIFY RESTORATION METHOD AND SEED MIXTURE. CONTRACTOR TO SUBMIT SHOP DRAWING TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

INLET PROTECTION TO BE PLACED AROUND STORM SEWER STRUCTURES DURING CONSTRUCTION UNTIL ALL SOURCES OF SEDIMENT HAVE BEEN STABILIZED. (REFER TO DETAIL)

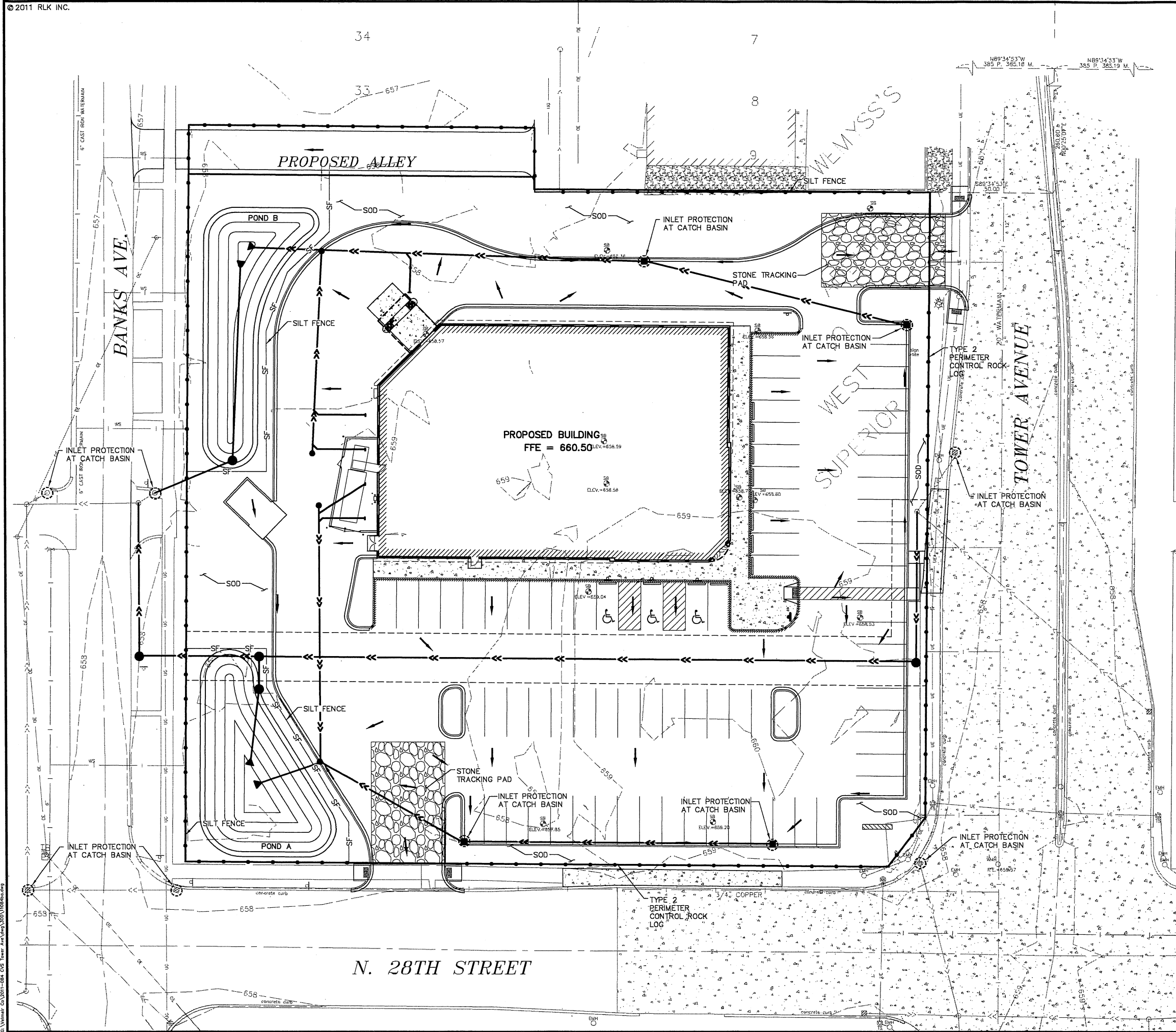
SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT CONTROL DEVICES AS NECESSARY AND DEVICES MUST BE REPLACED IF DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

SEDIMENT TRACKED OFF-SITE, AS A RESULT OF CONSTRUCTION TRAFFIC, SHALL BE MINIMIZED AND SWEEPED ON A DAILY BASIS. IF THE STONE TRACKING PADS ARE NOT EFFECTIVE TO REMOVE SEDIMENT FROM VEHICLE TIRES, THE CONTRACTOR SHALL PROVIDE A TIRE WASHING STATION IN ACCORDANCE TO WDRN CONSERVATION PRACTICE 1057.

ALL DISTURBED AREAS SHALL BE RESTORED WITH SOD, SEED, WOOD FIBER BLANKET OR PAVED SURFACE WITHIN 14 DAYS.

CONTRACTOR TO CONSTRUCT TEMPORARY SEDIMENT BASIN(S) ALONG WEST EDGE IF NECESSARY DEPENDENT UPON CONSTRUCTION/GRADING PROCEDURES.

ALL TEMPORARY SOIL STOCKPILES SHALL BE PROTECTED WITH SILT FENCE OR OTHER MEASURES.



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PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE REDEVELOPMENT OF A BLOCK OF PROPERTY AT THE NORTHWEST INTERSECTION OF TOWER AVENUE AND 28TH STREET. THE REDEVELOPMENT WILL CONSIST OF REMOVING FOUR HOUSES AND TWO COMMERCIAL BUILDINGS, THE CONSTRUCTION OF A NEW PHARMACY WITH ASSOCIATED PARKING, LANDSCAPING, UTILITIES AND STORMWATER DETENTION BASINS. THE CONSTRUCTION ACTIVITIES INCLUDE DEMOLITION, EXCAVATION, AND GRADING FOR COMPLETE CONSTRUCTION. THE TOTAL LAND AREA TO BE DISTURBED BY THIS PROJECT (EXCLUSIVE OF BORROW AND DISPOSAL AREAS) IS APPROXIMATELY 1.97 ACRES. THE RECEIVING WATERS FOR STORM WATER FROM THIS PROJECT WILL BE THE PUBLIC STORM SEWER SYSTEM. THE PROJECT IS LOCATED WITHIN 2 MILES OF LAKE SUPERIOR.

PROJECT OWNER/CONTACTOR

THE PROJECT OWNER AND THE CONTRACTOR ARE RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL BMPs BEFORE AND DURING CONSTRUCTION. CONSTRUCTION DATES ARE ESTIMATED TO BE FROM FEBRUARY 28, 2012 TO JULY 1, 2012. VELMEIR COMPANIES IS RESPONSIBLE FOR LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM:

OWNER
 VELMEIR COMPANIES
 7201 WEST 78TH STREET, SUITE 205
 BLOOMINGTON, MINNESOTA 55439

CONTRACTOR (T.B.D.)
 NAME:
 ADDRESS:
 PHONE:
 CONTACT:

TIMING OF BMP INSTALLATION

SEDIMENT CONTROL BMPs MUST BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITY BEGINS AND AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND CAPTURE SEDIMENT ON SITE, AND SHALL MEET THE STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES, GENERAL PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTION DISCHARGE ELIMINATION SYSTEM, WPDES PERMIT NO. WI-S067831-3 REQUIREMENTS.

WATER QUALITY CALCULATIONS (WITHIN PROJECT LIMITS)

WATER QUALITY VOLUME:

ADDITIONAL IMPERVIOUS AREAS
 12,702 SF = 0.29 ACRES

PROPOSED IMPERVIOUS AREAS = 1.46 ACRES
 EXISTING IMPERVIOUS AREAS = 1.17 ACRES

THE ADDITIONAL IMPERVIOUS SURFACE IS 0.29 ACRE.

CONSTRUCTION ACTIVITY REQUIREMENTS

THE CONTRACTOR SHALL APPLY FOR THE NOTICE OF INTENT IN ACCORDANCE TO THE WISCONSIN ADMINISTRATIVE CODE AT LEAST 14 DAYS PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITY. ALL EXPOSED AREAS MUST BE STABILIZED AS SOON AS POSSIBLE, BUT IN NO CASE LATER THAN 14 DAYS AFTER CONSTRUCTION IN THAT PORTION HAS TEMPORARILY OR PERMANENTLY CEASED.

THE NORMAL WETTED PERIMETER OF DRAINAGE DITCHES MUST BE STABILIZED WITHIN 200 LINEAR FEET OF A WATER OF THE STATE WITHIN 24 HOURS AFTER CONNECTING TO A WATER OF THE STATE. THE REMAINDER OF THE DITCH MUST BE STABILIZED AS NOTED ABOVE.

NOTE: THE PLANS INCLUDE AREAS THAT REQUIRE TURF ESTABLISHMENT/RESTORATION. THE CONTRACTOR SHALL BE PREPARED TO PROVIDE THE NECESSARY STABILIZATION OF THESE AREAS DURING THE CONSTRUCTION ACTIVITIES. MULTIPLE MOBILIZATION FOR STABILIZATION WILL BE NECESSARY, WHICH WILL BE INCIDENTAL.

CONTRACTOR SHALL PROVIDE THE NAME OF THE INDIVIDUAL(S) AND SUBCONTRACTORS WHO ARE PROPERLY TRAINED FOR OVERSEEING IMPLEMENTATION OF THE SWPPP AND PERFORMING, OR SUPERVISING THE INSTALLATION, MAINTENANCE OR REPAIR OF EROSION AND SEDIMENT CONTROL DEVICES, IN ACCORDANCE TO THE CONSTRUCTION STORM WATER PERMIT.

ESTIMATED QUANTITIES

SILT FENCE 1140 LF
 SEED AND MULCH 0.50 ACRES
 RANDOM RIPRAP 10 CY

SWPPP - DESIGNER

JOHN D. MATTONEN

CONTRACTORS LIST OF TRAINED INDIVIDUALS

LIST OF CONTRACTORS/SUBCONTRACTORS WHO WILL INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES

CONSTRUCTION NOTES

CONSTRUCTION SHALL BE GOVERNED BY THE PROJECT MANUAL

THE CONTRACTOR SHALL KEEP THE INSPECTION AND MAINTENANCE LOGS IN ACCORDANCE WITH THE WPDES PERMIT DURING CONSTRUCTION. INSPECTION AND MAINTENANCE LOGS SHALL BE PROVIDED TO THE ENGINEER EVERY 2 WEEKS.

THIS SWPPP, ALL PERMITS, ALL INSPECTION AND MAINTENANCE RECORDS AND DESIGN CALCULATIONS WILL BE KEPT BY THE OWNER AFTER CONSTRUCTION FOR NOT LESS THAN THREE YEARS. CONTRACTOR TO MAINTAIN EROSION CONTROL INSPECTIONS.

TMDL IMPLEMENTATION PLANS CONTAINING STORM WATER REQUIREMENTS

NO TMDL IMPLEMENTATION PLANS CURRENTLY EXIST FOR THE RECEIVING WATERS ON THIS PROJECT.

Location Of SWPPP Requirements in Project Plan		
DESCRIPTION	TITLE	LOCATION
SUMMARY OF PVIOUS AND IMPERVIOUS	SWPPP	SHEET 9
DIRECTION OF FLOW/DRAINAGE AREA	PLAN/PROFILES	SHEET 6-8
RECEIVING SURFACE WATERS	SWPPP	SHEET 9
SOIL TYPE DATA AND MAPS	SWPPP	OFFICE
EROSION CONTROL SHEETS		SHEETS 1-11
EROSION CONTROL DETAILS	DETAILS	SHEET 11
WATER RETENSION BASIN	EROSION CONTROL	N/A

INSPECTIONS AND MAINTENANCE

- THE CONTRACTOR SHALL ROUTINELY INSPECT THE CONSTRUCTION SITE ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION
- THE CONTRACTOR SHALL ROUTINELY INSPECT THE CONSTRUCTION SITE WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 1/2 INCH IN 24 HOURS. ANY MAINTENANCE OF PERMANENT OR TEMPORARY EROSION AND SEDIMENT CONTROL BMPs SHALL BE COMPLETED BY THE CONTRACTOR WHICH SHALL BE INCIDENTAL.

FINAL TURF ESTABLISHMENT TO CONSIST OF. 1. SOD WITHIN 45 DAYS AFTER FINAL STABILIZATION, REMOVAL OF TEMPORARY EROSION CONTROL BMPs, AND LAND DISTURBING ACTIVITY HAS CEASED, THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION.

SWPPP Implementation Contacts			
AGENCY	PERMIT	NAME	PHONE/E-MAIL
CONTRACTOR'S EROSION CONTROL SUPERVISOR	N/A		
WDNR	WI-S067831-3	BRUCE MOORE	715-682-2926
CITY OF SUPERIOR	CITY OF SUPERIOR CONST. STORMWATER	DIANE NELSON	715-394-0392
DESIGN RLK INC.	N/A	RLK INC. JOHN D. MATTONEN	218-262-5528
CONSTRUCTION EROSION CONTROL REVIEW	CONTRACTOR		
VELMEIR COMPANIES	OWNER		952-345-7022

AMENDMENTS TO SWPPP	DATE
1.	
2.	
3.	
4.	
5.	



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 DATE: 12/19/11

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CVS TOWER AVENUE AND 28TH STREET NORTH SUPERIOR, WISCONSIN
 STORM WATER POLLUTION PREVENTION PLAN
 SHEET # CB.2/22
 PROJECT # 11084

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CITY REVIEW PLANS

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CONSTRUCTION PRACTICES TO MINIMIZE STORM WATER CONTAMINATION
 TO PREVENT STORM WATER CONTAMINATION FROM OCCURRING, THE FOLLOWING BMPS
 WILL BE IMPLEMENTED:

1. ALL AREAS THAT ARE ROUGH GRADED MUST BE KEPT IN A SMOOTH CONDITION TO ALLOW SHEET FLOW OF STORM WATER WHEREVER PRACTICAL AND ALWAYS READY FOR SURFACE APPLICATION OF DEGRADABLE OR NON-DEGRADABLE BLANKETS, MULCH, OR OTHER PROTECTIVE COVERS.
2. A STABILIZED CONSTRUCTION ENTRANCE/EXIT WILL BE CONSTRUCTED TO REDUCE VEHICLE TRACKING OF SEDIMENTS OFF THE PROJECT RIGHT OF WAY.
3. ALL NON-HAZARDOUS WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER OR OTHER APPROVED CONTAINMENT METHOD AT THE END OF EACH DAY. ANY ALTERNATIVE TO A METAL DUMPSTER MUST BE SUBMITTED IN WRITING FOR APPROVAL BY THE PROJECT ENGINEER. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS NECESSARY TO FUNCTION AS INTENDED FOR DEBRIS COLLECTION. NO CONSTRUCTION MATERIALS WILL BE BURIED ON-SITE. THE CONTRACTOR'S EROSION CONTROL SUPERVISOR WILL INSTRUCT ALL PERSONNEL REGARDING THE CORRECT PROCEDURE FOR DISPOSAL.
4. A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR WILL COLLECT ALL SANITARY WASTE FROM THE PORTABLE UNITS AT A RATE NECESSARY TO MAINTAIN DESIGNED FUNCTION.
5. ALL VEHICLES ON SITE WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.
6. FERTILIZERS WILL BE STORED IN A COVERED SHED AND PARTIALLY USED BAGS WILL BE TRANSFERRED TO A SEALABLE BIN TO REDUCE THE CHANCE OF SPILLAGE.
7. HAZARDOUS MATERIALS WILL BE STORED IN TIGHTLY SEALED CONTAINERS, WHICH ARE CLEARLY LABELED. SECONDARY CONTAINMENT SHALL BE PROVIDED.
8. SPILL KITS WILL BE INCLUDED WITH ALL FUELING SOURCES AND MAINTENANCE ACTIVITIES. SECONDARY CONTAINMENT MEASURES WILL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.
9. ANY ASPHALT SUBSTANCES USED ON SITE WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
10. ALL PAINT CONTAINERS AND CURING COMPOUNDS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM WATER SYSTEM BUT WILL BE PROPERLY DISPOSED ACCORDING TO MANUFACTURER'S INSTRUCTION.
11. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEAN-UP WILL BE KEPT IN AN ENCLOSED TRAILER OR SHED ON SITE. EQUIPMENT WILL INCLUDE, BUT NOT LIMITED TO, BROOMS, MOPS, DUST PANS, RAGS, GLOVES, GOGGLES, ABSORBENT (KITTY LITTER), OIL ABSORBENT BOOMS AND DIAPERS, AND BUCKETS.
12. ALL SPILLS WILL BE CONTAINED AND CLEANED UP IMMEDIATELY UPON DISCOVERY. SPILLS LARGE ENOUGH TO REACH THE STORMWATER CONVEYANCE SYSTEM WILL BE REPORTED TO THE CITY OF SUPERIOR, ENVIRONMENTAL SERVICES
13. CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE, UNLESS DONE IN AN ENGINEERED CONTAINMENT SYSTEM. THE ENGINEERED SYSTEM MUST INCLUDE SITE DRAWINGS FOR THE PROJECT FILE AND WRITTEN ASSURANCE THAT THE SYSTEM WILL WORK AS DESIGNED AND LEAVE NO DISCHARGE OF CONCRETE OR CONCRETE RESIDUE POTENTIAL TO WATERS OF THE STATE DURING A MINIMUM OF A 100 YEAR STORM EVENT.
14. FORM RELEASE OIL USED FOR CONCRETE WORK MUST BE APPLIED OVER A PALLET CONTAINING ABSORBENT TO COLLECT EXCESS LIQUID. THE ABSORBENT MATERIAL WILL BE REPLACED AND PROPERLY DISPOSED WHEN SATURATED.
15. DISCHARGES FROM BASIN DEWATERING OPERATIONS THAT ARE TURBID OR SEDIMENT LADEN SHALL BE DISCHARGED TO TEMPORARY SEDIMENT BASINS CONSTRUCTED ON THE SITE TO PROVIDE TREATMENT PRIOR TO DISCHARGE TO A WATER OF THE STATE. IF BASINS ARE NOT FEASIBLE, DISCHARGES WILL BE DISPERSED OVER NATURAL ROCK RIPRAP, SHEETING, PLASTIC OR OTHER ENERGY DISSIPATION MEASURES.



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Significant Materials Inventory

Pollutants that result from clearing, grading, excavation, bridge and road building and have the potential to be present are listed in the following table. This table includes information regarding the material type, chemical and physical description, and the specific regulated storm water pollutants associated with each material:

Material/Chemical	Physical Description	Storm Water Pollutants	Location	Management Practice
Pesticides	Various colored colorless liquid, aerosols, powders, pellets or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides for Brush and weed control	Use of Certified Applicator and proper storage and container disposal
Permanent Fertilizer	Liquids or Solid Grains	Nitrogen, Phosphorous, Potassium	Newly seeded areas	Minimize Phosphates, apply appropriate rates
Temporary Fertilizer	Liquids or Solid Grains	Nitrogen, Phosphorous, Potassium	Rapid Stabilization Areas, Stockpiles	Managed application, quick growth planting
Cleaning Solvents	Colorless, blue or yellow green liquids	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	Concrete prep and cleaning. Storage areas	No equipment Cleaning in Project area Proper storage Spill kits
Construction Wastewater	Rinsate from Equipment washing	Soil, oil, grease and other solids	Stormwater conveyance system	No equipment cleaning in Project area
Asphalt	Black Solid	Oil, Petroleum Distillates	Highway surfacing	Excess material removed from project area
Concrete	White Solid	Limestone, Sand	Bridge Construction	Designated wash areas or complete removal
Glue, Adhesives	White or Yellow liquid	Polymers, epoxies	Expansion joints	Empty container management
Paints	Various colored liquid	Metal oxides, stoddard solvent, talc, calcium carbonate, lead, arsenic	Bridge rails, signposts, storage	Empty Container Management
Curing compounds	Creamy white liquid	Naphtha	Bridge	Empty Container Management
Wood Preservatives	Clear, amber, or dark brown liquid	stoddard solvent, petroleum, distillates, arsenic, copper, chromium	Timber beams, sign posts, gaurdrail posts, storage areas	Follow manufacturers guidelines
Hydraulic Oils	Brown, red or other colors. oily	petroleum and additives	Random leaks	Preventive maintenance, inspections, spill kits on site
Gasoline	Colorless, pale brown or pink	petroleum hydrocarbons, Benzene, ethyl benzene, toluene, xylene, MTBE	vehicles storage	Secondary containment Preventive maintenance, inspections, spill kits on site
Diesel Fuel	Clear, blue green, or yellow liquid	Petroleum distillate, oil, naphthalene, xylene	vehicles, storage	Secondary containment Preventive maintenance, inspections, spill kits on site
Anti-freeze, coolant	Clear, green/yellow liquid	Ethylene glycol, propylene glycol	Random leaks	Preventive maintenance, inspections, spill kits on site

CITY REVIEW PLANS

Duluth, MN
 Hibbing, MN
 Minnetonka, MN
 Phone: 218 262 5528
 Fax: 218 262 5059
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John J. Jannick
 JOHN J. JANNICK
 DATE: 12/21/11

SURVEYED	DESIGNED	SAR	SAR
		DRAWN	CHECKED

THE VELMEIR COMPANIES
 7201 WEST 78TH STREET, SUITE 205
 BLOOMINGTON, MN 55439

CVS TOWER AVENUE
 AND 28TH STREET NORTH
 SUPERIOR, WISCONSIN

SHEET #
 C8.3/22
 PROJECT #
 11084

CVS
 pharmacy
 LEFT HAND ENTRANCE
 TOWER AVE (HWY 35)
 AND
 28TH STREET N
 CVS CS# TBD
 CVS STORE # 07261
 CITY OF SUPERIOR
 DOUGLAS COUNTY, WI



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STORM WATER POLLUTION
PREVENTION PLAN DETAILS

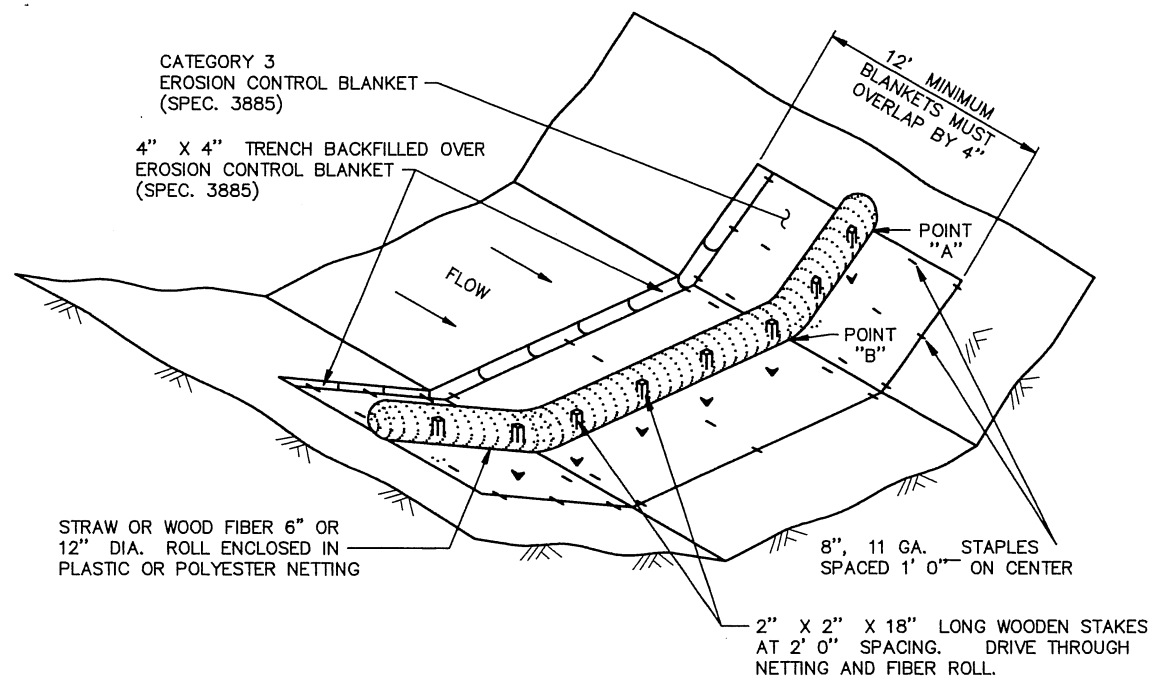
CVS

pharmacy
LEFT HAND ENTRANCE
TOWER AVE (HWY 35)
AND
28TH STREET N
CVS CS# TBD
CVS STORE # 07261
CITY OF SUPERIOR
DOUGLAS COUNTY, WI

SHEET #
08.4/22

PROJECT #
11084

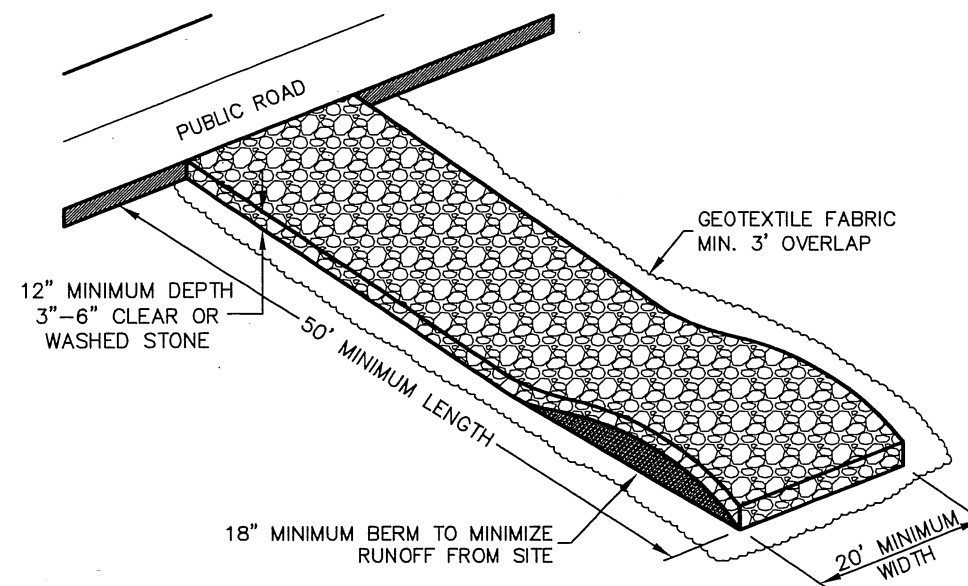
CITY REVIEW PLANS



POINT "A" MUST BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

(TYPE 2 SPEC. 3889)

BIOROLL BLANKET SYSTEM



FILTER FABRIC SHALL BE PLACED UNDER ROCK TO STOP SILT MIGRATION UP THROUGH THE ROCK.

STONE TRACKING PAD
WISCONSIN DNR STANDARD 1057



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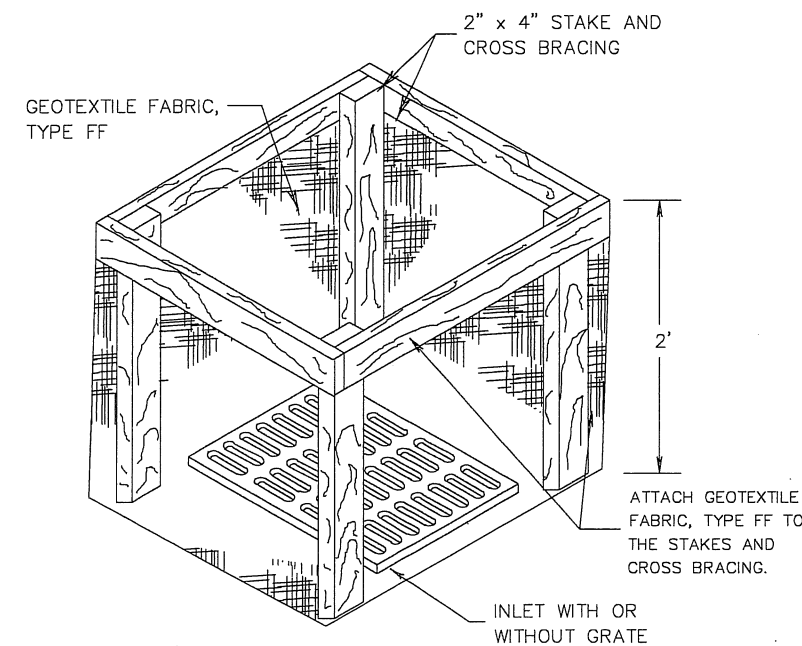
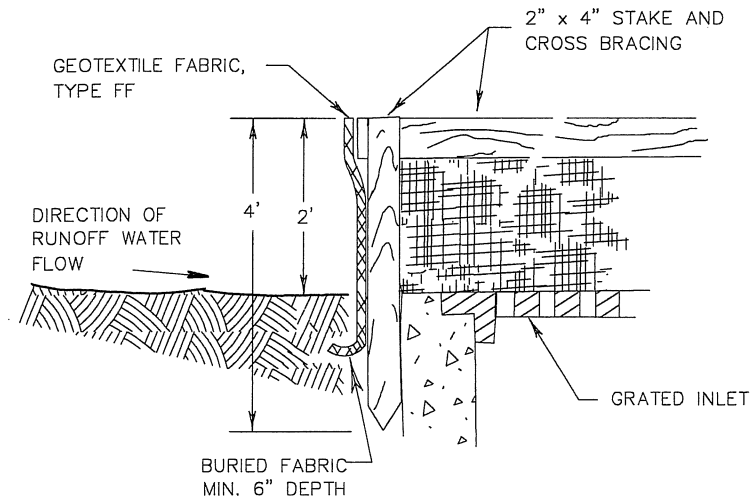


DESIGNED BY: *[Signature]*
DRAWN BY: JOHN P. JANNICK
DATE: 12/14/11

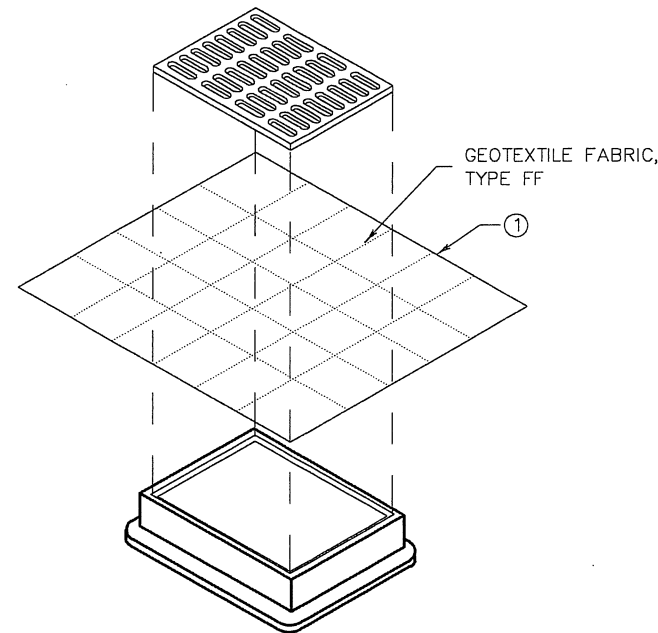
SURVEYED	DESIGNED	SAR	SAR
	DRAWN	CHECKED	

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7201 WEST 78TH STREET, SUITE 205
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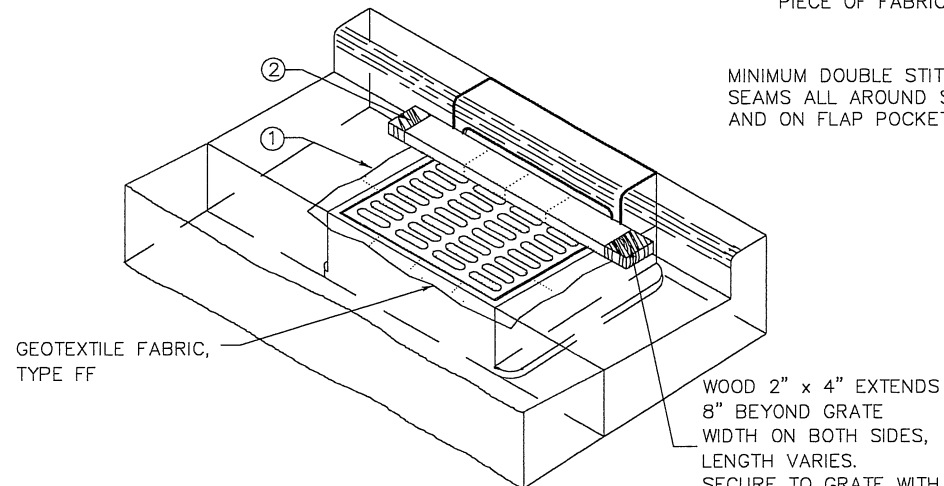
CVS TOWER AVENUE
AND 28TH STREET NORTH
SUPERIOR, WISCONSIN
STORM WATER POLLUTION
PREVENTION PLAN DETAILS



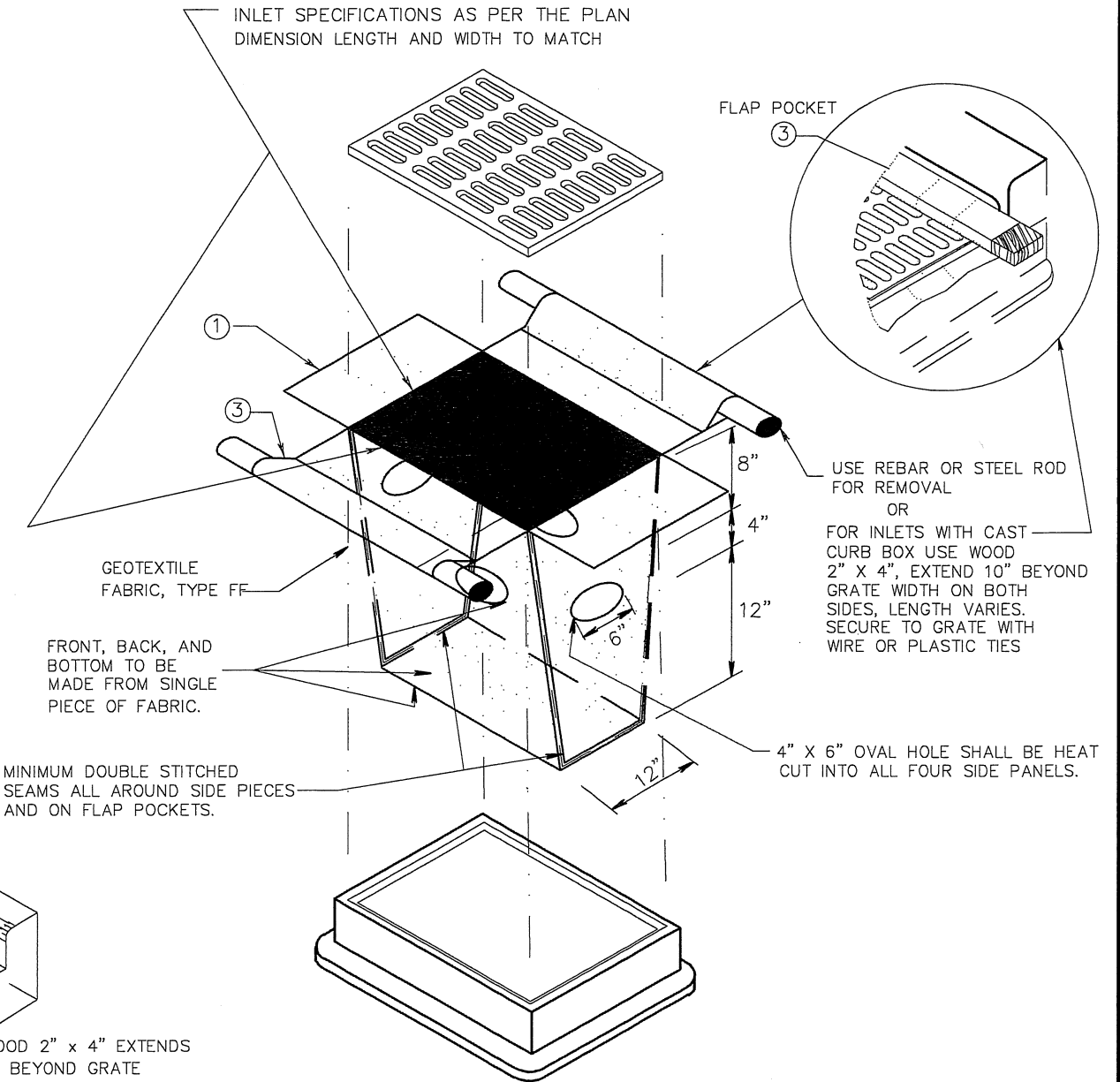
INLET PROTECTION, TYPE A



INLET PROTECTION, TYPE B (WITHOUT CURB BOX)
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



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

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.

This drawing based on Wisconsin
Department of Transportation
Standard Detail Drawing 8 E 10-2.

**INLET PROTECTION
TYPE A, B, C, AND D**

811
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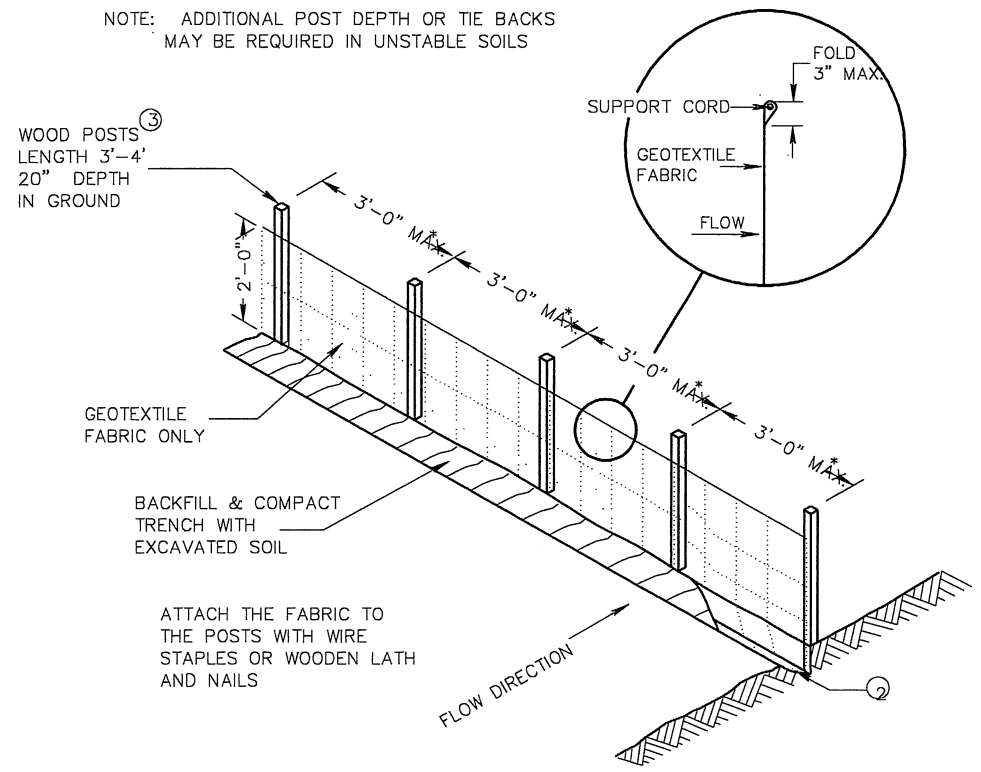
DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: 12/14/11

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CVS TOWER AVENUE
AND 28TH STREET NORTH
SUPERIOR, WISCONSIN
STORM WATER POLLUTION
PREVENTION PLAN DETAILS

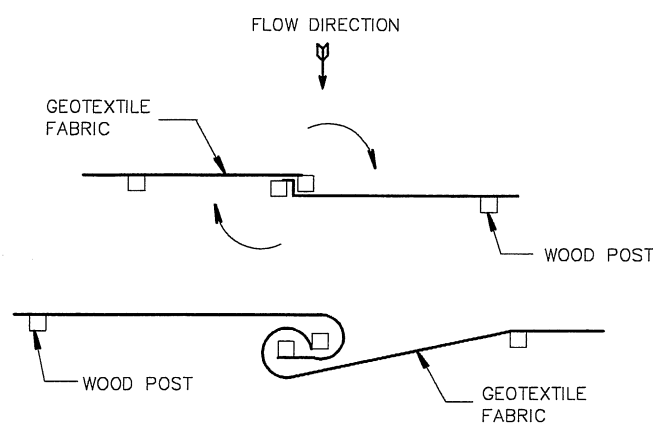
SHEET #
C8.6/22
PROJECT #
11084

CITY REVIEW PLANS

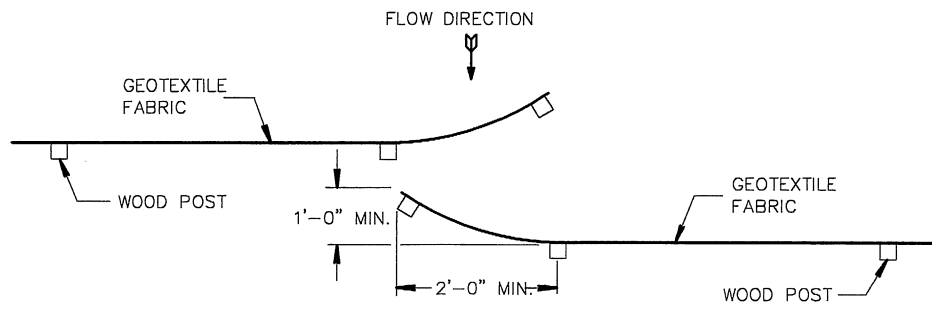


SILT FENCE

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

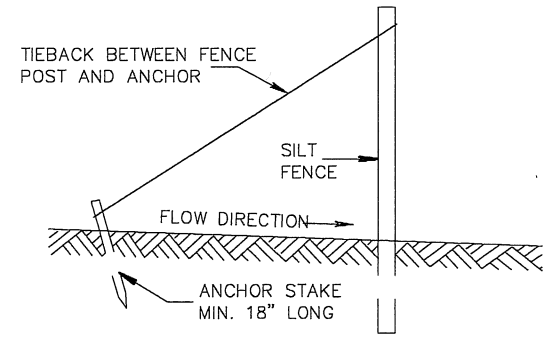


TWIST METHOD

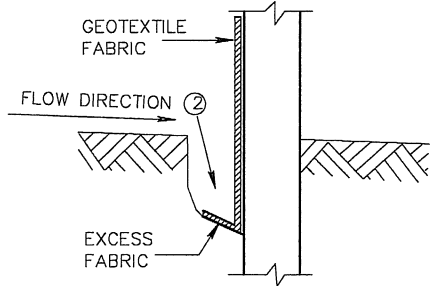


HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE



SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)



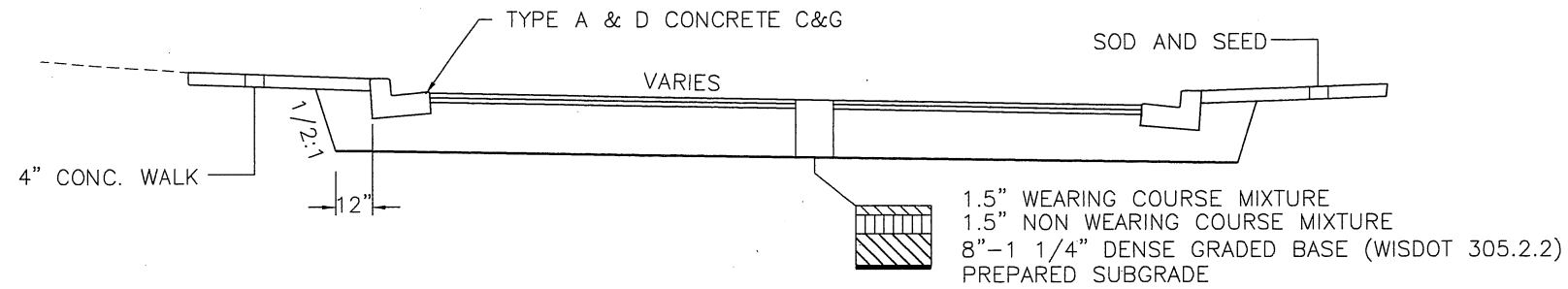
TRENCH DETAIL

GENERAL NOTES

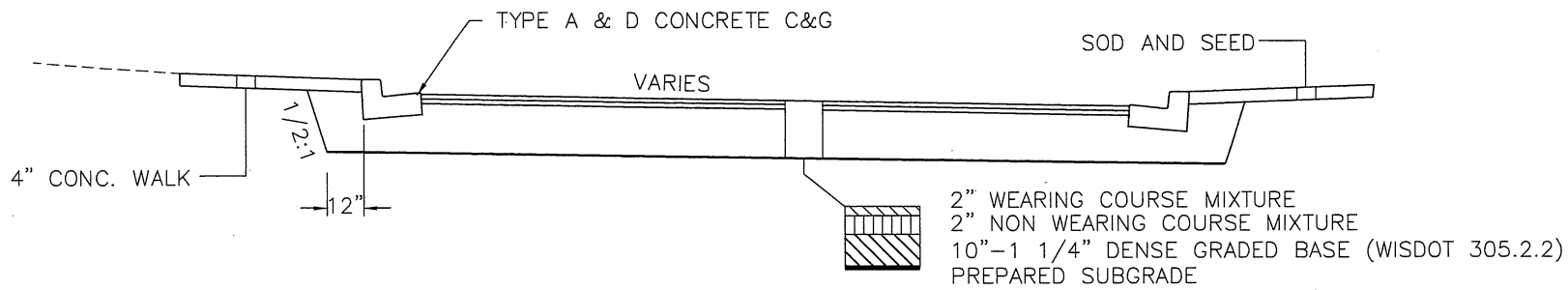
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/2" X 1 1/2" 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.

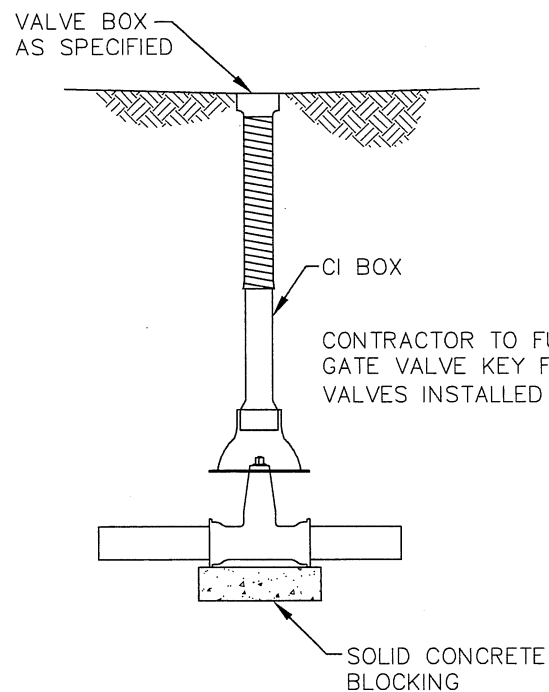
SILT FENCE



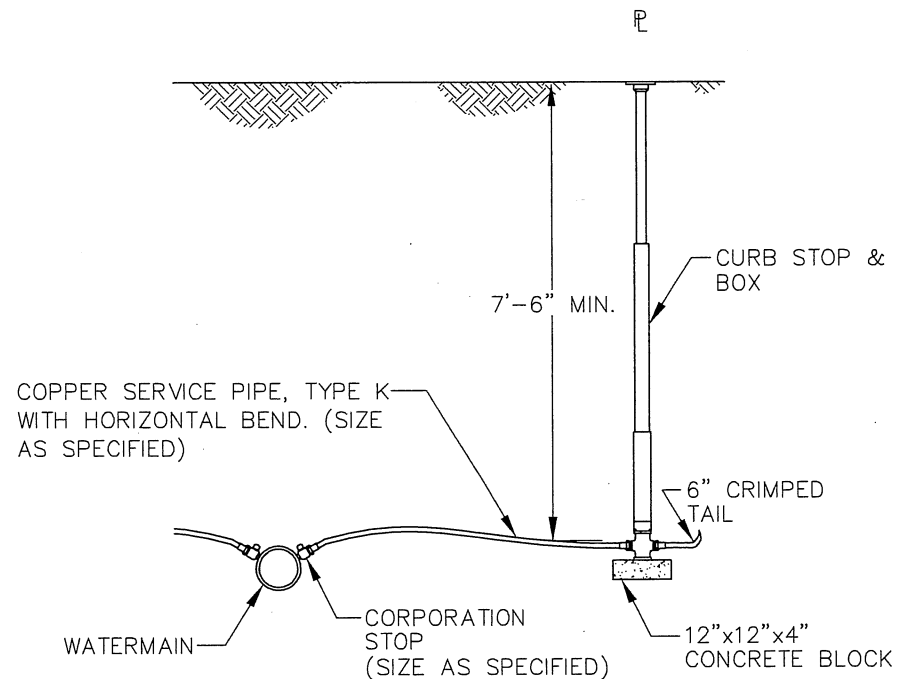
LIGHT DUTY PAVEMENT TYPICAL SECTION



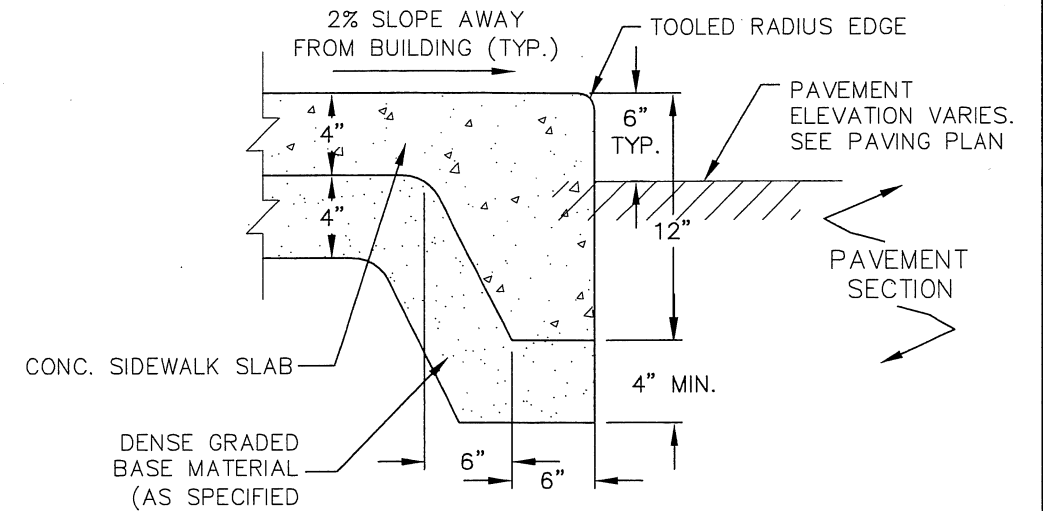
HEAVY DUTY PAVEMENT TYPICAL SECTION



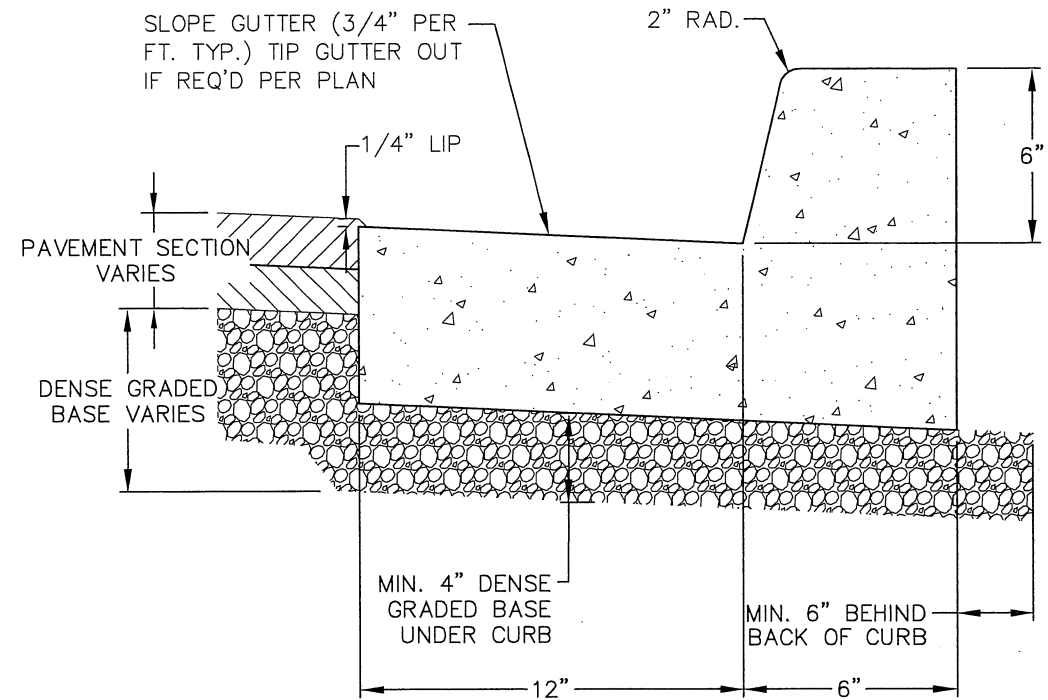
GATE VALVE & BOX



WATER SERVICE CONNECTION



INTEGRAL CURB AND SIDEWALK



**TYPE A & D 18" CURB AND GUTTER
WISDOT SDD 8d1**

JOHN P. JAMNICK
DATE 12/19/11

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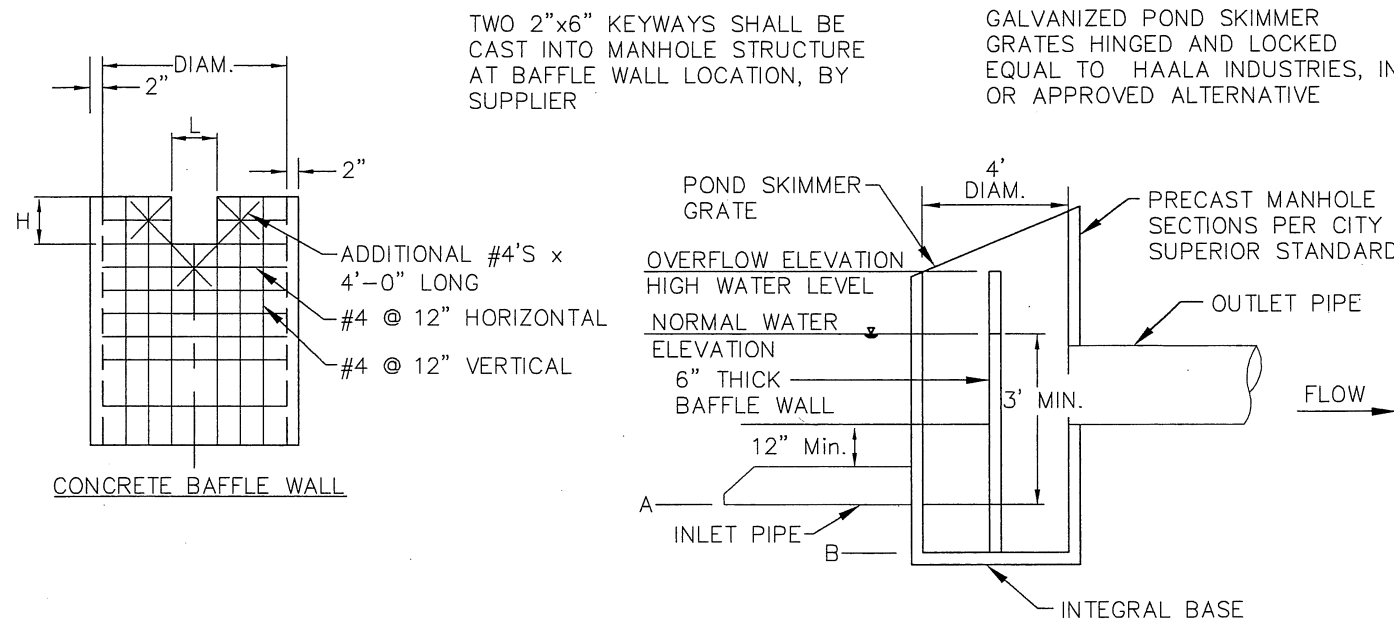
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CVS PHARMACY
TOWER AVE. & 28TH ST.
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GENERAL DETAILS

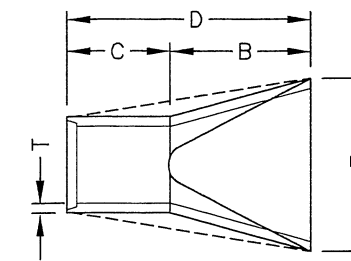
SHEET #
C9.0/20
PROJECT #
2011-084

CITY REVIEW PLANS



POND	HWL	NWL	A	B	INLET PIPE	OUTLET PIPE	DIAM.	H	L
A	658.10	657.5	653.5	653.25	12" RCP	12" RCP (655.5)	48"	0.60	0.29
B	658.00	657.5	654.5	654.25	12" RCP	12" RCP (656.5)	48"	0.50	0.35

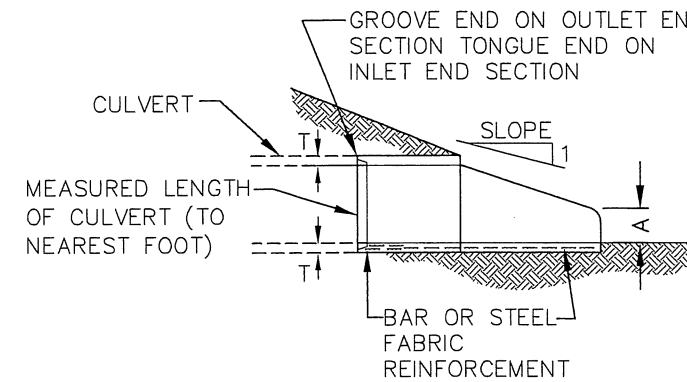
OUTLET CONTROL STRUCTURE WITH WEIR WALL



TOP VIEW

REINFORCED CONCRETE APRON ENDWALLS

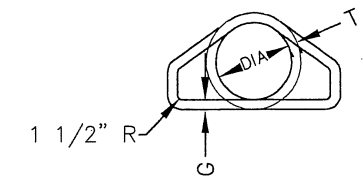
PIPE DIA. (IN.)	DIMENSIONS IN INCHES							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48.875	72.875	24	2	3 TO 1
15	2.25	6	27	46	73	30	2.25	3 TO 1
18	2.5	9	27	46	73	36	2.5	3 TO 1
21	2.75	9	36	37.5	73.5	42	2.75	3 TO 1
24	3	9.5	43.5	30	73.5	48	3	3 TO 1



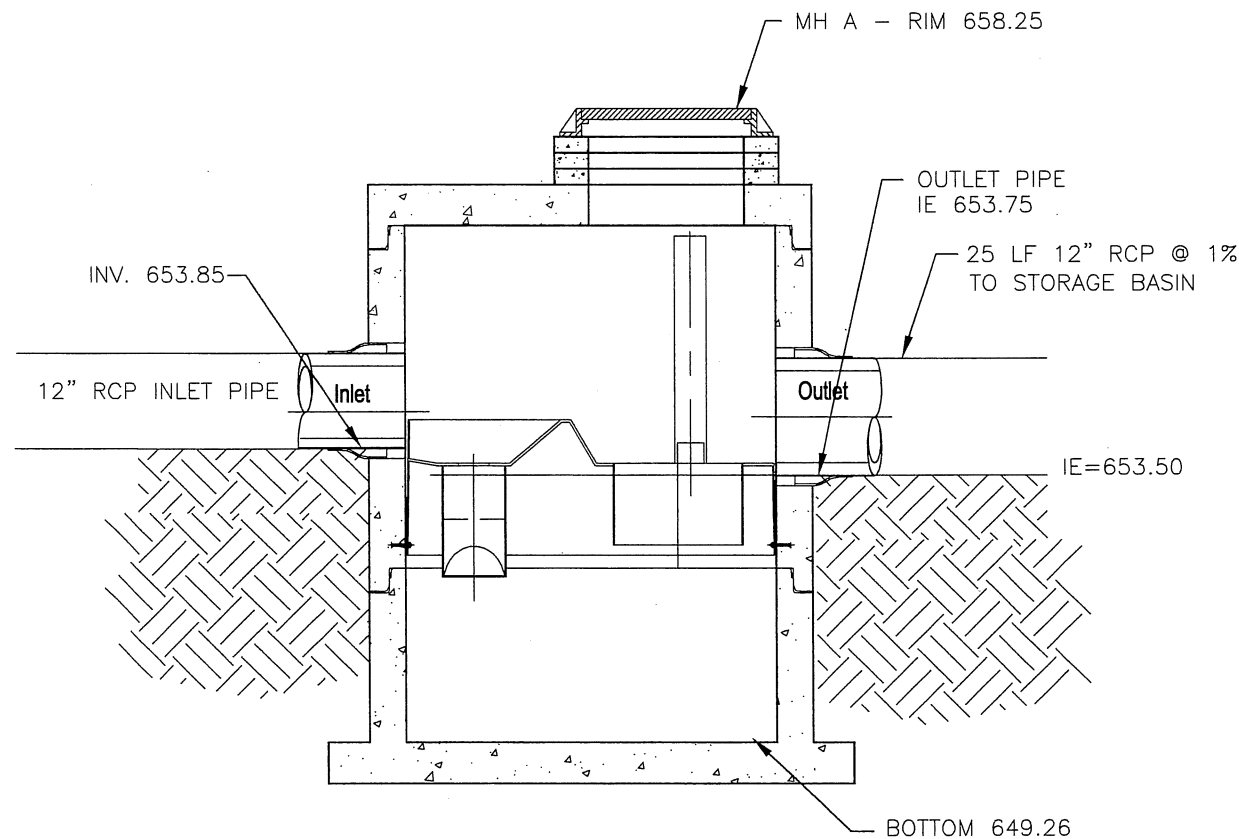
CONCRETE ENDWALLS
WISDOT SDD 8f1

ALL OUTLET APRONS SHALL BE TIED ACCORDING TO WISDOT 8f4

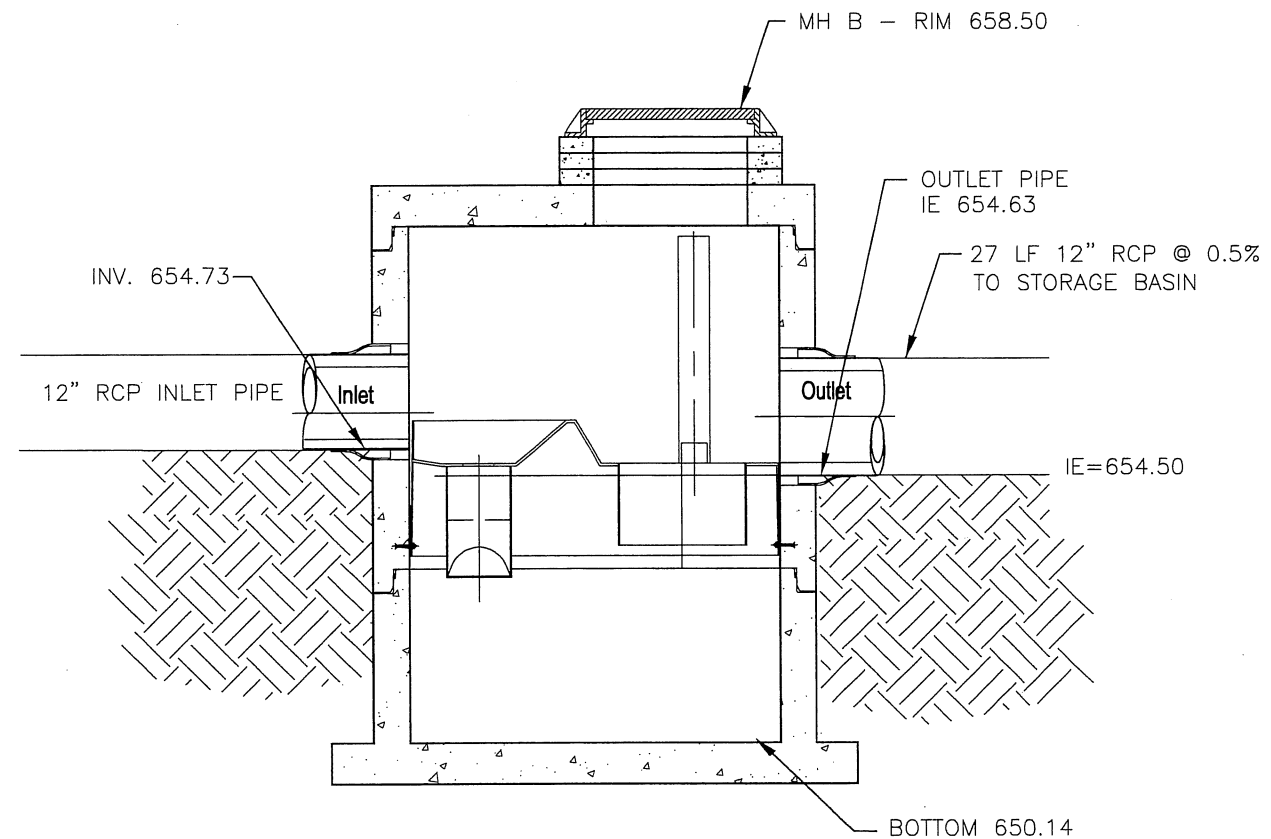
APRON SHALL BE REINFORCED ACCORDING TO WISDOT STDS.



END VIEW



STORMWATER BASIN INLET DETAIL
STORMCEPTOR STC 900 MODEL
POND A



STORMWATER BASIN INLET DETAIL
STORMCEPTOR STC 900 MODEL
POND B

CITY REVIEW PLANS



JOHN P. JANNICK
DATE 12/14/11

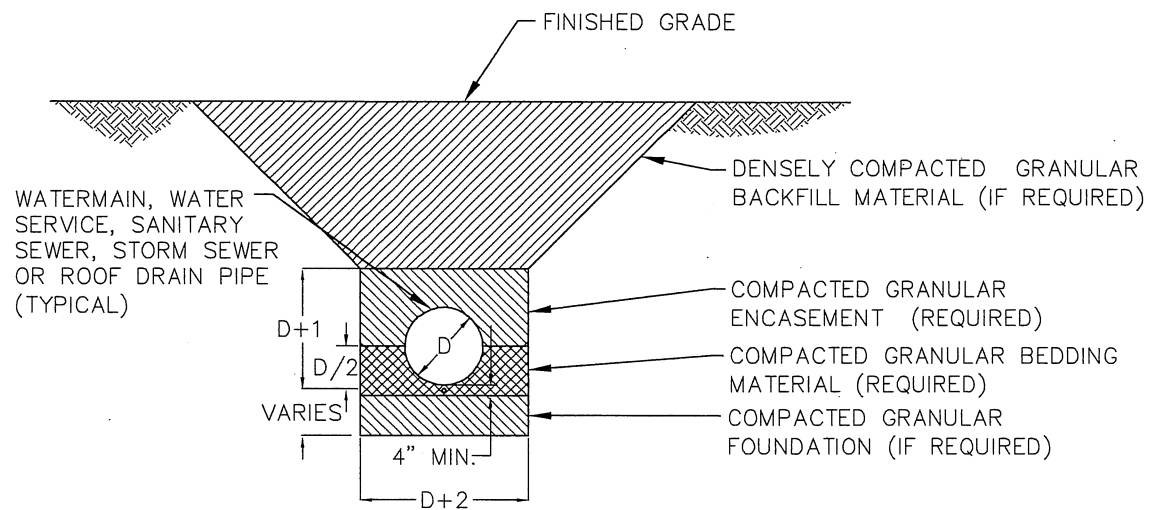
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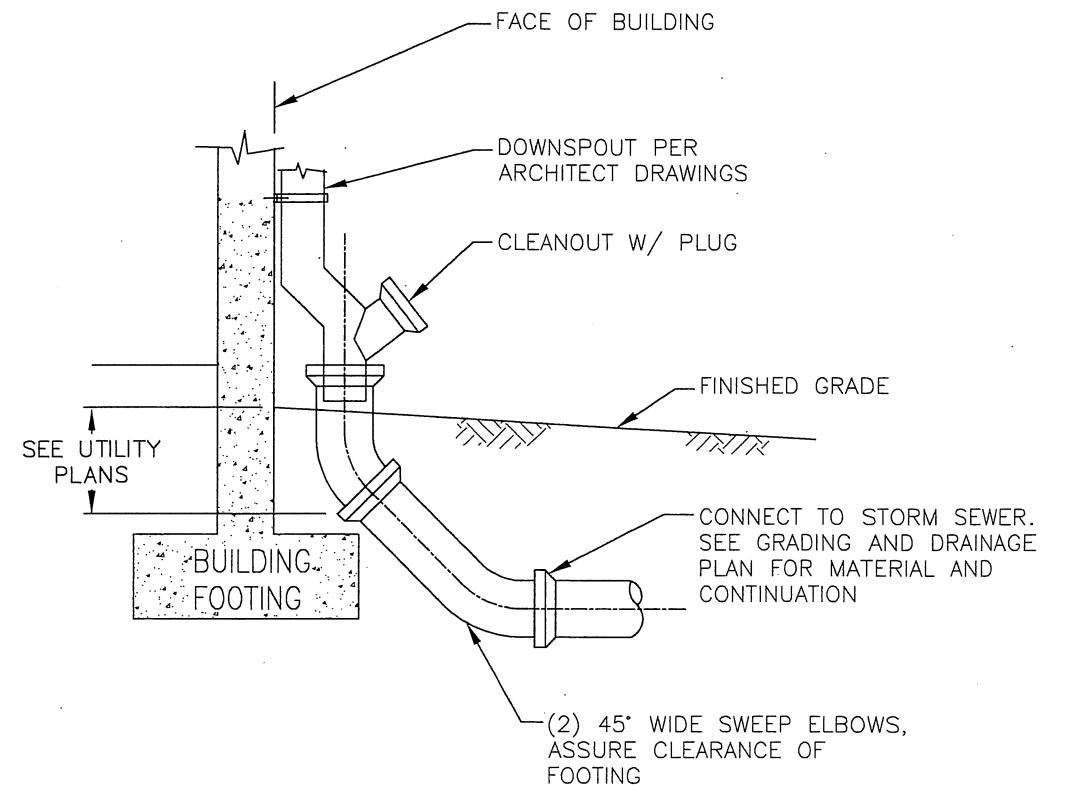
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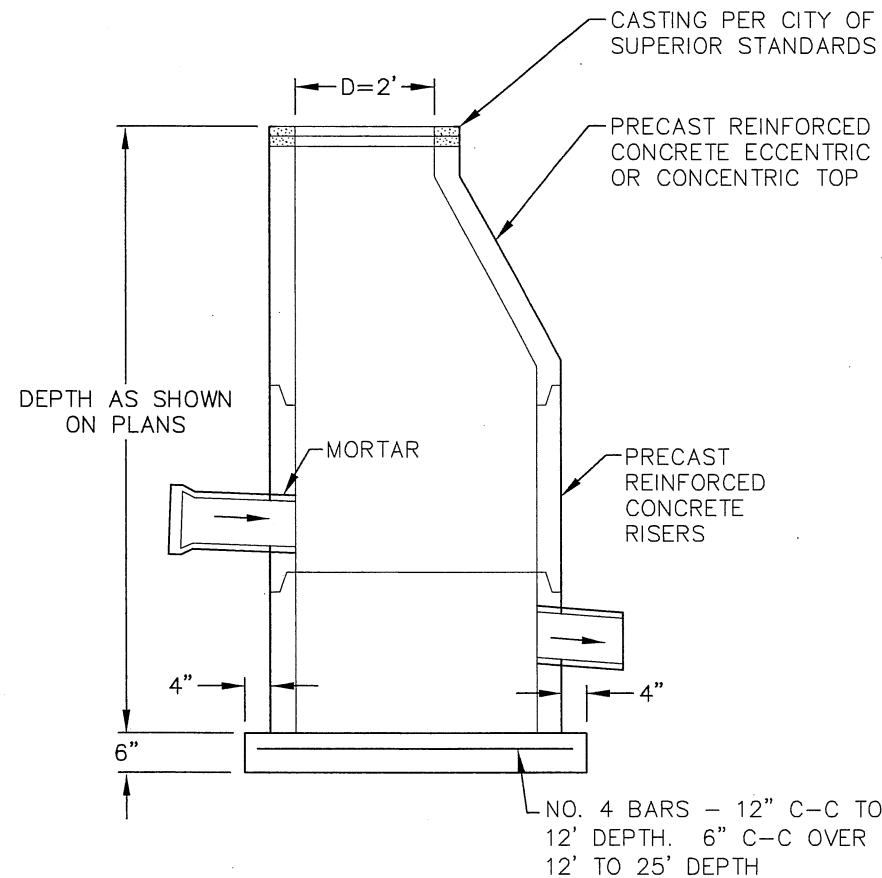
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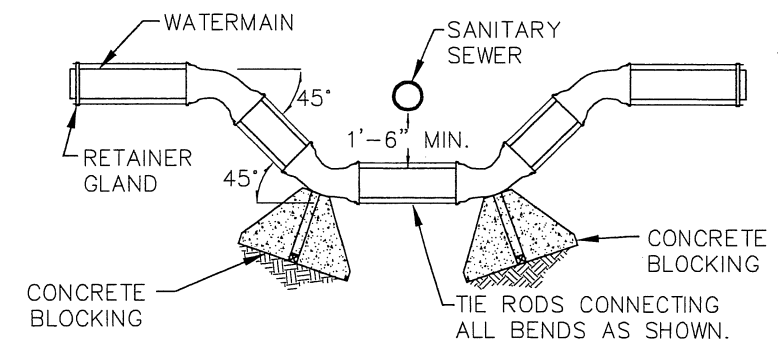
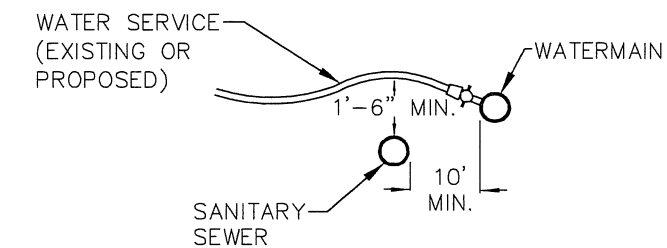
GRANULAR MATERIALS FOR PIPE CONSTRUCTION



DOWNSPOUT LEADER



CATCH BASIN TYPE 1
WISDOT SDD SHT 8a6



WATER MAIN/SANITARY SEWER SEPARATION

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 DATE: 12/19/10

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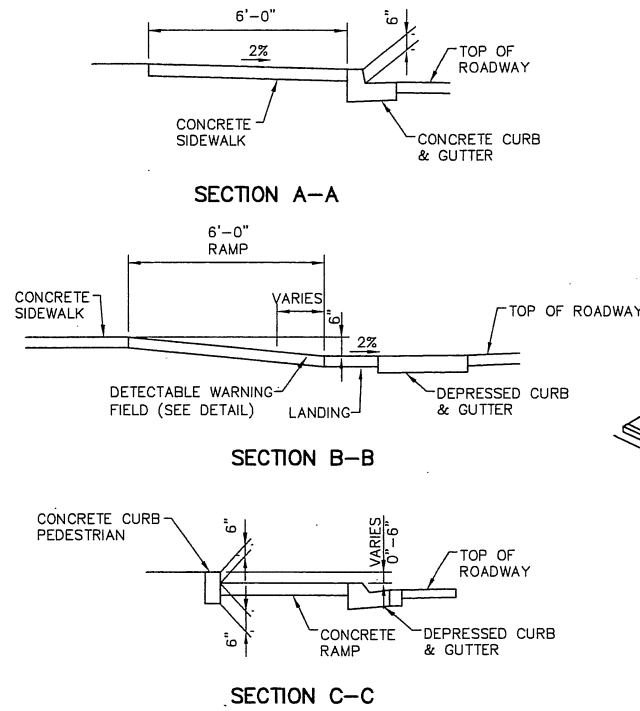
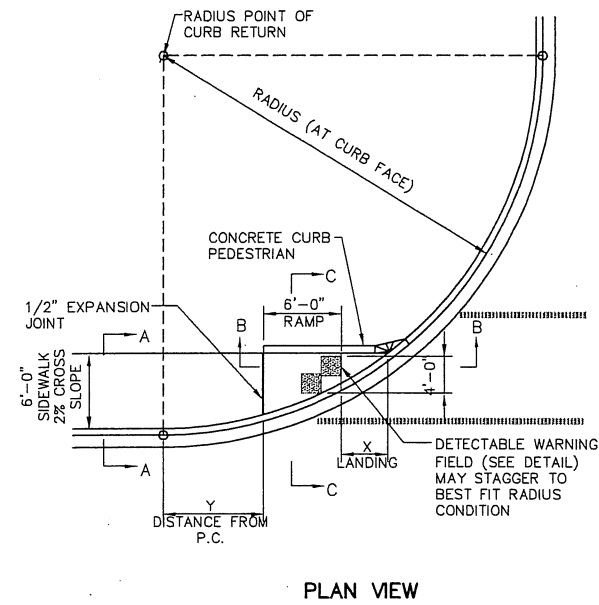
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 PROJECT #
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Date: 2/21/2011 8:23am
 C:\Users\jannick\Documents\2011\084\9.dwg

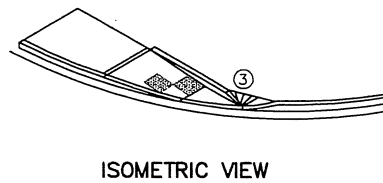


GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES, OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

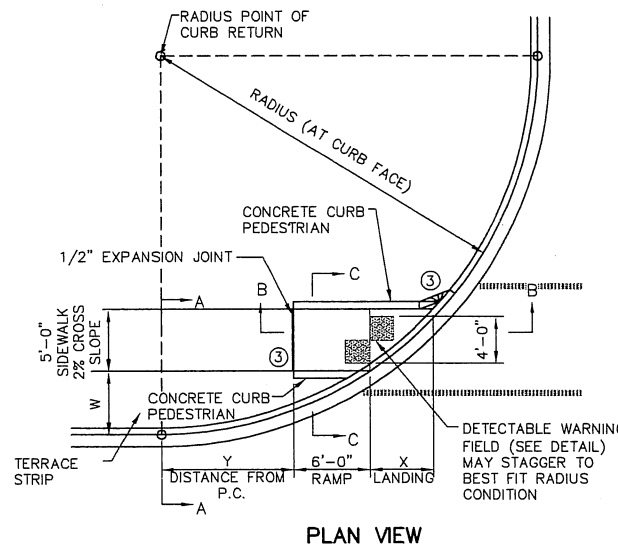
RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1 3/4"	2'-7 1/4"
30 FEET	7'-11 3/4"	4'-8 1/4"
40 FEET	9'-5 1/4"	6'-5"
50 FEET	10'-8 3/4"	7'-11 1/4"
60 FEET	11'-10 1/4"	9'-3 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



- PAVEMENT MARKING CROSSWALK (WHITE)
- 1/2" EXPANSION JOINT - SIDEWALK
- CONTRACTION JOINT FIELD LOCATED

TYPE 4A PEDESTRIAN RAMP
WSDOT SDD 8d5

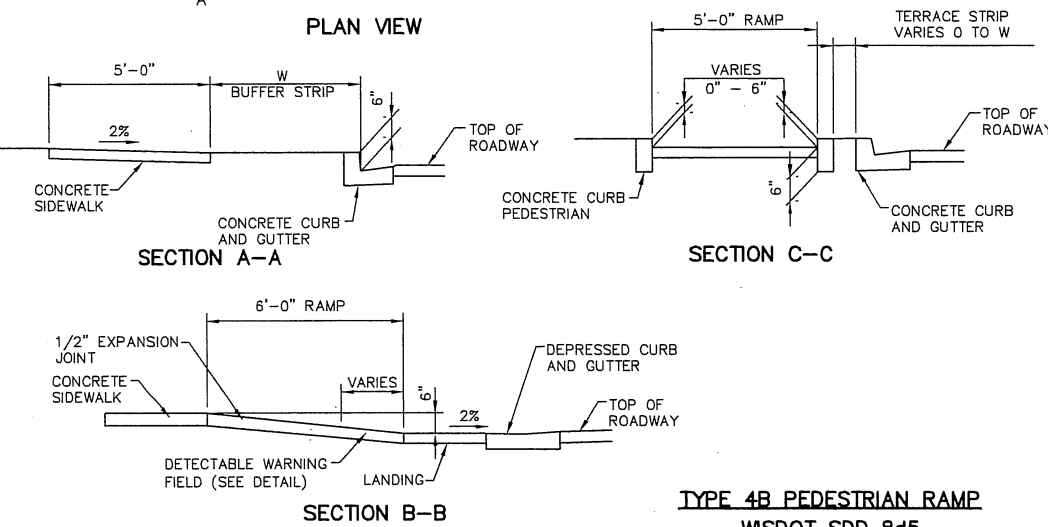


RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"
70 FEET	12'-2 3/4"	14'-3 1/4"	11'-1/4"	17'-4"	10'-1"	19'-11 3/4"	9'-3 3/4"	22'-4 1/4"	8'-8 1/4"	24'-6 1/4"
80 FEET	13'-2"	15'-8 1/2"	11'-10 1/2"	18'-11 3/4"	10'-10 3/4"	21'-10"	10'-1"	24'-4 3/4"	9'-5"	26'-8 3/4"
90 FEET	14'-1/2"	17'-1/2"	12'-8 1/4"	20'-6 1/2"	11'-7 3/4"	23'-7"	10'-9 3/4"	26'-3 3/4"	10'-1 1/4"	28'-9 1/2"
100 FEET	14'-10 1/2"	18'-3 3/4"	13'-5 1/2"	22'-0"	12'-4 1/4"	25'-2 3/4"	11'-5 3/4"	28'-1 1/2"	10'-9"	30'-9"

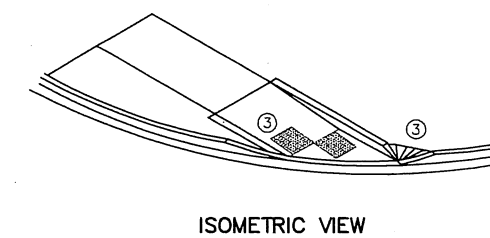
INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES, OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.
- SIDEWALK SLOPE SHALL NOT EXCEED 2%.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.



TYPE 4B PEDESTRIAN RAMP
WSDOT SDD 8d5

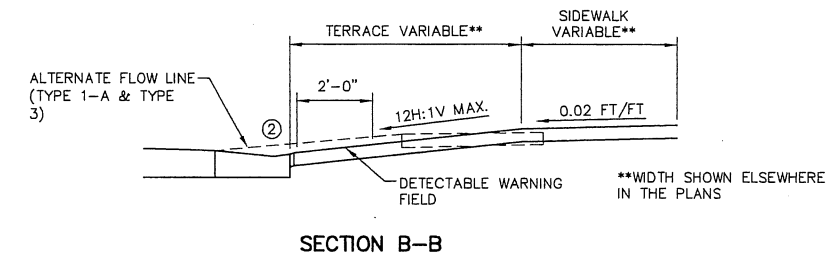
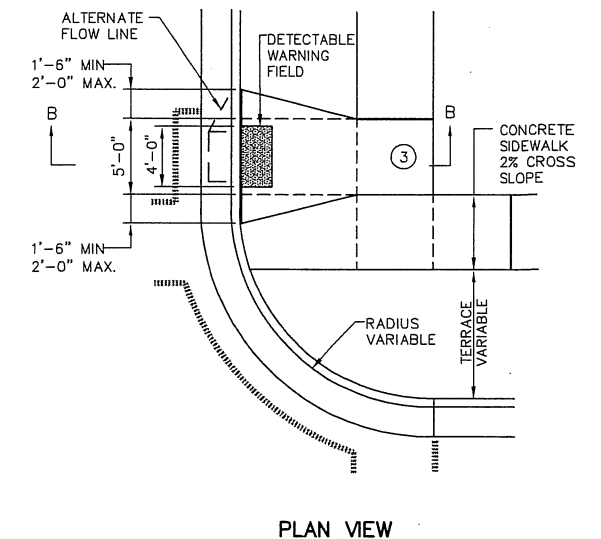


- PAVEMENT MARKING CROSSWALK (WHITE)
- 1/2" EXPANSION JOINT - SIDEWALK
- CONTRACTION JOINT FIELD LOCATED

GENERAL NOTES

- USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.
- WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

- PAVEMENT MARKING CROSSWALK (WHITE)
- 1/2" EXPANSION JOINT - SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- ALTERNATE LAYOUT



TYPE 3 PEDESTRIAN RAMP
WSDOT SDD 8d5

CITY REVIEW PLANS

RLK INCORPORATED
218 720 8219
218 720 8219
602 Garfield Avenue • Suite 105 • Dubuque, MN 56902

JOHN P. JAVNICK
DATE: 2/19/11

REVISIONS	SURVEYED	DESIGNED	DRAWN	CHECKED

THE VELMER COMPANIES
7201 WEST 78TH STREET, SUITE 205
BLOOMINGTON, MN 55439

CVS PHARMACY
TOWER AVE. & 28TH ST.
SUPERIOR, WISCONSIN

SHEET #
C9.3/22
PROJECT #
2011-084

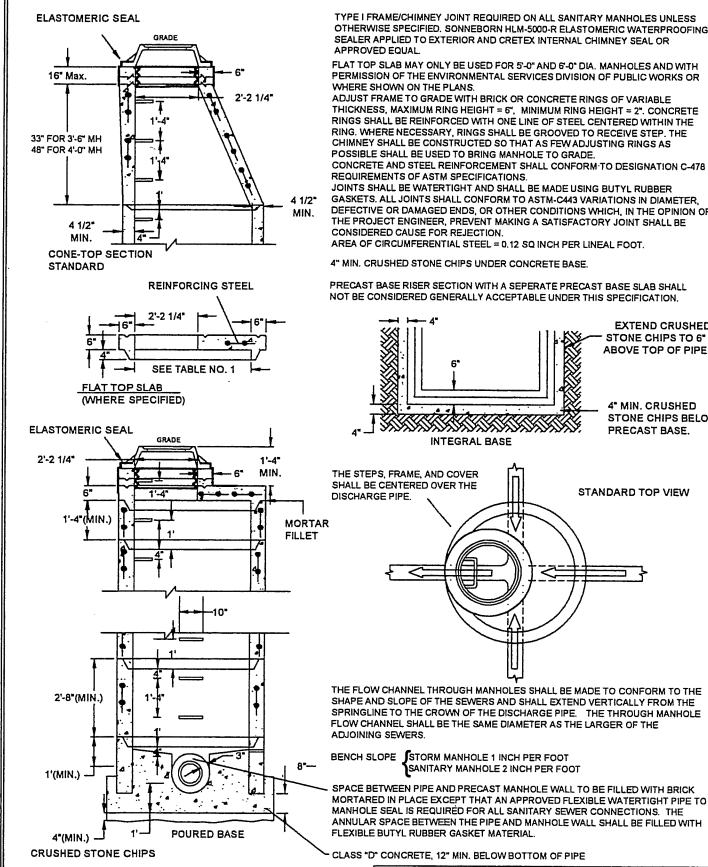
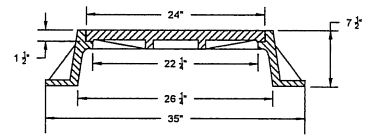


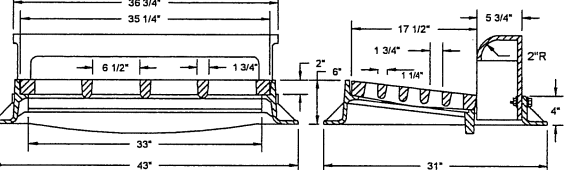
TABLE NO. 1
PIPE DIA. MANHOLE DIA. WALL THICKNESS
6" THRU 30" 4'-0" 5"
36" 5'-0" 6"
42" 6'-0" 7"

PRECAST MANHOLE

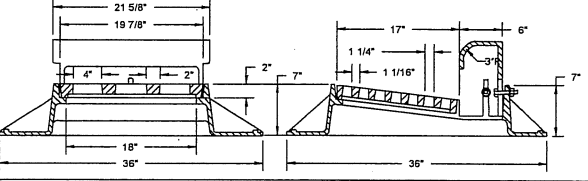
MANHOLE CASTING DIMENSIONS



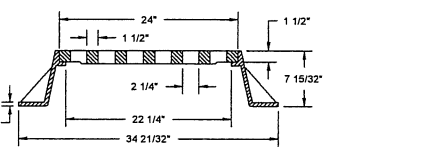
TYPICAL CURB INLET CASTING DIMENSIONS FOR RECTANGULAR STRUCTURES



TYPICAL CURB INLET CASTING DIMENSIONS FOR CIRCULAR STRUCTURES



CASTING DIMENSIONS FOR GRATED MANHOLE COVERS AND CIRCULAR INLETS IN NON-CURB INSTALLATIONS



GENERAL
The Contractor shall comply with the following. In case of conflict, the first listed standard shall take precedence.

- 1. Comply with all applicable Sections of Wisconsin Administrative Code.
2. Comply with all applicable Sections of City of Superior Administrative Code.
3. Comply with all applicable Sections of Standard Specifications for Sewer & Water Construction in Wisconsin, Fifth Edition with Addendum No. 1 and No. 2.

DIAMETER
Sewers shall be sized sufficient for future extension in accordance with City of Superior Sewer Service Area Planning and shall not be less than 8 inches in diameter.

DEPTH
Sewers shall be laid at a depth sufficient for future extension in accordance with City of Superior Sewer Service Area Planning. Sewers shall be laid at a depth to prevent freezing and to provide gravity basement drainage for sanitary waste.

SLOPE
Sewers shall be laid with uniform slope between manholes. All sewers shall be designed and constructed to give average velocities of not less than 2 feet per second.

Table with 2 columns: Sewer Size, Minimum Slope %
8" 0.45
10" 0.32
12" 0.25
15" 0.17
18" 0.14
21" 0.11
24" 0.09

LINE AND GRADE
Line and grade shall be controlled and maintained by use of a laser beam.

SANITARY PIPE AND JOINT MATERIALS
Materials used in open trench construction of nonpressure sanitary sewers shall be restricted to the following: Reinforced Concrete Pipe (RCP), Ductile Iron Pipe (DI), and Polyvinyl Chloride Pipe (PVC).

STORM PIPE AND JOINT MATERIALS
Materials used in open trench construction of storm sewers shall be restricted to the following: RCP and Polyethylene Pipe with a smooth liner and corrugated exterior (PE).

CULVERT PIPE AND JOINT MATERIALS
Materials used in construction of culverts shall be restricted to the following: RCP, PE, and Corrugated Steel Culvert Pipe (CSCP).

FITTINGS FOR ALL BUILDING SEWER (LATERAL) CONNECTIONS
The following are minimum standards for nonpressure pipe:

- 1. Polyvinyl Chloride (PVC) bell and spigot sewer pipe shall meet the requirements of ASTM D3034 (1981).
2. Reinforced Concrete Pipe (RCP) bell and spigot sewer pipe shall meet the requirements of ASTM C443 (1979).

PIPE & FITTING MATERIALS
The following are minimum standards for nonpressure pipe:

- 1. Polyvinyl Chloride (PVC) bell and spigot sewer pipe shall meet the requirements of ASTM D3034 (1981).
2. Reinforced Concrete Pipe (RCP) bell and spigot sewer pipe shall meet the requirements of ASTM C443 (1979).

- 3. Steel Pipe shall be welded from steel plate or spiral welded from steel coil.
4. Ductile Iron (DI) bell and spigot sewer pipe, fittings, and joints shall meet the requirements of AWWA C100 (1977).
5. Corrugated Polyethylene Pipe (PE) with a smooth liner shall conform to ASTM F894 or AASHTO M294, Type S.

REJECTION OF PIPE MATERIALS
Pipe shall be subject to rejection for failure to conform to any requirement of the specifications or for any of the following reasons:

- 1. Fractures or cracks passing through the pipe wall or socket, except that a single crack not exceeding 2 inches in length at either end of the pipe or a single fracture in the socket not exceeding 3 inches in width nor 2 inches in length shall not be considered cause for rejection unless these defects exist in more than 5% of the entire shipment or delivery.
2. Chips or fractures on the interior of the pipe exceeding 2 inches in length, 1 inch in width, or a depth more than 1/4 the barrel thickness.

ALIGNMENT
All pipes shall be laid uniformly to line and grade so that the finished sewer will present a uniform bore.

JOINT ASSEMBLY OF POLYETHYLENE AND POLYVINYL CHLORIDE PIPING
Lubricated spigot end shall be inserted into receiving pipe bell until marked line is even with edge of bell.

COUPLINGS
Where pipe couplings are required to join pieces of dissimilar material, they shall be fully stainless steel shielded rubber couplings intended for underground use.

BEDDING
Lift thickness for bedding materials shall not exceed 12 inches. Bedding shall be compacted by hand, or mechanically compacted by equally careful means, to a minimum of 90% of Standard Proctor Density.

CRUSHED STONE CHIPS
Crushed Stone Chips shall mean granular material resulting from the mechanical compaction of rock, boulders, large cobble stones, or pea gravel of which 85% to 100% of particles have been fractured by crushing operations.

CRUSHED STONE
Crushed Stone shall mean granular material resulting from the mechanical compaction of rock, boulders, large cobble stones, of which substantially all faces have been fractured by crushing operations.

COVER
Lift thickness for pipe cover shall not exceed 12 inches. Cover shall be mechanically tamped to a minimum of 90% of Standard Proctor Density.

MANHOLE DIAMETER
The minimum diameter of manholes shall be 48 inches. Larger diameter manholes shall be used as indicated on the plan and profile drawings.

MANHOLE STEPS
Steps shall be Steel Reinforced Plastic Manhole Steps or Gray Cast Iron Manhole Steps.

GRADES FOR SETTING MANHOLE FRAMES
The manhole frame shall be set at the elevation given on the plan or, when no such elevation is given, they shall be set as follows:

- 1. Within A Traveled Roadway Within a traveled roadway or in the shoulders of a highway, the top of the manhole frame shall be set 1/2-inch below the shoulder or pavement surface.
2. In Other Locations In other locations, the top of the frame shall be set at the proposed or established grade, whichever is higher.

PREPARATION OF SUBGRADE
All undesirable material such as organic soils, etc., which cannot adequately support the manhole shall be removed below the normal manhole bottom and replaced with Crushed Stone.

MANHOLE BASES
Concrete manhole bases shall be as follows:

- 1. Precast Manhole With Integral Base The excavation shall be made deep enough so that after the bottom manhole barrel section with the integral base has been placed thereon, set to grade, and plumbed, there remains a minimum depth of bedding material below the bottom of the base equal to the depth of bedding material of the adjacent sewers.
2. Field Poured Base For Precast Manhole The Precast Manhole bottom barrel shall be set on concrete brick or solid block so that the bottom of this section is below the spring line of the outlet pipe, set for proper location and plumbed.

FLOW CHANNEL
The flow channel through manholes shall be made to conform to the shape of the connecting sewers and shall extend vertically from the springline to the crown of the discharge pipe.

DROP PIPE
An outside drop pipe shall be provided for a sewer entering a manhole where the invert elevation of the entering sewer is 2 feet or more above the springline of the outgoing sewer.

PIPE TO MANHOLE CONNECTION
Connection shall be water tight in all manholes. Penetrations in manholes shall be cored or preformed.

NONFLEXIBLE CONNECTIONS OF RIGID PIPE
When rigid pipe is connected to a concrete brick, block, or precast manhole within the manhole base, it shall be supported on brick or solid concrete blocks for the pouring of the concrete base.

FLEXIBLE CONNECTION OF PIPE
All plastic pipe shall be connected to Precast Manholes by means of an approved flexible watertight pipe to manhole seal.

REJECTION MANHOLE RISERS AND TOPS
Precast manhole risers and tops shall be subject to rejection for failure to conform to any of the specification requirements.

DEFLECTION TESTING
Deflection tests shall be performed for flexible pipe installations. The deflection test shall be performed using a rigid ball or a mandrel and shall be performed without mechanical pulling devices.

LEAKAGE TESTING
Groundwater infiltration into gravity sewer systems shall be minimized. All sanitary sewers, except laterals with active connected building sewers, shall be leakage tested in accordance with Chapter 3.7.0 of the most current edition of Standard Specifications for Sewer & Water Construction in Wisconsin.

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CHIMNEY
A chimney having a minimum height of 6 inches and a maximum height of 16 inches, constructed of precast concrete adjusting rings shall be built on top of the curb section or flat slab up to the elevation at which the frame is set.

ADJUSTING RINGS
Concrete adjusting rings shall substantially conform to the diameter dimensions of the respective manhole corbel and shall have height of 2 to 6 inches. Concrete adjusting rings shall be reinforced with No. 2 reinforcing rod centered within the ring.

CASTINGS
All manhole and inlet castings shall conform to the requirements of ASTM A-48, Class No. 30-B and shall be free from cracks, holes, swells, and cold shuts.

- 1. Standard Manhole Castings Castings shall be Neenah R-1670, East Jordan Ironworks 112021 or ESD approved equal.
2. Bolt Down Manhole Castings Bolt down castings shall be Neenah R-1916-D or ESD approved equal, and shall be secured to the manhole wall with one-inch diameter anchor bolts as directed by the ESD.
3. Curb Inlet Castings - Circular Typical curb inlet castings for circular structures shall be Neenah R-3235 Type C, ESD approved equal.
4. Curb Inlet Castings - Rectangular Typical curb inlet castings for rectangular structures shall be Neenah R3290, East Jordan Ironworks 7030, ESD approved equal, or ESD approved alternate.

FRAME / CHIMNEY JOINTS
All manhole chimneys shall be constructed with flexible watertight frame / chimney joints. All frame / chimney joints for sanitary sewer manholes shall be Type I Chimney Joints.

INTERNAL CHIMNEY SEAL
Chimney Seals shall be manufactured seals installed on new or existing sanitary manholes. The flexible portion of the seal shall be natural or synthetic rubber conforming to applicable requirements of ASTM C-923.

ELASTOMERIC WATERPROOFING SEAL
All masonry work shall be cured a minimum of 24 hours prior to applying an elastomeric waterproofing seal.

MORTAR
Mortar used in connection of rigid pipe to manholes not in active service, for construction of chimney joints, and for backplastering shall be 2 1/4 to 3 parts sand and one part of either a mixture of 50 percent Portland Cement / 50 percent masonry cement or a mixture of 75 percent Portland Cement / 25 percent hydrated lime and shall be carefully proportioned by volume.

ELASTOMERIC SEALER
Elastomeric Waterproofing Seal shall be a single component moisture curing polyurethane applied to form a continuous membrane.

CONCRETE
Portland Cement Concrete shall be composed of a mixture of Portland Cement, fine and coarse aggregates, and water.

PHASING & CONSTRUCTION SCHEDULE
A Phasing & Construction Schedule shall be submitted to the ESD upon request. The Phasing & Construction Schedule shall indicate the Contractor's plan for progression of the Work.

CONSTRUCTION QUALITY TESTING
Project acceptance shall not occur until all of the Construction Quality Testing reports have been delivered and approved by the ESD.

DEFLECTION TESTING
Deflection tests shall be performed for flexible pipe installations. The deflection test shall be performed using a rigid ball or a mandrel and shall be performed without mechanical pulling devices.

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COVER MATERIAL, 6 INCHES ABOVE PIPE FOR SIZES 36 INCHES IN DIAMETER OR SMALLER. MINIMUM 12 INCHES ABOVE PIPE FOR DIAMETERS 36 INCHES OR LARGER.

CRUSHED STONE CHIPS MAY BE USED AS COVER MATERIAL.

3 INCH CRUSHED COARSE STONE FOR WET OR UNSTABLE TRENCH BOTTOM

BEDDING OF CRUSHED STONE CHIPS BELOW PIPE AND UP TO SPRING LINE. BEDDING THICKNESS 4 INCH MINIMUM FOR 36 INCHES IN DIAMETER OR SMALLER. MINIMUM 6 INCHES BELOW THE PIPE FOR DIAMETERS 36 INCHES OR LARGER.

CITY REVIEW PLANS
SUPERIOR, WISCONSIN
DATE: JUNE 22, 2010
SURVEY DESIGNED APPROVED: [Signature]
CURRENT AS OF: 6/29/2011
SHEET: 1