



Village of Menomonee Falls  
 W156 N8480 Pilgrim Road  
 Menomonee Falls, WI 53051-3140  
 Telephone: (262) 532-4200

## STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section NW ¼ Sec 4 Name of Business/Subdivision Lot 200 CSM 7648 – Crossroads  
 Property Tax ID Number MNFV0014990 Address of Property N95 W18345 County Line Road  
 Date October 29, 2014

|          |   |
|----------|---|
| Dry Pond |   |
| Wet Pond |   |
| Other    | X |

Location of Pond North of Pick-n-Save in the parking lot

Pond ID: SWA 2012-05 (Permit #)  
Underground detention

Year Pond Constructed 2013 Year of Last Certification 2014

| Compliance Verification                        | Design | Actual | Compliant |    | Comments<br>(Condition of Structure) |
|--|--------|--------|-----------|----|--------------------------------------|
|  |        |        | Yes       | No |                                      |
| <b>Primary Outlet Pipe</b>                     |        |        |           |    | Outlet Pipe Material                 |
| Opening Diameter (inches)                      | 21"    | 21"    | X         |    | CMP                                  |
| Upstream Invert                                | 869.30 | 869.16 | X         |    |                                      |
| Downstream Invert                              | 869.15 | 868.87 | X         |    |                                      |
| Length (feet)                                  | 10'    | 10'    | X         |    |                                      |
| Slope (%)                                      | 1.00%  | 2.90%  | X         |    |                                      |
| <b>Secondary Outlet Pipe</b> (If Applicable)   |        |        |           |    | Outlet Pipe Material                 |
| Opening Diameter (inches)                      |        |        |           |    | Not applicable                       |
| Upstream Invert                                |        |        |           |    |                                      |
| Downstream Invert                              |        |        |           |    |                                      |
| Length (feet)                                  |        |        |           |    |                                      |
| Slope (%)                                      |        |        |           |    |                                      |
| <b>Riser</b> (If Applicable)                   |        |        |           |    | Riser Material                       |
| Opening Diameter (inches)                      |        |        |           |    | Not applicable                       |
| Elevation                                      |        |        |           |    |                                      |
| <b>Upper Discharge Control</b> (If Applicable) |        |        |           |    |                                      |
| Opening Diameter (inches)                      |        |        |           |    | Not applicable                       |
| Elevation                                      |        |        |           |    |                                      |

| Compliance Verification                                | Design            | Actual    | Compliant                         |    | Comments                           |   |
|--|-------------------|-----------|-----------------------------------|----|------------------------------------|---|
|  |                   |           | Yes                               | No |                                    |   |
| <b>Lower Discharge Control</b>                         | (If Applicable)   |           |                                   |    |                                    |   |
| Opening Diameter (inches)                              | 21"               | 21"       | X                                 |    |                                    |   |
| Elevation  | 869.30            | 869.16    | X                                 |    |                                    |   |
| <b>Other (Description)</b>                             |                   |           |                                   |    |                                    |   |
| Opening Type and Size (inches)                         |                   |           |                                   |    | Not applicable                     |   |
| Elevation  |                   |           |                                   |    |                                    |   |
| <b>Emergency Spillway</b>                              |                   |           |                                   |    |                                    |   |
| Elevation  |                   |           |                                   |    | Not applicable                     |   |
| Length of spillway (feet)                              |                   |           |                                   |    | Not applicable                     |   |
| <b>Embankment</b>                                      | Present<br>Yes no |           | Comments/Maintenance Requirements |    |                                    |   |
| Unauthorized Plantings, trees, or woody vegetation     |                   |           | Not applicable                    |    |                                    |   |
| Animal burrows or slope erosion                        |                   |           |                                   |    |                                    |   |
| <b>Storm Sewer Outfalls</b>                            | Type & Size       |           | Location                          |    | Comments                           |   |
| Outfall 1  | 21" cmp           |           | Underground to MH                 |    | Drains the system                  |   |
| Outfall 2  | 27" conc          |           | Downstream from MH                |    | Downstream pipe from connection MH |   |
| Outfall 3  |                   |           |                                   |    |                                    |   |
| <b>Storage Properties</b>                              | Design            | Actual    | Compliant<br>Yes No               |    | Not Applicable                     | Equipment Used  |
| Normal Water Elevation (Wet Ponds)                     | 869.30            | 869.16    | X                                 |    |                                    | Survey total station for elevations and a tape measure to check depths. Pondpack computer program to check volumes. |
| Design High Water Elevation                            | 874.73            | 874.44    | X                                 |    |                                    |   |
| Area at Normal Water Elevation (Ac) (Wet Ponds)        | 17.90 sf          | 16.29 sf  | X                                 |    |                                    |   |
| Area at Design High Water Elevation (Ac)               | 56.62 sf          | 55.62 sf  | X                                 |    |                                    |   |
| Active Storage Available (Ac-Ft)*                      | 0.68 acft         | 0.68 acft | X                                 |    |                                    |   |
| Lowest Elevation at Top of Embankment (If Applicable)  |                   |           |                                   |    | X                                  |   |
| Average Elevation at Top of Embankment (If Applicable) |                   |           |                                   |    | X                                  |   |
| Maximum Bottom Elevation                               | 866.30            | 866.25    | X                                 |    |                                    |   |
| Average Pond Bottom Elevation                          | 866.30            | 866.34    | X                                 |    |                                    |   |
| Pond Bottom Area (Ac)                                  | 0.0               | 0.0       | X                                 |    |                                    |   |
| Maximum Pond Depth                                     | 8.5'              | 8.5'      | X                                 |    |                                    |   |
| Average Pond Depth                                     | 8.5'              | 8.5'      | X                                 |    |                                    |   |
| Average Permanent Pool Depth (Wet Ponds)               | 3.0'              | 2.8'      | X                                 |    |                                    |   |

\*To Determine Active Storage  $V=H/3(A1+A2+(A1 \times A2)^{1/2})$

Wet Ponds Use  $H = \text{Height of Section}$ ,  $A1 = \text{area at normal water elevation}$ ,  $A2 = \text{area at top section}$

Dry Ponds Use  $H = \text{Height of Section}$ ,  $A1 = \text{pond bottom area}$ ,  $A2 = \text{area at top section}$

Sketch Outlet or Attach to Document

Place Photograph of Pond or Attach to Document

Attached

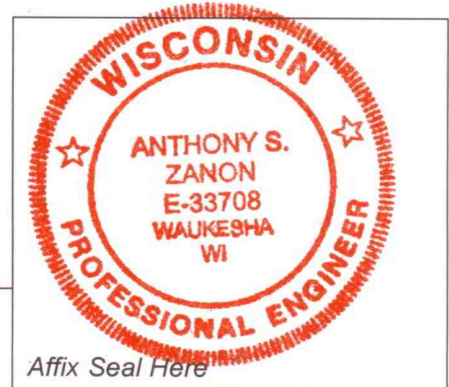
Attached

Place Photograph of Pond or Attach to Document

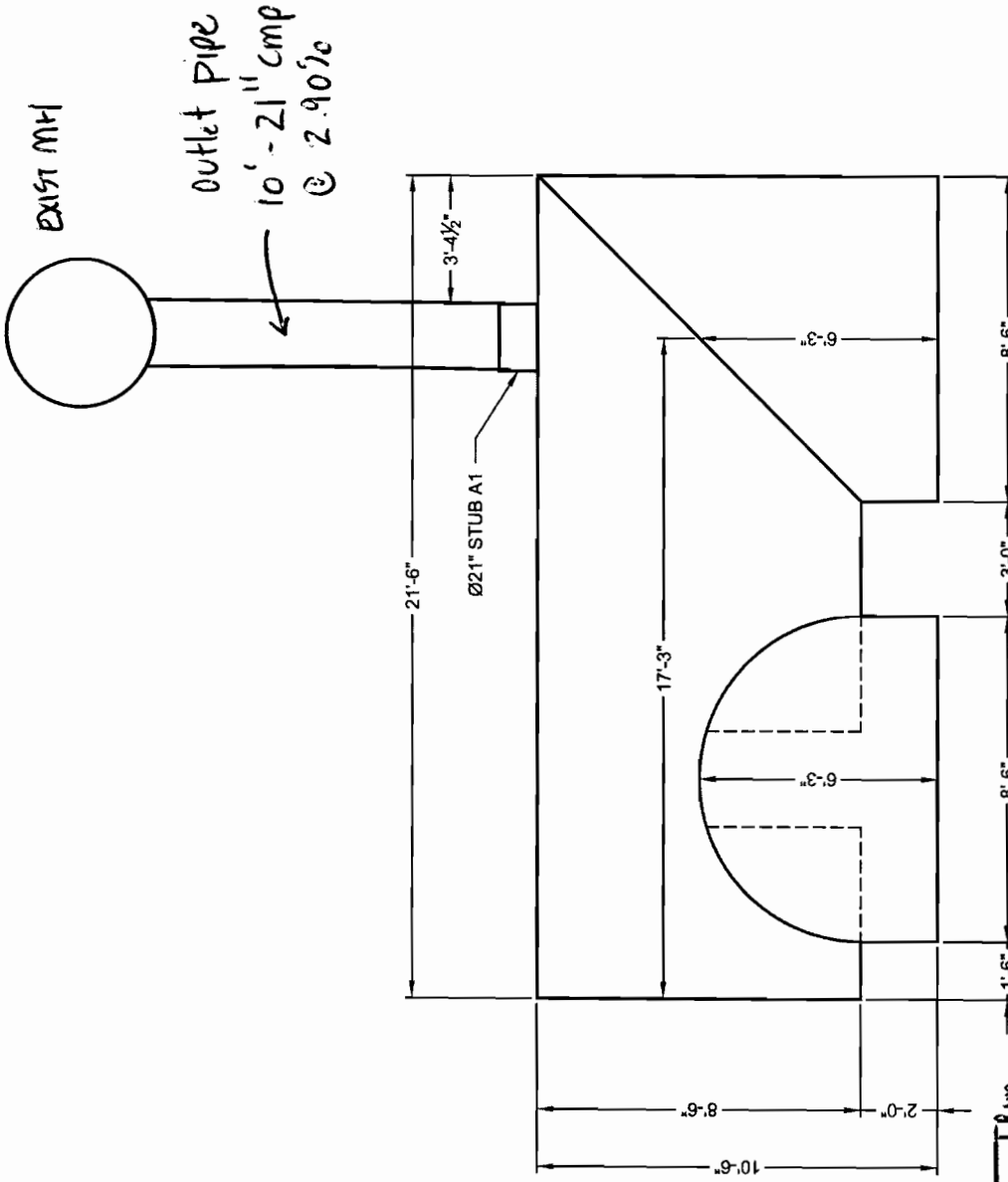
Attach As-built Survey to the Document for the first report submission

|                  |  |                  |                                 |
|------------------|--|------------------|---------------------------------|
| Inspection Firm: | <u>Jahnke &amp; Jahnke Associates</u>                      | Inspector Name : | <u>Robert Thomas</u>            |
| Phone Number:    | <u>262-542-5797</u>  | Inspection Date: | <u>7/19/2013 and 10/20/2014</u> |
| Address:         | <u>711 West Moreland Blvd</u><br><u>Waukesha, WI 53188</u> |                  |                                 |

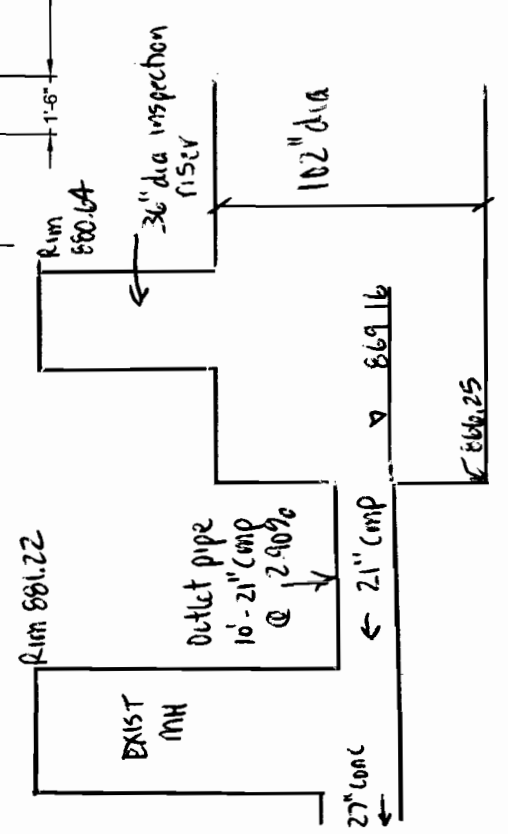
Certifying Professional    Anthony S. Zanon, PE  
 Name: \_\_\_\_\_  
 Phone Number:         262-542-5797



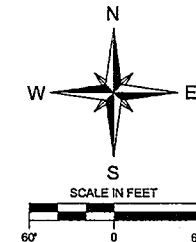
|                            |                                       |
|----------------------------|---------------------------------------|
| Date:<br><u>10/29/2014</u> | Signature:<br><u>Anthony S. Zanon</u> |
|----------------------------|---------------------------------------|



outlet detail  
NOT TO SCALE



COUNTY LINE ROAD C.T.H. "Q"



REFERENCE BENCHMARK: TOP OF CONCRETE MONUMENT WITH BRASS CAP FOUND MARKING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SECTION 4-8-20. ELEV. - 879.10 - NGVD 1929. REFERENCE BEARING: BEARINGS ARE REFERENCED TO THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 4, T8N, R20E WHICH HAS A RECORDED BEARING OF NORTH 89°20'48" EAST PER C.S.M. No. 6188.

LEGEND:

- CONCRETE MONUMENT WITH BRASS CAP FOUND
EXISTING BOLLARD
EXISTING CATCH BASIN (ROUND)
EXISTING CATCH BASIN (SQUARE)
EXISTING SEWER CLEANOUT
EXISTING ELECTRIC MANHOLE
EXISTING ELECTRIC METER
EXISTING ELECTRIC TRANSFORMER
EXISTING GAS METER
EXISTING GAS VALVE
EXISTING GUY WIRE
EXISTING HYDRANT
EXISTING LIGHT POLE
EXISTING STORM MANHOLE
EXISTING SANITARY MANHOLE
EXISTING PULL BOX
EXISTING POWER POLE
EXISTING SIAMSE CONNECTION
EXISTING SIGN
EXISTING TELEPHONE PEDESTAL
EXISTING WATER VALVE
EXISTING CHAIN LINK FENCE
EXISTING GUARD RAIL
EXISTING RETAINING WALL
EXISTING UNDERGROUND TRAFFIC SIGNAL WIRING
EXISTING UNDERGROUND FIBER OPTIC
EXISTING SANITARY SEWER
EXISTING STORM SEWER
EXISTING UNDERGROUND ELECTRIC
EXISTING UNDERGROUND GAS
EXISTING UNDERGROUND TELEPHONE
EXISTING WATER MAIN

UTILITY NOTES:

- 1. GENERAL: A. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, SIXTH EDITION (STANDARD SPECS), THE WISCONSIN ADMINISTRATIVE CODE, THE REQUIREMENTS OF THE VILLAGE OF MENOMONEE FALLS AND THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT. B. THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE A MINIMUM OF 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. C. ALL UTILITY WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. UTILITY CONTRACTOR IS RESPONSIBLE FOR REMOVING THE EXCESS SPOIL MATERIAL FROM THE TRENCH UNLESS OTHERWISE DIRECTED BY THE GENERAL CONTRACTOR. D. ALL BEDDING AND COVER MATERIAL SHALL BE CRUSHED STONE CHIPS PER THE STANDARD SPECS. SECTION 8.43.2. E. GRANULAR BACKFILL SHALL BE USED PER THE STANDARD SPEC. SECTION 8.43.4. F. COORDINATE ALL BUILDING LATERALS WITH THE GENERAL CONTRACTOR PRIOR TO INSTALLING SAID LATERAL. G. THE WATER LATERAL, SANITARY LATERAL, STORM SEWER AND ROOF DRAINS SHALL BE INSTALLED WITH A TRACER WIRE CONSISTING OF AN INSULATED AWS #12 COPPER SOLID CORE WIRE TAPED TO THE LATERAL/MAIN. THIS IS IN ACCORDANCE WITH STAT. 1620715(2). 2. SANITARY SEWER: A. THE SANITARY SEWER PIPE SHALL BE PVC ASTM D-3034 SDR 35. JOINTS SHALL BE MADE BY THE USE OF AN ELASTOMERIC SEAL CONFORMING TO ASTM D3212. B. THE SANITARY SEWER MANHOLES SHALL BE PRECAST MEETING FILE NO. 12 OF THE STANDARD SPECS. THE FRAME AND COVER SHALL BE NENAH R-1661-B. C. COORDINATE EXACT LOCATION AND INVERT ELEVATION WITH THE GENERAL CONTRACTOR BEFORE BEGINNING WORK. D. THE EXTERIOR OF THE SANITARY SEWER MANHOLES SHALL BE MAC WRAPPED. THERE SHALL BE INTERNAL AND EXTERNAL SEALS ON THE MANHOLES. 3. WATER MAIN: A. HYDRANT LEAD SHALL BE PVC AWWA C-900 DR18. JOINTS SHALL BE MADE BY THE USE OF ELASTOMERIC SEAL CONFORMING TO ASTM D3139. 4. STORM SEWER: A. THE STORM SEWER PIPE SHALL BE ADS N-12 WITH W.T. JOINTS UNLESS NOTED TO BE CORRUGATED METAL PIPE. B. ALL CATCH BASINS AND STORM SEWER MANHOLES SHALL BE PRECAST, REINFORCED CONCRETE, 48" MINIMUM INSIDE DIAMETER WITH BASE, STEPS, ECCENTRIC TOP SECTION AND IRON GRATE RATED FOR TRAFFIC, NO SUMPS. C. THE FRAME AND GRATE FOR THE CATCH BASINS LOCATED OUTSIDE THE CURB LINE SHALL BE NENAH R-2467-D. D. THE FRAME AND GRATE FOR THE CATCH BASINS LOCATED IN THE CURB LINE SHALL BE NENAH R-3067. E. ALL STORM INLETS IN THE WORK AREA SHALL BE PROTECTED WITH TYPE B INLET PROTECTION UNTIL THE FINAL ASPHALT HAS BEEN PLACED AND THE LANDSCAPE AREAS STABILIZED. F. THE UNDERGROUND DETENTION SYSTEM IS A 102" SOLID WALL CORRUGATED METAL PIPE WITH ALT2 FINISH. SEE CONTECH DRAWINGS FOR SPECIFIC DETAILS.



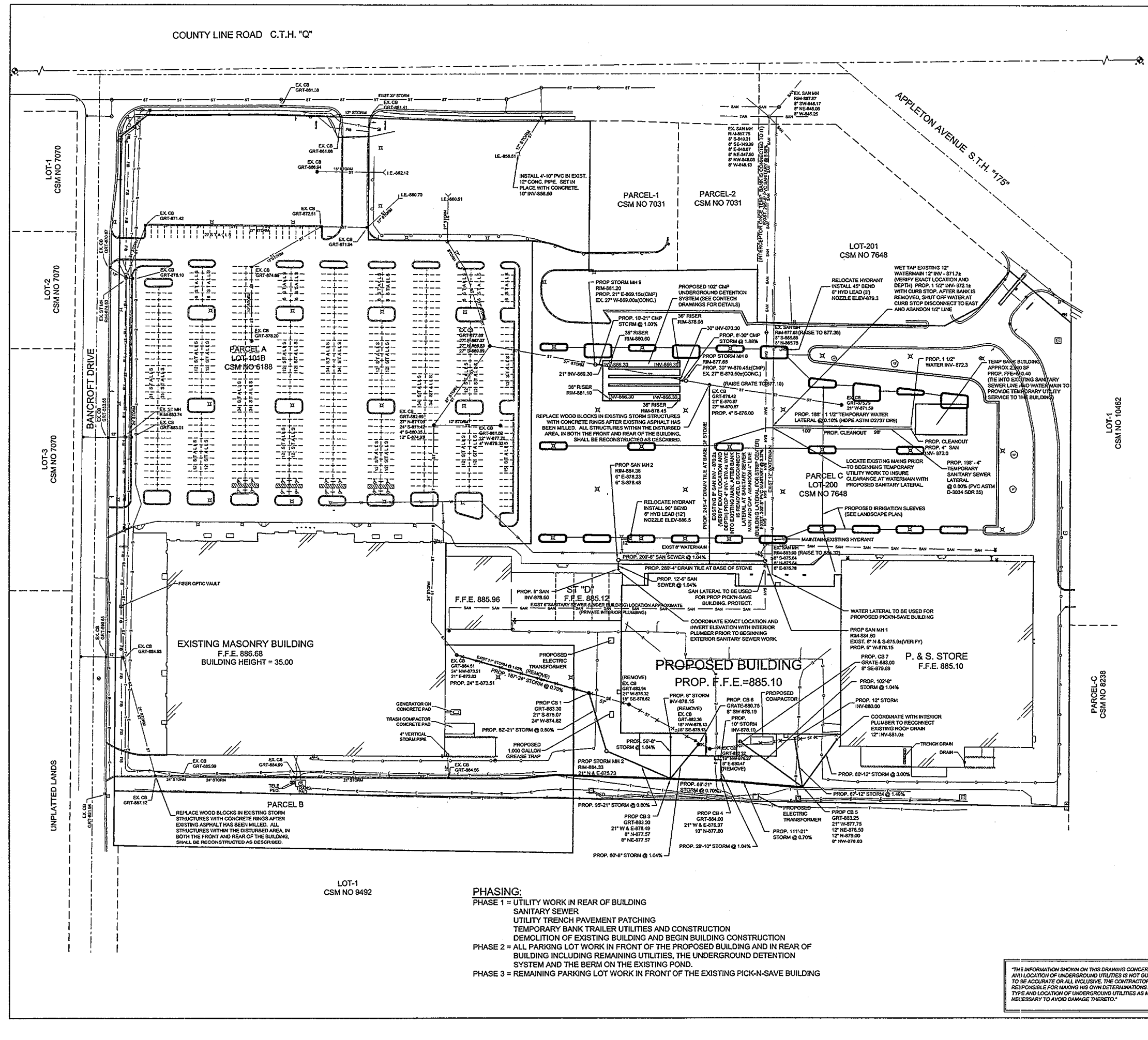
REVISED: APRIL 18, 2012
REVISED: MAY 2, 2012
REVISED: MAY 23, 2012
REVISED: JUNE 29, 2012 (REVISED UNDERGROUND SYSTEM)
REVISED: AUGUST 23, 2012 (PHASE NOTES & TEMP BANK)
REVISED: OCTOBER 12, 2012 (SANITARY LATERAL & REMOVE WATER LATERAL)
REVISED: MARCH 22, 2013 (COORDINATE W/ INTERIOR PLUMBER/CURB LINE)
REVISED: MARCH 26, 2013 (TEMP. BANK)

PROPOSED UTILITY PLAN
CROSSROADS SHOPPING CENTER
PART OF THE NW 1/4 OF SEC. 4, T8N, R20E
VILLAGE OF MENOMONEE FALLS, WAUKESHA COUNTY, WISCONSIN
JAHNKE & JAHNKE ASSOCIATES INC.
PLANNERS & PROFESSIONAL ENGINEERS
711 W. MORELAND BLVD., WAUKESHA, WI. 53188
TEL. No. (262) 542-5737 FAX: (262) 542-7698 (E-MAIL: jahnhke@jahnhkeandjahnke.com)
SCALE: 1" = 60'
DATE: MARCH 19, 2012
DRAWN BY: B.R. CHECKED BY: J.R.S. FILE NO.: MENOMONEE 286
BOOK: MENOMONEE 51 JOB: S-7616-2011 SHEET 8 OF 9

THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THEREOF.

CALL DIGGERS HOTLINE
1-800-292-6511
TOLL FREE
www.diggershotline.com
MILW. AREA 298-1181

Reference for location on site 1 OF 2



PHASING:
PHASE 1 = UTILITY WORK IN REAR OF BUILDING
SANITARY SEWER
UTILITY TRENCH PAVEMENT PATCHING
TEMPORARY BANK TRAILER UTILITIES AND CONSTRUCTION
DEMOLITION OF EXISTING BUILDING AND BEGIN BUILDING CONSTRUCTION
PHASE 2 = ALL PARKING LOT WORK IN FRONT OF THE PROPOSED BUILDING AND IN REAR OF BUILDING INCLUDING REMAINING UTILITIES, THE UNDERGROUND DETENTION SYSTEM AND THE BERM ON THE EXISTING POND.
PHASE 3 = REMAINING PARKING LOT WORK IN FRONT OF THE EXISTING PICK-N-SAVE BUILDING

LOT-1
CSM NO 9492

UNPLATTED LANDS

LOT-3
CSM NO 7070

LOT-2
CSM NO 7070

LOT-1
CSM NO 7070

LOT-201
CSM NO 7648

PARCEL-C
CSM NO 8238

LOT-1
CSM NO 10462

EXISTING MASONRY BUILDING
F.F.E. 886.68
BUILDING HEIGHT = 35.00

PROPOSED BUILDING
PROP. F.F.E. = 885.10

P. & S. STORE
F.F.E. 885.10

PARCEL B
REPLACE WOOD BLOCKS IN EXISTING STORM STRUCTURES WITH CONCRETE RINGS AFTER EXISTING ASPHALT HAS BEEN MILLED. ALL STRUCTURES WITHIN THE DISTURBED AREA, IN BOTH THE FRONT AND REAR OF THE BUILDING, SHALL BE RECONSTRUCTED AS DESCRIBED.

REPLACE WOOD BLOCKS IN EXISTING STORM STRUCTURES WITH CONCRETE RINGS AFTER EXISTING ASPHALT HAS BEEN MILLED. ALL STRUCTURES WITHIN THE DISTURBED AREA, IN BOTH THE FRONT AND REAR OF THE BUILDING, SHALL BE RECONSTRUCTED AS DESCRIBED.

TEMP BANK BUILDING APPROX 2'x10'x5' (TO BE INTO EXISTING SANITARY SEWER LINE AND WATER MAIN TO PROVIDE TEMPORARY UTILITY SERVICE TO THE BUILDING)

RELOCATE HYDRANT INSTALL 90" BEND 6" HYD LEAD (12") NOZZLE ELEV=885.5

LOCATE EXISTING MAINS PRIOR TO BEGINNING TEMPORARY UTILITY WORK TO INSURE CLEARANCE AT WATERMAIN WITH PROPOSED SANITARY LATERAL.

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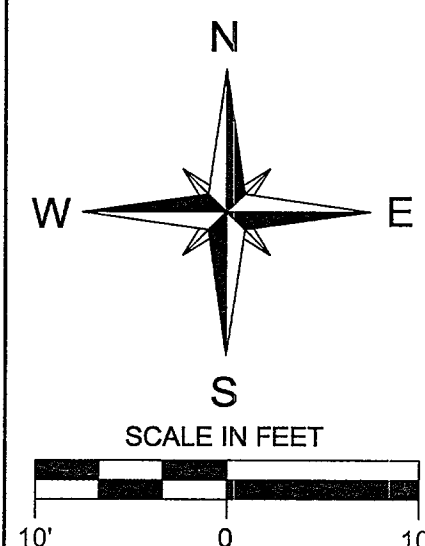
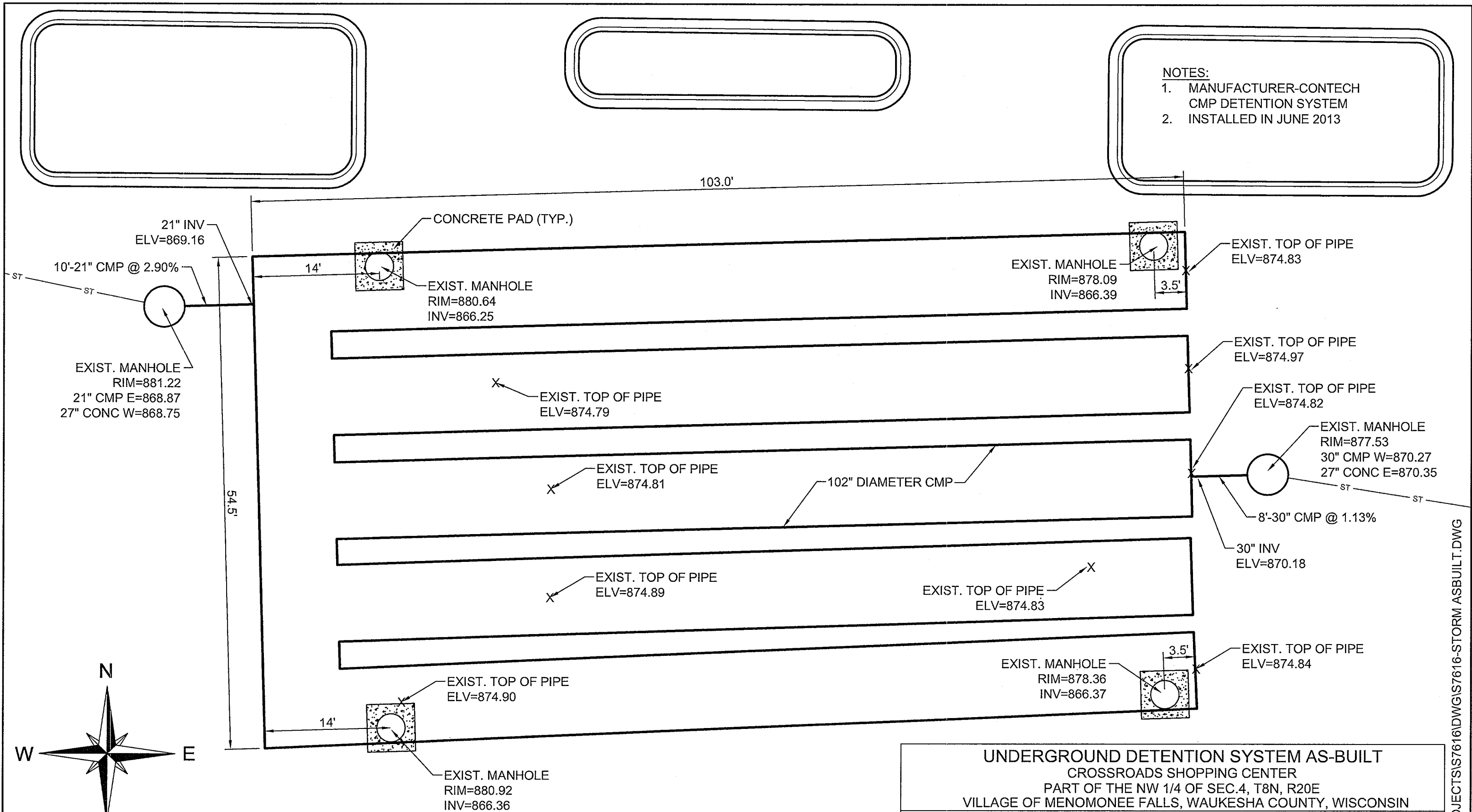
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LOCATE EXISTING MAINS PRIOR TO BEGINNING TEMPORARY UTILITY WORK TO INSURE CLEARANCE AT WATERMAIN WITH PROPOSED SANITARY LATERAL.

- NOTES:**
1. MANUFACTURER-CONTECH  
CMP DETENTION SYSTEM
  2. INSTALLED IN JUNE 2013



**REFERENCE BENCHMARK:**  
 1) TOP OF CONCRETE MONUMENT WITH BRASS CAP FOUND MARKING THE  
 NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SECTION 4-8-20  
 ELEV. - 879.10 - NGVD 1929

|   |                        |                         |
|---|------------------------|-------------------------|
| <b>UNDERGROUND DETENTION SYSTEM AS-BUILT</b><br>CROSSROADS SHOPPING CENTER<br>PART OF THE NW 1/4 OF SEC.4, T8N, R20E<br>VILLAGE OF MENOMONEE FALLS, WAUKESHA COUNTY, WISCONSIN                              |                        |                         |
| <b>JAHNKE &amp; JAHNKE ASSOCIATES INC.</b><br>PLANNERS & PROFESSIONAL ENGINEERS<br>711 W. MORELAND BLVD.-WAUKESHA, WI. 53188<br>TEL.No.(262)542-5797 FAX(262)542-7698 (E-MAIL brohling@jahnkeandjahnke.com) |                        |                         |
| SCALE: 1" = 10'   | DATE: OCTOBER 29, 2014 |                         |
| DRAWN BY: B.R.  | CHECKED BY: A.S.Z.     | FILE NO.: MENOMONEE 286 |
| BOOK: MENOMONEE 56  | JOB: S-7616:2013       | SHEET 2 OF 2            |

FILE NAME: S:\PROJECTS\16\DWG\16-STORM ASBUILT.DWG