

Soil and Groundwater Management Plan

Village of Luck, Polk County, Wisconsin

July 5, 2018

The purpose of this plan is to identify potential contamination sources affecting the Main Street reconstruction project in the Village of Luck, and outline procedures to properly handle and dispose of contaminated soil and groundwater generated during the construction project.

Location

Main Street Reconstruction project corridor runs from 240 feet south of Park Avenue/Main Street intersection (center line) to south edge of intersection with 1st Avenue (STH 48). See attached Overall Plan sheet – Main Street Improvements, Sheet G2 (Appendix A).

Geology and Hydrogeology

Subsurface deposits in this area consist of sand and silty sand. The depth to groundwater ranged from 5 to 9 feet during the site investigation at the Laundry Basket site at 300 S. Main Street. The water table groundwater flow direction is generally to the west-northwest. Groundwater flow in the deeper piezometer wells is also to the west-northwest.

The hydraulic conductivity at well MW-2 at the Laundry Basket site was calculated to be 3.2×10^{-3} cm/sec based on a pumping test.

Potential Contaminant Sources

The Wisconsin Department of Natural Resources BRRTS registry and RR Sites Maps were searched for potential contaminant sources within the project corridor. In addition, the DATCP storage tank database was searched for registered underground storage tanks. The following table summarizes the information obtained from these searches.

From south to north along project corridor:

<p>SCI Cable Systems (Savage Communications) 412 S. Main Street</p>	<p>This address is listed as a closed leaking underground storage tank site in the DNR BRRTS database. A tank closure site assessment report was submitted to the State on 11/3/1997, and the site was closed on 11/20/2018. No additional information was available in the DNR's BRRTS listing, but due to the short time the site was open, and that the State did not require further investigation or remediation, MSA assumes that the contamination detected during the tank closure was minimal.</p> <p>Two underground storage tanks are listed in the DATCP storage tank database as closed/removed in 1986, registered to Savage Communications at address 410 S. Main Street in Luck. Both tanks were listed as 500 gallon in size containing leaded gasoline.</p>
---	---

SCI Cable Systems (cont.)	Based on a view of the current use of the properties, address 410 S. Main Street is a single family residential building. Address 412 S. Main Street is a former commercial building converted to single family residential. Based on this, it appears the tanks were likely removed from the 412 S. Main Street property. The northern lot line for address 412 S. Main Street is approximately 45 south of the southern limit of the project corridor. Based on the apparent low-level contamination at the site, with no further action required by the State, and the distance from the project corridor, this site is not considered to be a potential contaminant threat to the project.
Equity Coop 301 S. Main Street	Petroleum contamination resulting from a release from underground storage tanks at this site was detected in 1993, and the site was closed by the DNR in 2009. A review of the DNR online GIS Registry information for the site indicated that no soil contamination exceeding State standards was present at the time of site closure. However, groundwater contamination exceeding State standards remained on the parcel, and extended downgradient into the right of way of 3 rd Avenue to the north and northwest of the former tank bed. This groundwater contamination would therefore not affect the project corridor on Main Street that is located to the east of the parcel.
The Laundry Basket 300 S. Main Street	<p>Both soil and groundwater contamination from this property are present in the project corridor. Contamination at this property is the result of releases from both underground petroleum storage tanks from a former gasoline station at this property, and from operation of a former dry cleaning business. Therefore, petroleum and solvent (tetrachloroethene) contamination is co-mingled at this site.</p> <p>The majority of the soil contamination detected at this site was in the groundwater smear zone from 4 to 8 feet, with the highest concentrations detected in the 6 to 8 foot zone. Based on the low concentrations detected in soil sampling onsite in the past, it has been assumed that the soil contamination is limited to the Laundry Basket parcel, and potentially into the immediate right of way of Main Street to the west and 3rd Avenue to the north. No offsite soil sampling was conducted to confirm this, or to fully define the extent of soil contamination in the groundwater smear zone in Main Street. Therefore, the potential for soil contamination to be present in the project corridor adjacent to the Laundry Basket parcel exists, from approximately Station 14+20 to Station 15+10 and should be monitored during construction in this area. The contaminant depth will correlate to the maximum rise and fall of the local groundwater surface, expected to be in the range of 5 to 9 feet below the ground surface. Any work conducted at these depths within the Station range listed above should be monitored for the presence of soil contamination.</p> <p>The co-mingled groundwater plume resulting from the petroleum and solvent contamination at the Laundry Basket site is present from approximately Station 14+00, just south of the Laundry Basket parcel, to the north to Station 16+00, for the full width of the Main Street right of way. Any groundwater generated during dewatering activities within this</p>

	area of the project corridor should be considered contaminated, and be disposed of properly.
The Luck Post Office 128 S. Main Street	One 560 gallon fuel oil underground storage tank was removed from this property on September 11, 2001. No contamination was reported to the DNR upon removal of the tank. The former location of the tank is unknown, but due to the lack of reported contamination, this former tank is not considered to be a potential contamination source to the project corridor.
Luck Marine 100 S. Main Street	<p>Contamination from former underground petroleum storage tanks was detected at this site in 1999. The site has recently (as of 6/12/2018) obtained conditional closure from the Department of Natural Resources. Residual soil contamination is present from approximately Station 21+55 to Station 22+00 (the end of the project corridor) for the full width of the right of way of Main Street. The contamination is present within the groundwater smear zone at a depth of 4 to 9 feet below the ground surface. In addition, a small area of direct contact soil exceedances was identified along the west wall of a soil excavation performed between the building and the back of sidewalk of Main Street adjacent to the property. Soil in this area is potentially contaminated within the 0 to 4 foot level. This shallow soil contamination corresponds to Station 21+75 to Station 21+90, under the sidewalk adjacent to 100 S. Main Street. Soils excavated in the areas defined above should be screened for the presence of petroleum contamination.</p> <p>Groundwater contamination from this source is more extensive, and is present from Station 21+35 north to Station 22+00 (the north end of the project corridor). Any groundwater generated during dewatering within this area should be considered contaminated, and disposed of properly.</p>

Supporting documents for the above discussion are included in Appendix B.

Note that due to the shallow groundwater in this area, the utility trenches may be a conduit for contaminant migration if they are backfilled with a more permeable material than the native soils. The contractor should be alert to suspicious changes in soil color or soil odors while excavating along existing utility trenches. If any unusual conditions are encountered, further excavation should immediately cease, and the Engineer should be immediately notified.

In addition, the Contractor should note that while no other registered underground storage tanks were identified in the DATCP storage tank database within the project limits, unregistered tanks could be present. If an underground storage tank is encountered, excavation activities should immediately cease, and the Engineer should be notified. In the event of tank rupture and release of fluids, the Contractor shall take any means necessary to immediately halt release of fluids from the tank, and shall contain any released fluids. A Wisconsin DATCP certified tank removal company should be contacted to arrange for tank removal.

Excavation, Hauling, and Disposal of Petroleum or Solvent Contaminated Soil

Contaminated soil exceeding the Wisconsin Department of Natural Resources Chapter NR 720 RCLs must be disposed at a DNR-licensed landfill or bioremediation facility. DNR licensed landfill facilities in the area that accept contaminated soil are:

Republic Services
W5987 County Highway D
Sarona, WI 54870
Contact: Jason Eraquam, Facility manager
Telephone: (715) 469-3356
Email: JEraquam@repulicsservices.com

Timberline Trail RDF
N4581 Hutchinson Road
Weyerhaeuser, WI 54895
Contact: Thomas Fijalkiewicz
Telephone: (715) 868-7000
Email: tfijalki@wm.com

A waste generator profile for either petroleum-contaminated soil (Luck Marine contamination) or a mixture of petroleum and solvent contaminated soil (Laundry Basket) must be approved by the DNR-licensed facility prior to off-site disposal. It may be necessary to apply for separate profiles for the two soil contamination areas, depending upon landfill requirements. Do not transport contaminated soil off-site without prior approval from the landfill, Engineer, or environmental consultant. Per NR 718.07, a solid waste collection and transportation license is required under NR 502.06 for each vehicle used to transport contaminated soil.

If contaminated soil is encountered elsewhere on the project, terminate excavation activities in the area and immediately notify the Engineer.

Contractor Duties

At the pre-construction conference, provide a schedule for all excavation activities in the identified contamination areas to the Engineer.

A minimum of two business days (48 hours) notification to the environmental consultant prior to commencement of excavation activities in contaminated areas is required. Coordinate to ensure that the environmental consultant is present during excavation in contaminated soil management areas. Do not proceed with contaminated soil excavation without the environmental consultant (or other person designated by the Engineer) present.

Environmental Consultant Contact:

Erica Klingfus
MSA Professional Services, Inc.
Office: (218) 499-3171
Cell: (608) 445-4962
Email: eklingfus@msa-ps.com

MSA Professional Services, Inc.

The Environmental Consultant will periodically evaluate soil excavated in the identified soil contaminant management areas to determine if the soil is contaminated and requires landfill disposal. Excavated soil will be evaluated by the Environmental Consultant based on field screening results, visual observations, and soil analytical results from previous investigations. Contractor will assist the Environmental Consultant in collecting soil samples for evaluation. The sampling frequency will be determined by site conditions, but will be a minimum of one sample for every 15 cubic yards excavated in the potentially contaminated areas.

Directly load and haul contaminated soil designated by the Environmental Consultant for offsite treatment/disposal to the DNR-approved landfill/bioremediation facility. If not hauled to the landfill/bioremediation facility during the same day on which it was excavated, temporarily stockpile the contaminated soil on an impervious surface within the construction limits, cover the material with impervious plastic sheeting, and anchor the sheeting in place to prevent the soil from being exposed until such time as the soil is hauled to the landfill/bioremediation facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of soils or residues. Sufficiently dewater soils designated for offsite treatment/disposal prior to transport or stockpiling so as not to contain free liquids.

Dewatering in Contaminated Groundwater Areas

Any groundwater generated during dewatering activities in contaminated groundwater areas identified above should be considered contaminated, and may not be disposed in storm sewer or surface water areas. Potential acceptable disposal options are:

1. Disposal in the Village of Luck sanitary sewer system
2. Disposal in other licensed treatment system
3. Pre-treatment to surface water standards and disposal in storm sewer or surface water. This option will require application to the DNR Wastewater Treatment program. Contractor must be able to provide information as to how the contaminated groundwater will be treated to meet surface water disposal standards. The treatment plan will be reviewed by the DNR and MSA prior to approval to proceed.

Contractor shall identify contaminated groundwater disposal plan/location at the pre-construction conference and provide evidence of approval for disposal from the treatment facility/location prior to initiation of excavation activities.

Monitoring Wells Within Construction Area

Monitoring wells within the construction area will be protected from damage. Flush mount well casings will be carefully removed from existing pavement and reset to final grade. Any flush mount covers damaged during construction will be replaced with a new flush mount approved by the Engineer, labeled with "monitoring well" on the cover, and meeting DNR monitoring well flush cover specifications.

The following monitoring wells have been approved for abandonment by Phil Richard of the DNR for the Laundry Basket project and will be properly abandoned by the Environmental Consultant prior to construction according to the requirements in Wisconsin Administrative Code NR 141:

1. Injection Well IW-6
2. Monitoring Well PZ-1

Monitoring wells for the Luck Marine project have been approved for abandonment by the DNR. The timing for the well abandonment is unknown, but will likely be completed within the project construction period. Flush mount covers for those wells within the construction area (MW-6, MW-7, and PZ-1) may be removed once the wells have been abandoned by the environmental consultant for the Luck Marine site.

Vapor sampling points installed in concrete sidewalks for the Laundry Basket project will not be abandoned, but will be removed along with the concrete sidewalk and not replaced during construction.

Health and Safety

All persons working in areas of soil and groundwater contamination or who will have the reasonable probability of exposure to safety or health hazards associated with the contamination shall have completed Health and Safety training that meets OSHA requirements prior to commencing work in contaminated areas.

Appendix A
Project Plan Sheets

MAIN STREET IMPROVEMENTS

VILLAGE OF LUCK POLK COUNTY, WISCONSIN

SHEET INDEX

G - GENERAL PLANS

- G 1 TITLE SHEET
- G 2 OVERALL PLAN
- G 3 TYPICAL ROADWAY SECTIONS
- G 4 EROSION CONTROL DETAILS
- G 5-7 ROADWAY DETAILS
- G 8 WATER DETAILS
- G 9 STORM DETAILS
- G 10-11 MISCELLANEOUS DETAILS
- G 12 TRAFFIC CONTROL PLAN
- G 13 TRAFFIC CONTROL FOR LANE CLOSURE
- G 14 INTERSECTION DETAILS

ST - SITE PLANS

- ST 1-2 DEMOLITION AND REMOVALS PLANS
- ST 3-4 EROSION CONTROL PLANS
- ST 5-6 PAVEMENT MARKING PLANS
- SF 1 SITE FURNISHING

SL - STREET LIGHTING PLANS

- SL 1 STREET LIGHTING DEMOLITION PLAN
- SL 2 STREET LIGHTING PLAN
- SL 3-6 STREET LIGHTING DETAILS

R - ROAD CONSTRUCTION AND UTILITY PLANS

- R 1-3 PLAN & PROFILE - MAIN STREET
- R 4 PLAN & PROFILE - THIRD AVENUE
- R 5 PLAN & PROFILE - SECOND AVENUE

CS - CROSS SECTION SHEETS

- CS 1-10 CROSS SECTIONS - MAIN STREET
- CS 11-12 CROSS SECTIONS - THIRD AVENUE
- CS 13-14 CROSS SECTIONS - SECOND AVENUE

LEGEND

- W — EXISTING WATER MAIN
- W — G EXISTING WATER MAIN, VALVE & HYDRANT
- W — G EXISTING WATER SERVICE & CURB STOP
- W — G PROPOSED WATER MAIN, VALVE, & HYDRANT
- W — G PROPOSED WATER SERVICE & CURB STOP
- SW — G EXISTING SANITARY SEWER & MANHOLE
- SW — G PROPOSED SANITARY SEWER & MANHOLE
- FM — EXISTING FORCEMAIN
- SS — G EXISTING STORM SEWER & INLET
- SS — G PROPOSED STORM SEWER & INLET
- E — PROPOSED STORM SEWER & MANHOLE
- G — BURIED ELECTRIC
- TV — BURIED CABLE TELEVISION
- T — BURIED TELEPHONE
- FO — BURIED FIBER OPTICS
- OH — OVERHEAD UTILITY
- RR — RAILROAD TRACKS
- C — EXISTING CURB & GUTTER
- C — PROPOSED CURB & GUTTER
- S — EXISTING SIDEWALK
- S — PROPOSED SIDEWALK
- CP — EXISTING CULVERT PIPE
- CP — PROPOSED CULVERT PIPE
- * * * — FENCE LINE
- D — DRAINAGE ARROW
- S — SILT FENCE
- — — RIGHT-OF-WAY
- — — BASELINE
- — — PROPERTY LINE
- — — TREE LINE
- BENCHMARK
- IRON PIPE
- IRON ROD
- ▲ CONTROL POINT
- → UTILITY POLE & GUY
- ⊙ SOIL BORING
- ⊙ LIGHT POLE
- ⊙ PEDESTAL
- ⊙ STREET SIGN
- ⊙ MAILBOX
- ⊙ FLAGPOLE
- ⊙ TREE - DECIDUOUS
- ⊙ TREE - CONIFEROUS
- ⊙ TREE TO BE REMOVED

UTILITIES

GAS:

WE ENERGIES
LEWIS KNAPP, LEAD DESIGNER
WORK: 715-234-9604
CELL: 715-416-4269
EMAIL: lknapp@kapurinc.com

ELECTRIC:

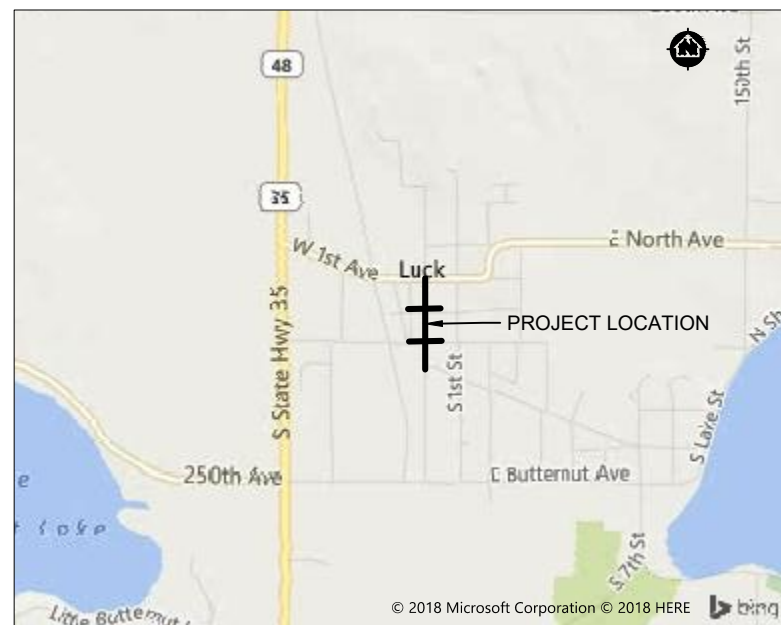
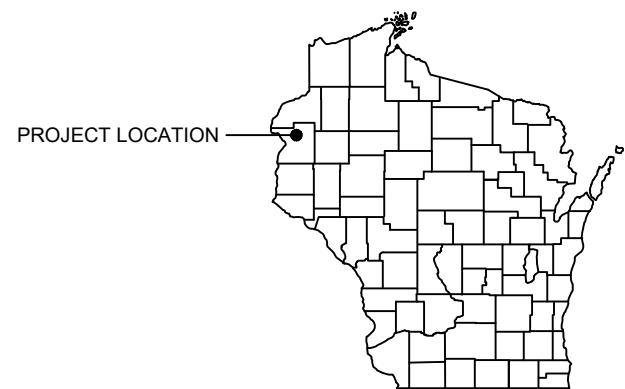
XCEL ENERGY, INC.
ASHLEY CHAPMAN
801 KELLER AVENUE SOUTH
AMERY, WI 54001
CELL: 715-268-3218
EMAIL: ashley.d.chapman@xcelenergy.com

TELEPHONE - CATV - INTERNET (FIBER OPTICS):

LAKELAND COMMUNICATIONS
TODD ROEHM, PLANT MANAGER
825 INNOVATION AVENUE
MILLTOWN, WI 54858
WORK: 715-825-2171, Ext. 109

SEWER & WATER:

VILLAGE OF LUCK
SETH PETERSON DPW
401 S MAIN STREET
LUCK, WI 54853
MOBILE: 715-491-3424



LOCATION MAP
NOT TO SCALE



STREETS & UTILITIES



STREET LIGHTING
SHEETS SL 1 THRU SL 6

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

NOTE:
UTILITY LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND CONTRACTOR SHALL HAVE APPROPRIATE UTILITY MARK EXACT LOCATIONS PRIOR TO CONSTRUCTION.

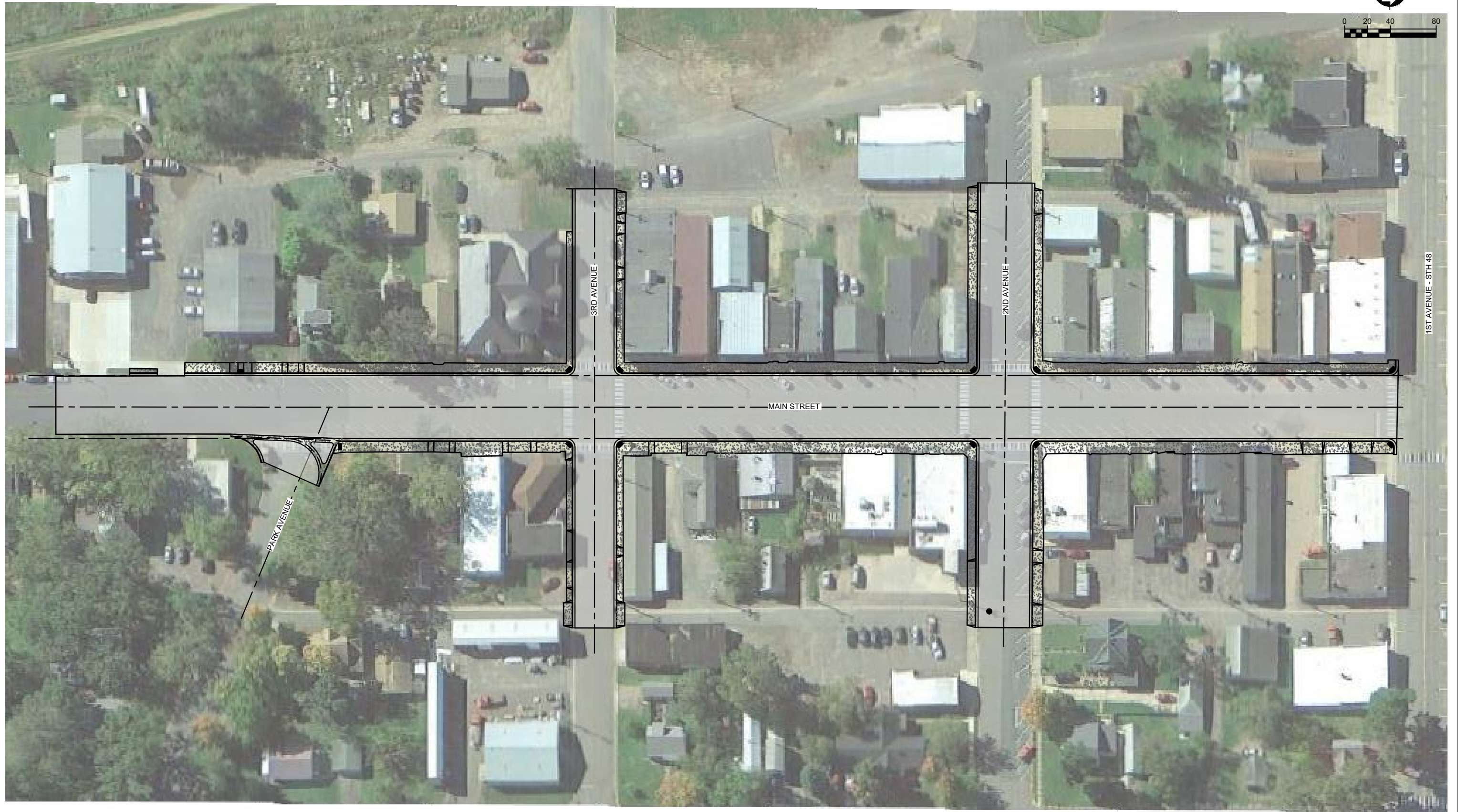
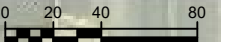
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

TITLE SHEET

FILE NO.
00524035
SHEET
G1



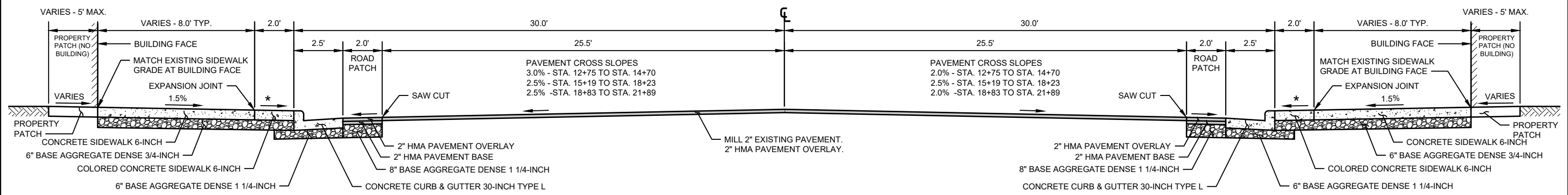
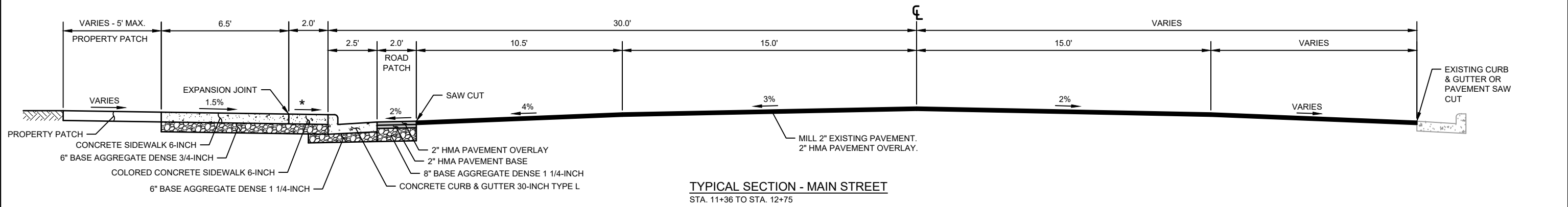
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.	DATE	REVISION	BY:
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				
PLOT DATE: 5/7/18, P:\520a\52400524035\CADD\Construction Drawings\00524035 Overall Plan.dwg							

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

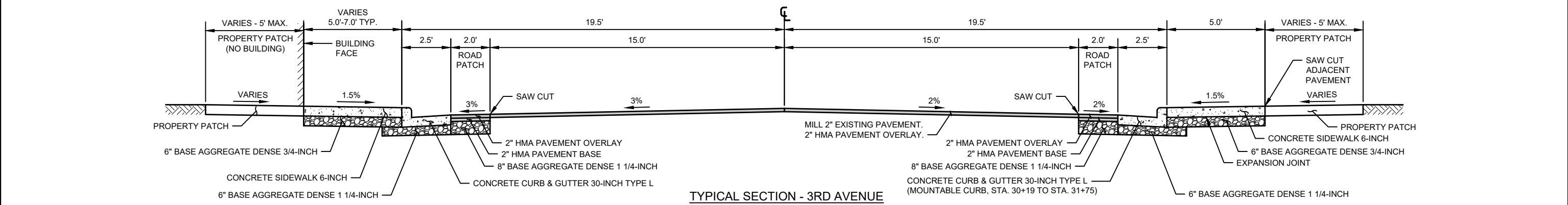
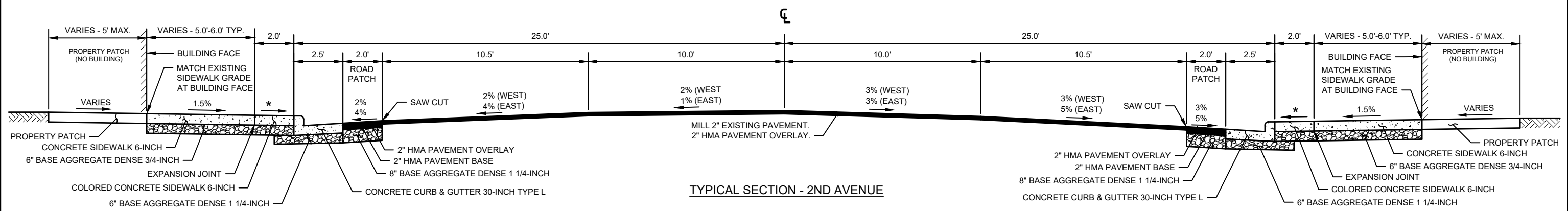
MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

OVERALL PLAN

FILE NO.
00524035
 SHEET
G2



* SLOPE VARIES
1.5% MIN. TO 4.0% MAX.



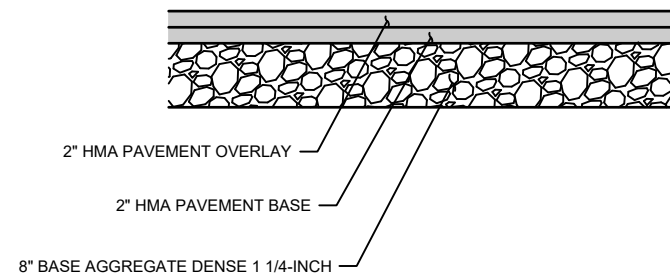
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS	CHECKED BY:	TKA						
F.B.:											
PLOT DATE: 5/7/18, P:\524035\2400524035\CADD\Construction Drawings\00524035 Typical Sections.dwg											

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

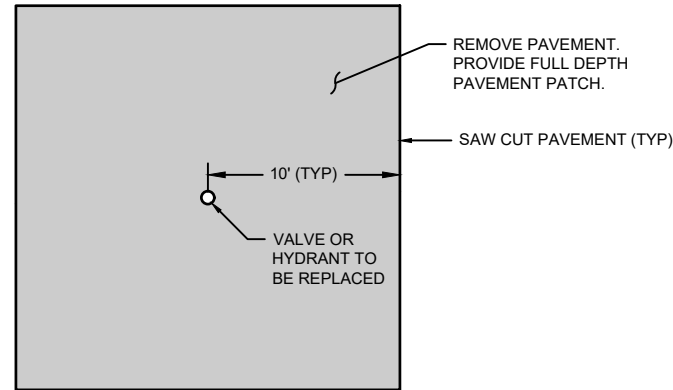
TYPICAL ROADWAY SECTIONS

FILE NO.
00524035
SHEET
G3

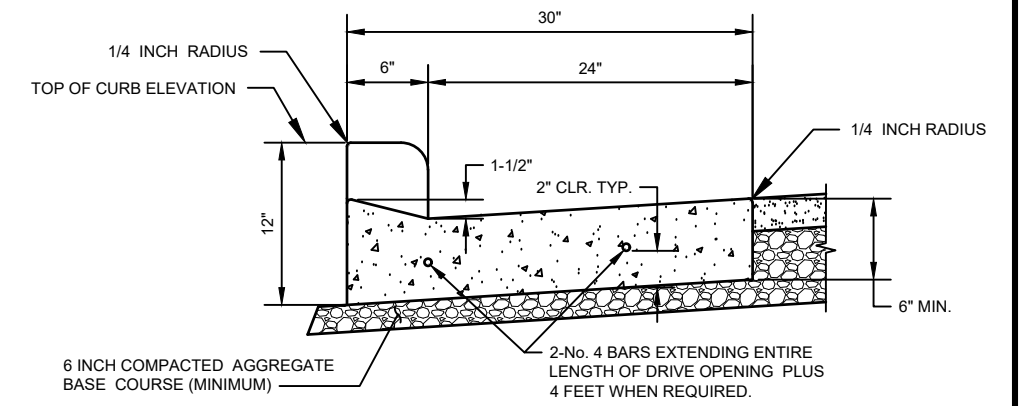


TO BE USED AT VALVE REPLACEMENTS, UTILITY TRENCH CUTS, AND ANYWHERE MILLING REMOVES FULL PAVEMENT THICKNESS.

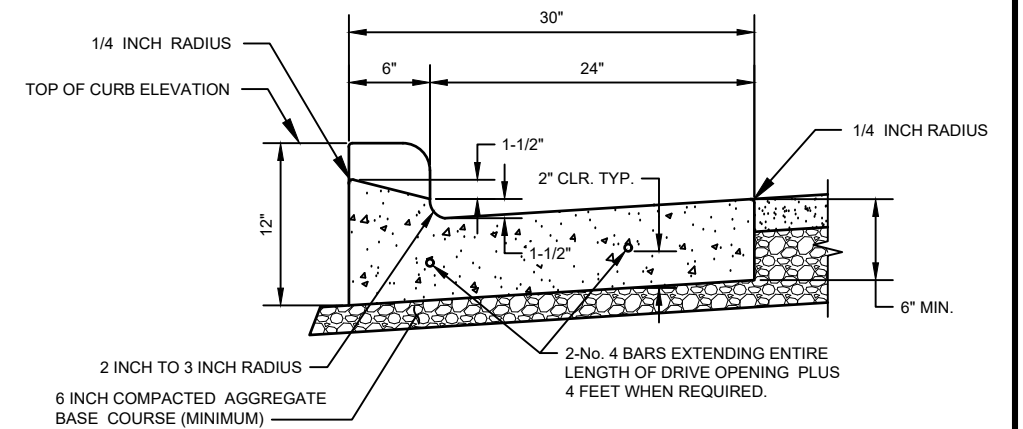
FULL DEPTH PAVEMENT PATCH
NO SCALE



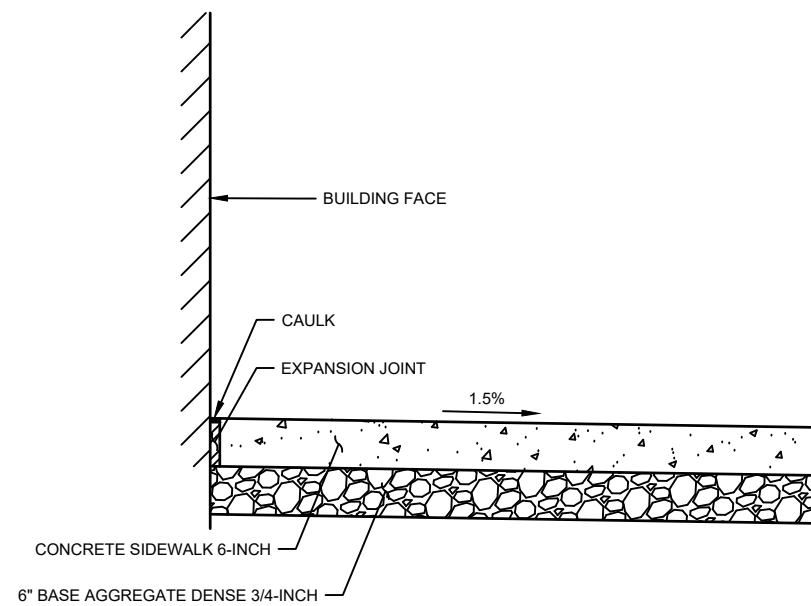
PAVEMENT REMOVAL AND PATCH AT WATER VALVE AND HYDRANT REPLACEMENT
NO SCALE



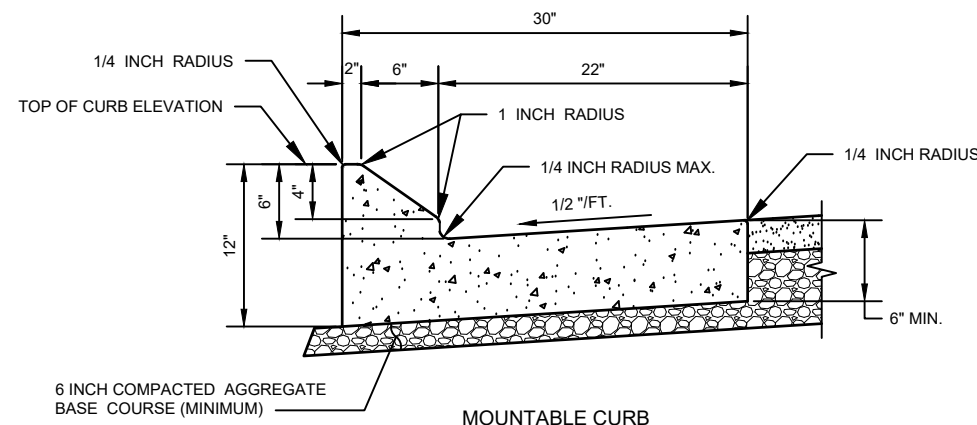
DRIVEWAY SECTION



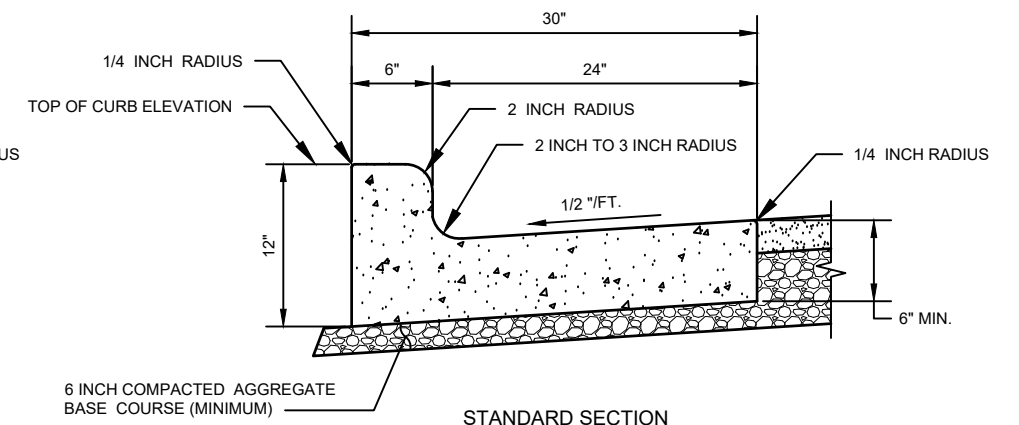
SPECIAL DRIVEWAY SECTION



SIDEWALK DETAIL AT BUILDING
NO SCALE



MOUNTABLE CURB



TYPE L CURB AND GUTTER DETAIL
NO SCALE

PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

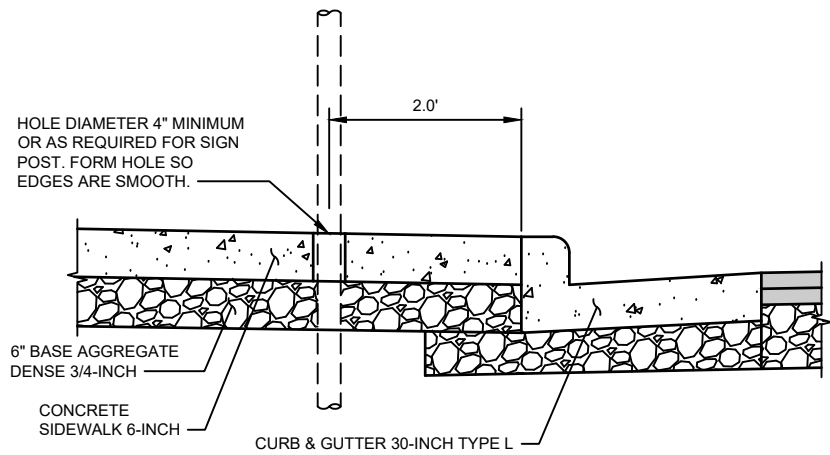
PLOT DATE: 5/7/18, P:\520a\52400524035\CADD\Construction Drawings\00524035 Roadway Details.dwg

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

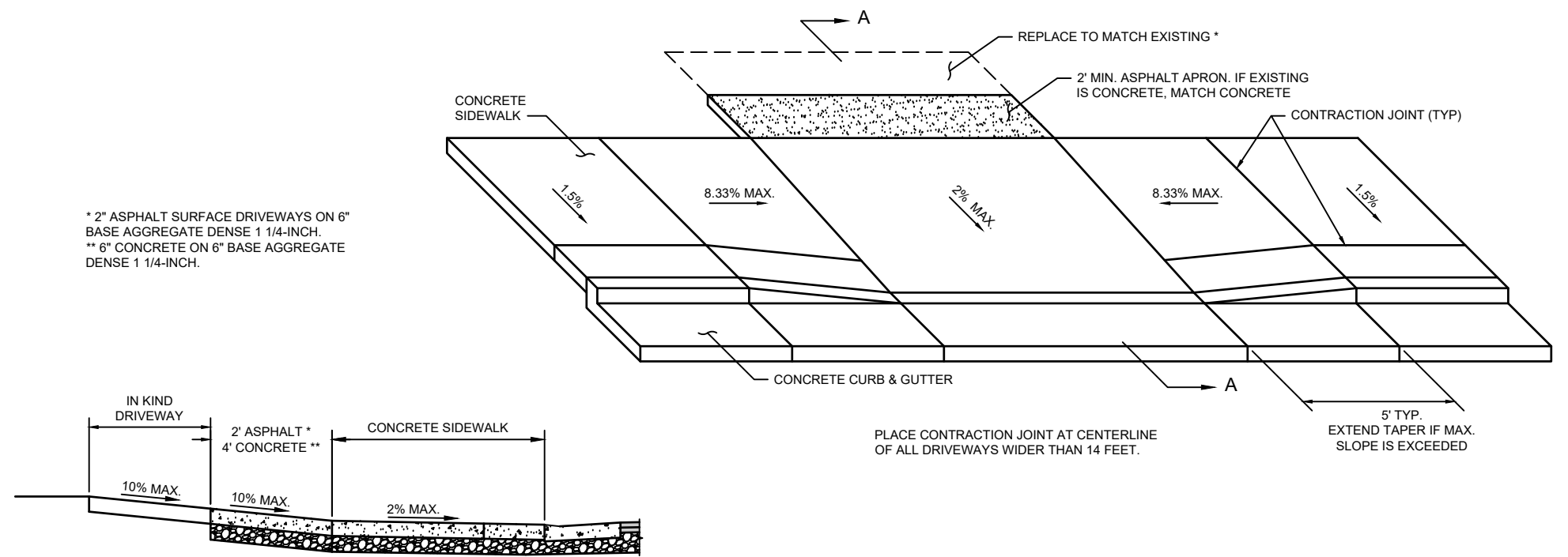
ROADWAY DETAILS

FILE NO.
00524035
SHEET
G5



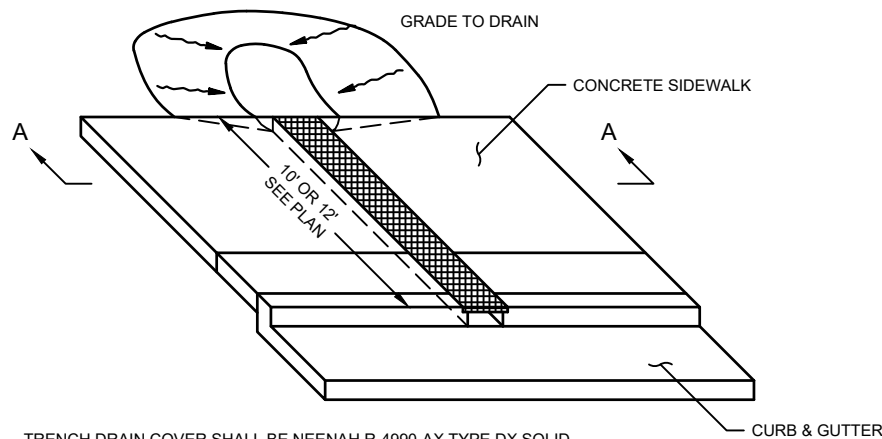
SIGN ACCOMMODATION HOLES
NO SCALE

* 2" ASPHALT SURFACE DRIVEWAYS ON 6" BASE AGGREGATE DENSE 1 1/4-INCH.
** 6" CONCRETE ON 6" BASE AGGREGATE DENSE 1 1/4-INCH.

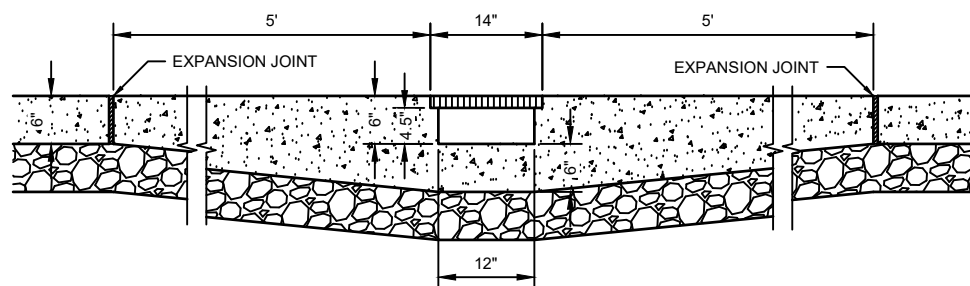


SECTION A-A

TYPICAL DRIVEWAY APPROACH
NO SCALE



TRENCH DRAIN COVER SHALL BE NEENAH R-4990-AX TYPE DX SOLID COVER OR APPROVED EQUAL. ADDITIONAL GRADING BEHIND THE BACK OF SIDEWALK TO CHANNEL WATER SHALL BE CONSIDERED INCIDENTAL.

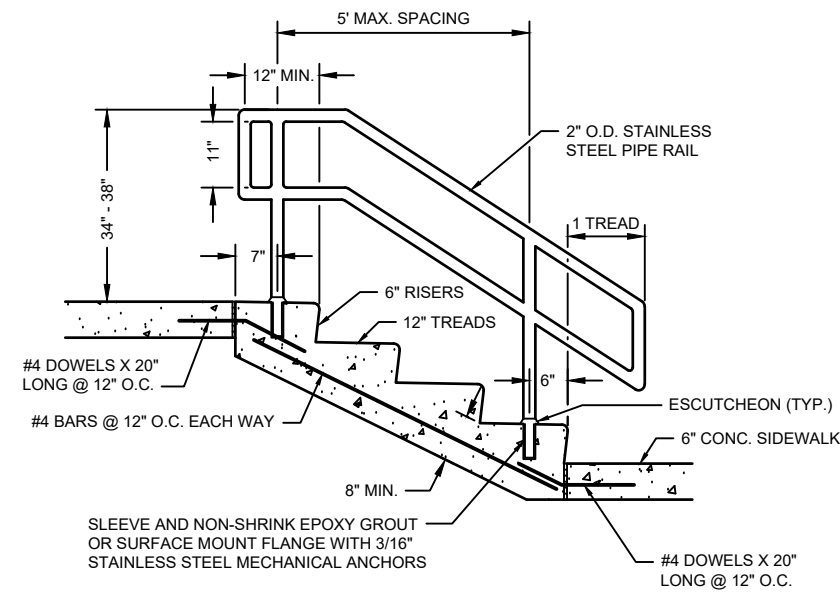


SECTION A-A

TRENCH DRAIN
NO SCALE

NOTES:

1. FUSION-WELDED. WELDS SHALL NOT SHOW ON THE FINISHED HANDRAIL
2. TUBE SECTIONS WILL BE FORMED TO SMOOTH RADII, SHOWING NO BUCKLES, KINKS, OR OTHER IMPERFECTIONS.



CONCRETE STEPS WITH HANDRAIL
NO SCALE

NOT USED

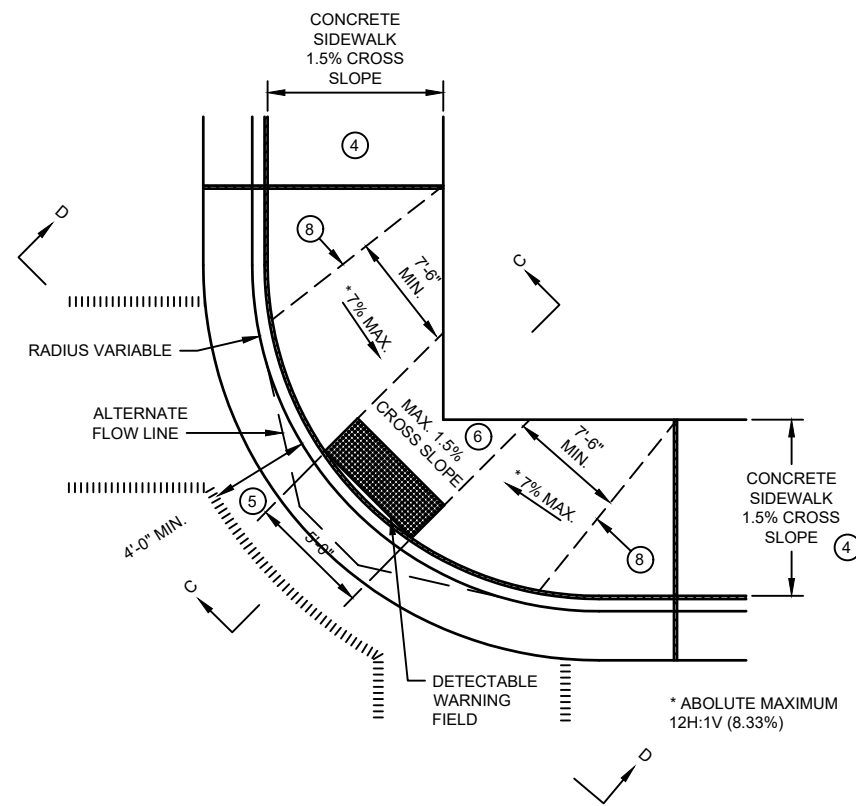
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS								
F.B.:		CHECKED BY:	TKA								
PLOT DATE: 5/7/18, P:\520a\52400524035\CADD\Construction Drawings\00524035 Roadway Details.dwg											

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54968
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

ROADWAY DETAILS

FILE NO.
00524035
SHEET
G6



PLAN VIEW
TYPE 1-A RAMP
(NO TERRACE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

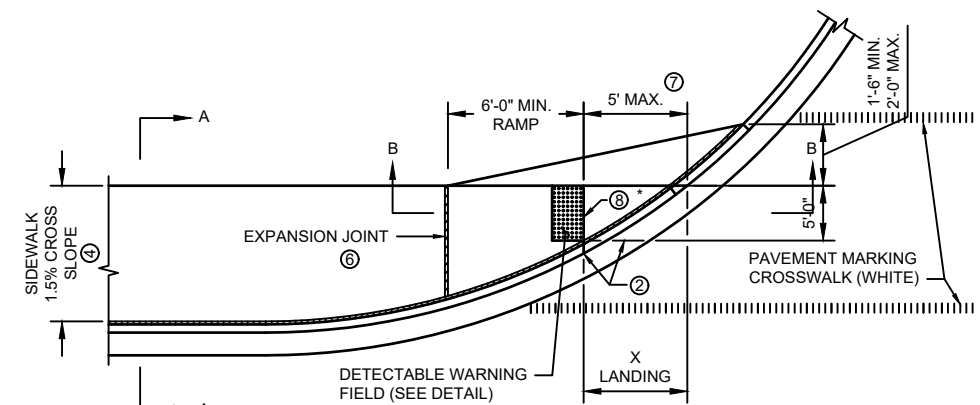
DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE WISDOT APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

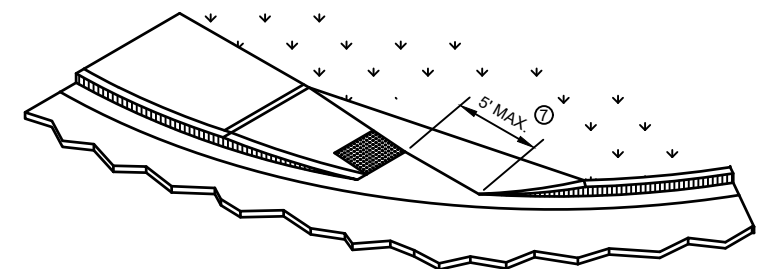
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

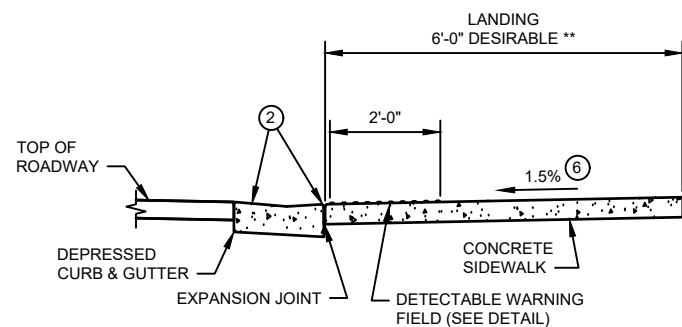
- 1 THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 +0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 5 PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.)
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- 7 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 10 INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- 11 SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.



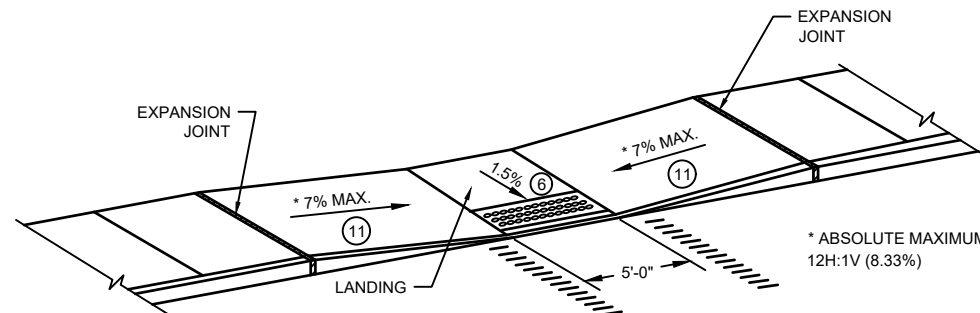
CURB RAMP TYPE 4A1
PLAN VIEW



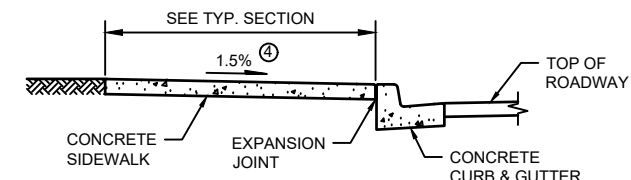
ISOMETRIC VIEW - TYPE 4A1



SECTION C-C



MID-BLOCK CROSSING
CURB RAMP TYPE 7A



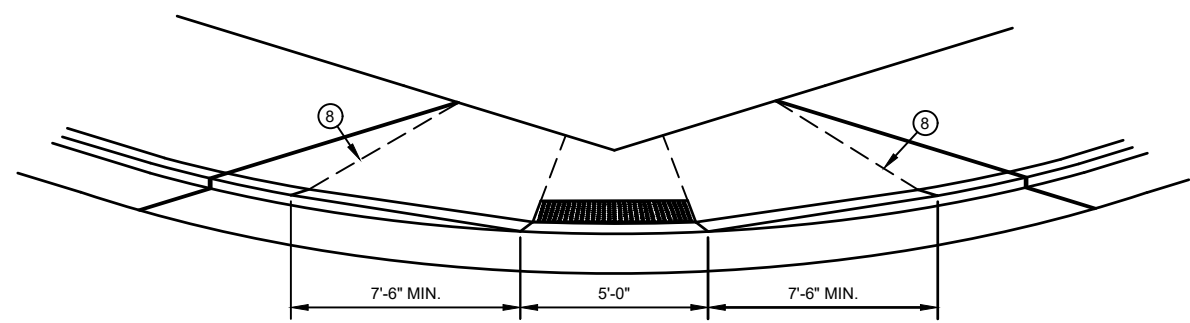
SECTION A-A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED.

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5 1/2"

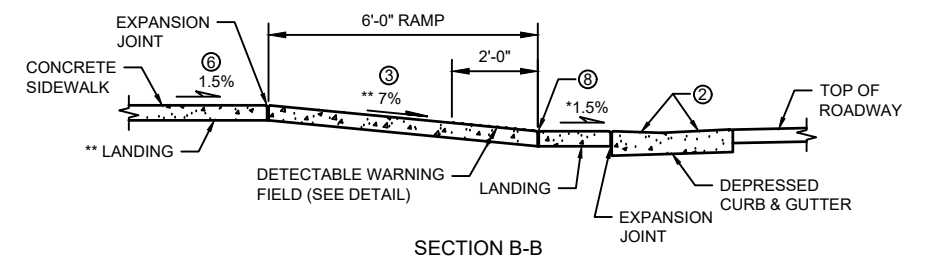
INTERMEDIATE RADII CAN BE INTERPOLATED



VIEW D-D

LEGEND

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



SECTION B-B

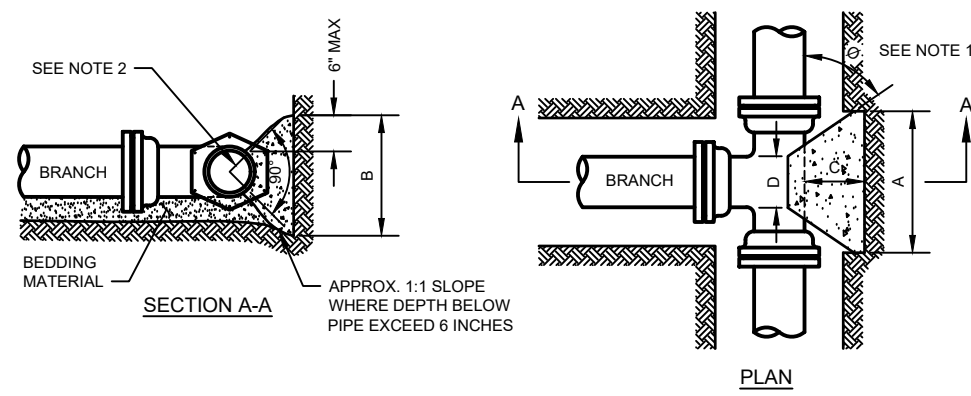
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

ROADWAY DETAILS

FILE NO.
00524035
SHEET
G7

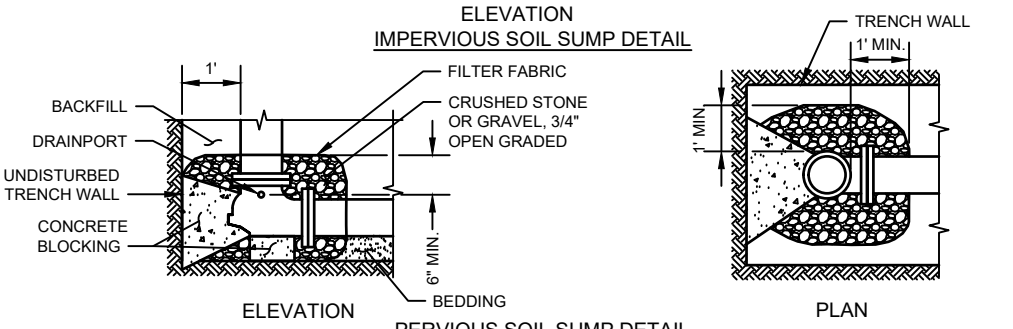
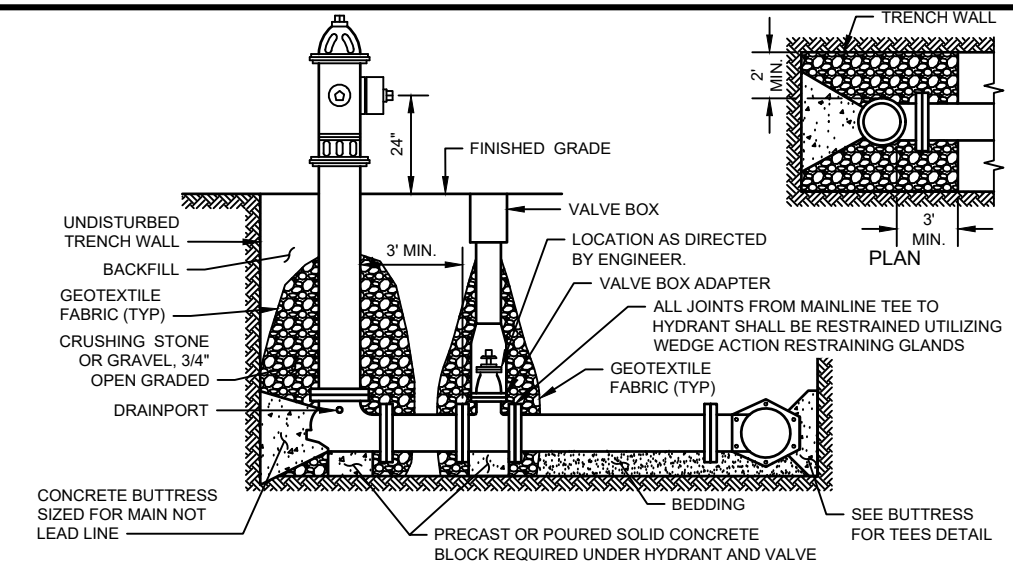


- NOTES:
- DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE θ GREATER THAN OR EQUAL TO 45°.
 - CONCRETE SHOULD BEAR ON THIS QUADRANT OF PIPE AT A MINIMUM.
 - DIMENSION 'D' SHOULD BE AS LARGE AS POSSIBLE BUT CONCRETE SHOULD NOT INTERFERE WITH MECHANICAL JOINTS.
 - BUTTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI. INFORM THE ENGINEER IF ON-SITE SOIL DOES NOT MEET THIS CONDITION OR PRESSURES EXCEED 150 PSI.
 - BUTTRESS TO BE PLACED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
 - CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI.
 - ALL POURED BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
 - IN ADDITION TO BUTTRESSES, ALL JOINTS SURROUNDING TEES SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS.

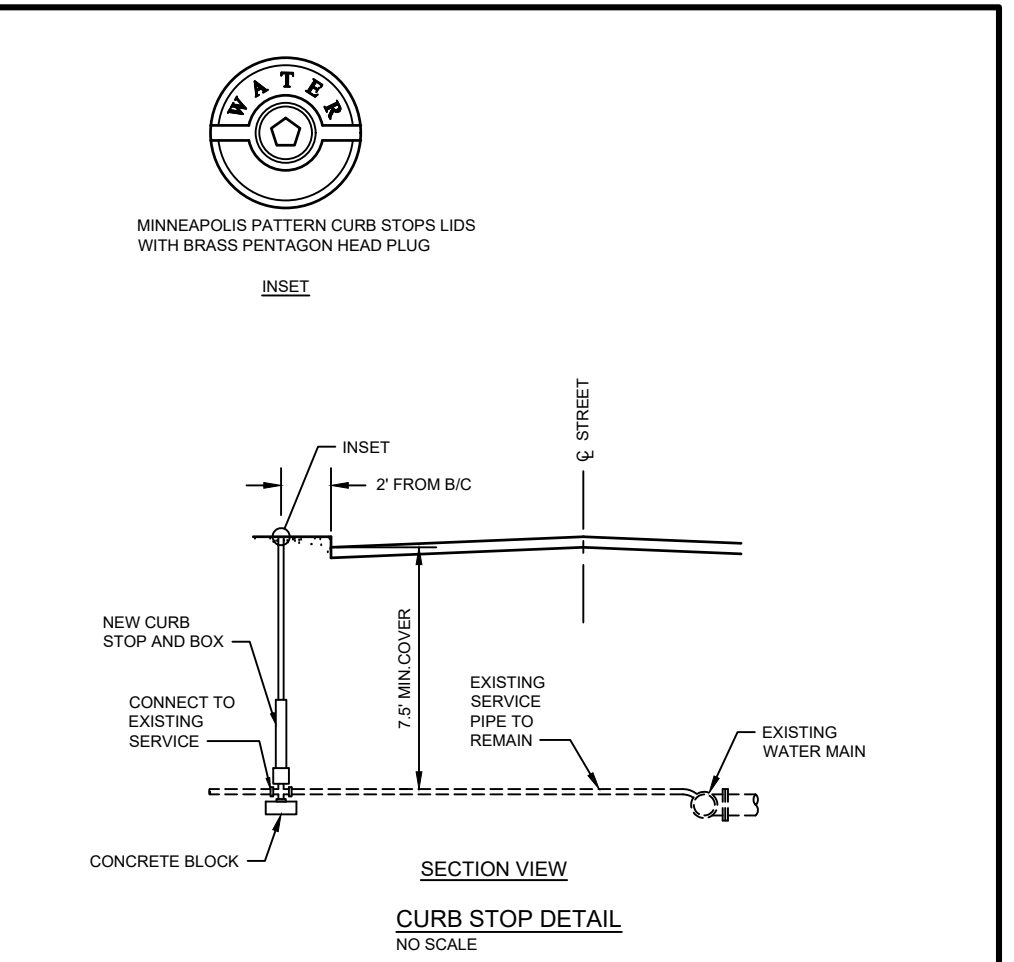
BUTTRESS DIMENSIONS				
DIA.	A	B	C	D
6"	1'-3"	1'-0"	SEE NOTE NO. 1	SEE NOTE NO. 3
8"	1'-6"	1'-4"		
10"	1'-10"	1'-8"	SEE NOTE NO. 1	SEE NOTE NO. 3
12"	2'-3"	2'-0"		
16"	3'-2"	2'-6"	SEE NOTE NO. 1	SEE NOTE NO. 3
20"	4'-0"	3'-0"		
24"	5'-3"	3'-4"	SEE NOTE NO. 1	SEE NOTE NO. 3

DIA. = BRANCH DIAMETER

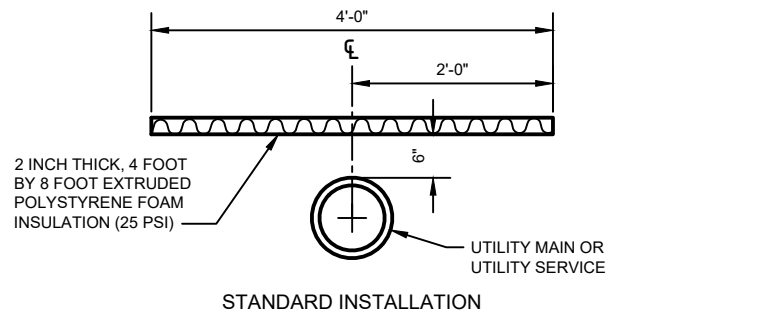
BUTTRESS FOR TEES DETAIL
NO SCALE



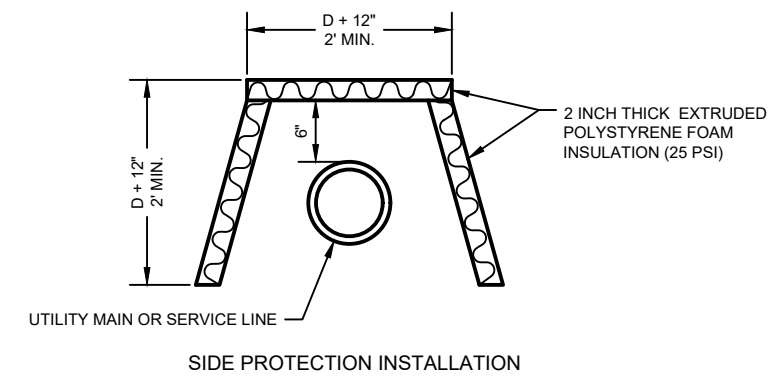
HYDRANT AND LEAD CONNECTION DETAIL
NO SCALE



CURB STOP DETAIL
NO SCALE



STANDARD INSTALLATION



SIDE PROTECTION INSTALLATION

- GENERAL NOTES:
- THE SIDE PROTECTION INSTALLATION SHALL BE USED WHERE FROST WILL PENETRATE BELOW THE PIPE INVERT.

PIPE INSULATION DETAIL
NO SCALE

NOT USED

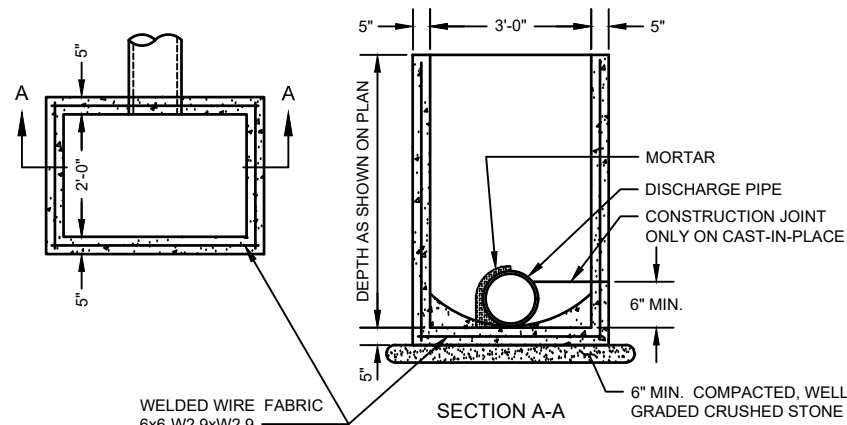
NOT USED

PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.	DATE	REVISION	BY:
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54988
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

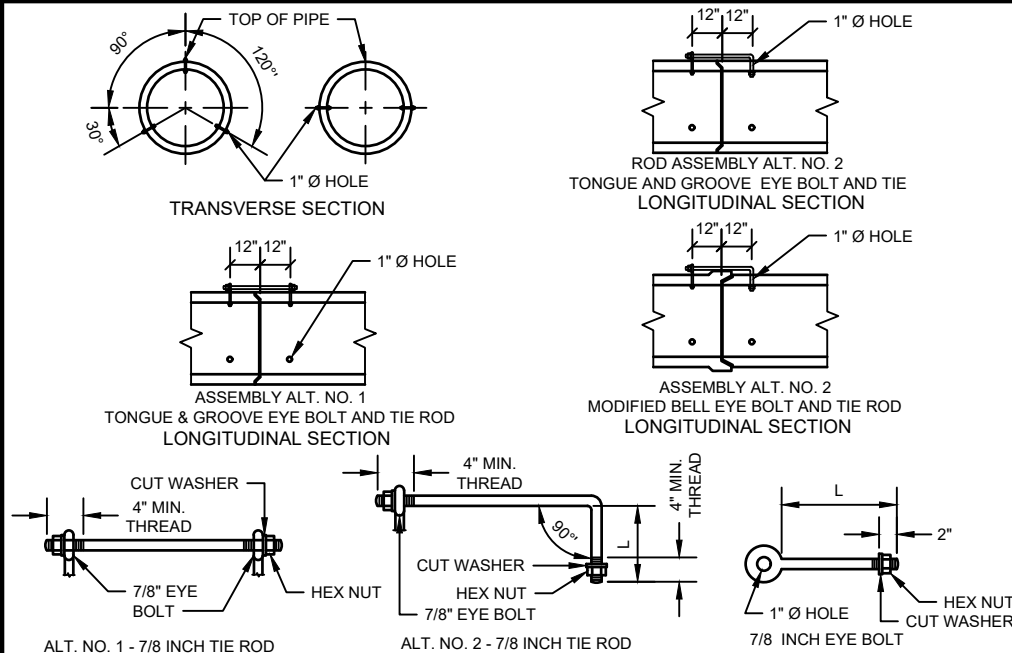
FILE NO. 00524035
SHEET G8
WATER DETAILS



GENERAL NOTES:

- SEE PLANS FOR SIZE, NUMBER, AND LOCATION OF PIPES.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE SPECIFICATIONS.
- DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.
- ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.
- PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR WELL GRADED CRUSHED STONE. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.
- PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.
- ALL BAR STEEL AND WELDED WIRE FABRIC REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.

2' x 3' INLET DETAIL
NO SCALE

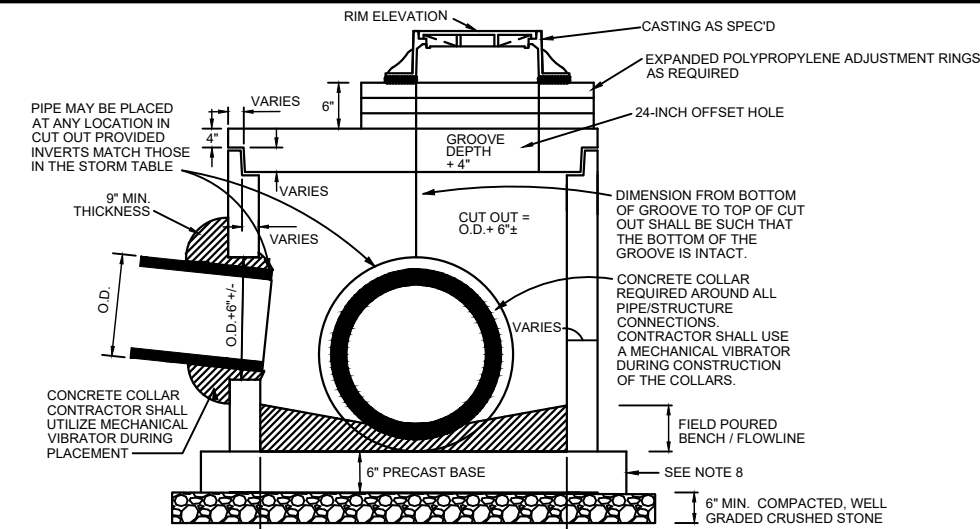


EYE BOLT DIMENSION TABLE

PIPE SIZE (INCHES)	LENGTH, L (INCHES)	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18 TO 24	4 1/2	5 1/2
30	5	7
36	5 1/2	7
42	5	
48	6 1/2	
60	7 1/2	
72	8 1/2	

- GENERAL NOTES:**
- CONCRETE CULVERT PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
 - DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
 - HOLES SHALL BE FILLED WITH A NON-SHRINK GROUT OR A NON-SHRINK EPOXY GROUT AS DIRECTED BY THE ENGINEER.
 - BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

CONCRETE PIPE JOINT TIE DETAIL
NO SCALE

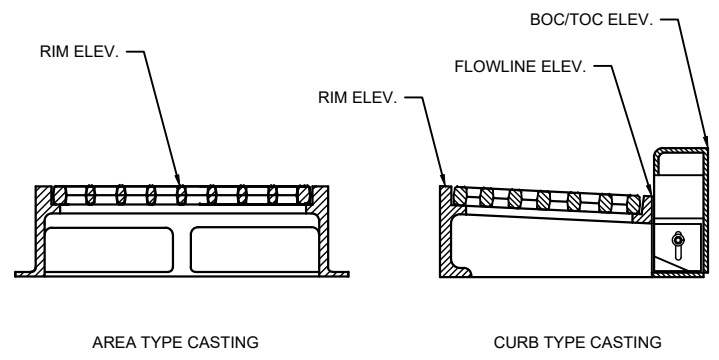


GENERAL NOTES:

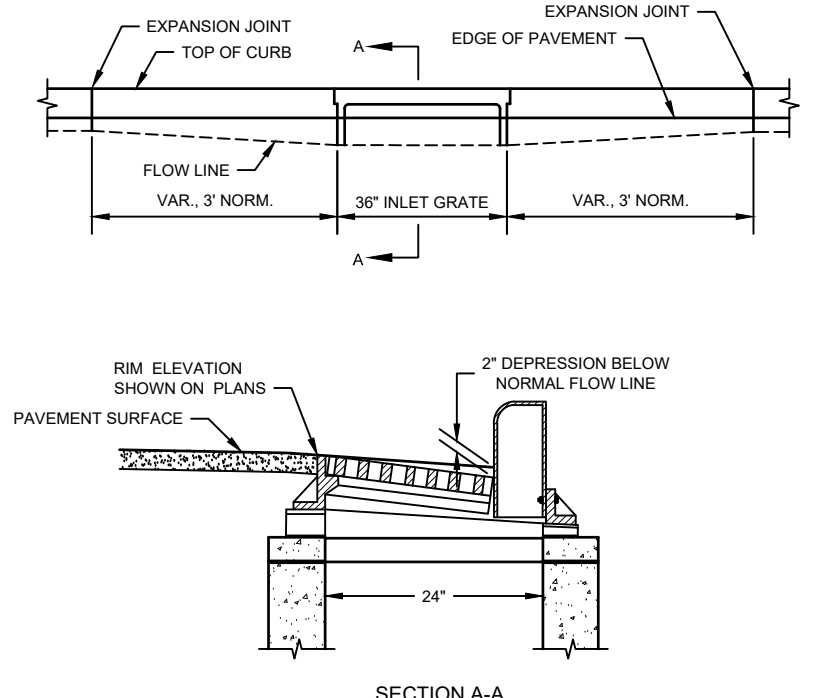
- SEE PLANS FOR SIZE, NUMBER, AND LOCATION OF PIPES.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE SPECIFICATIONS.
- DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.
- ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.
- PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR WELL GRADED CRUSHED STONE. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.
- ALL BAR STEEL AND WELDED WIRE FABRIC REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- PRECAST REINFORCED CONCRETE RISERS SHALL BE PLACED WITH TONGUE DOWN.
- OVERHANGING BASE NOT REQUIRED WHERE INTEGRAL BASE IS ALLOWED. SEE SPECIAL PROCEDURES OR CONTACT ENGINEER TO VERIFY.

STORM MANHOLE DETAIL
NO SCALE

NOT USED



RIM ELEVATION DEFINITION
N.T.S.



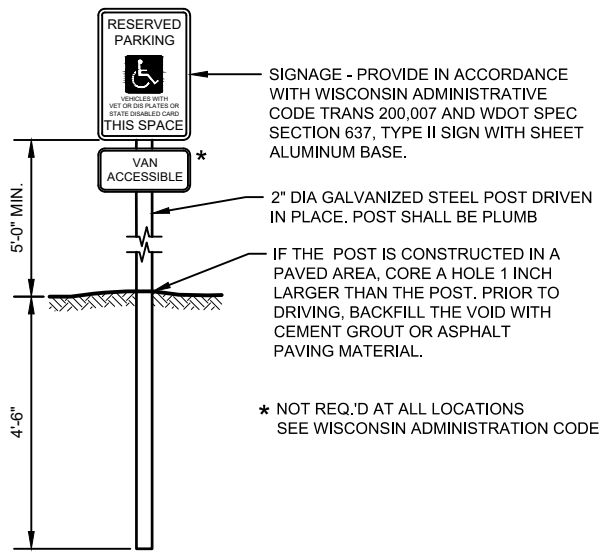
CURB AND GUTTER AT INLETS DETAIL
NO SCALE

PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

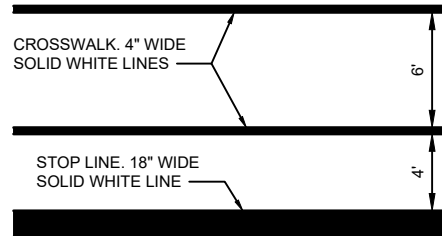
MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

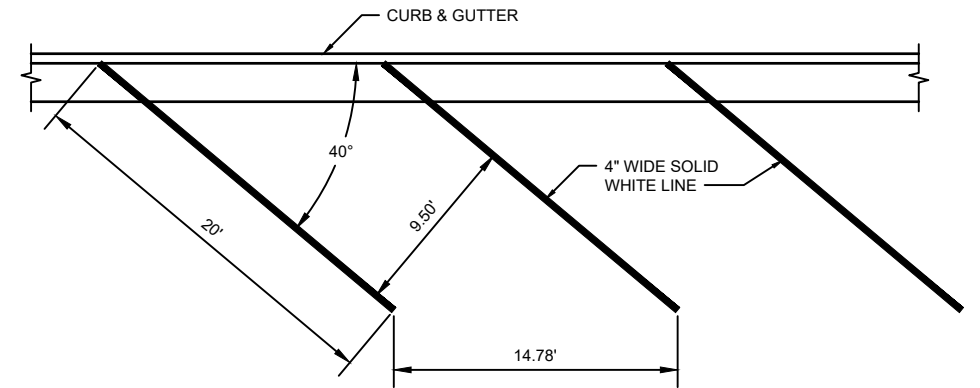
STORM DETAILS	FILE NO. 00524035
	SHEET G9



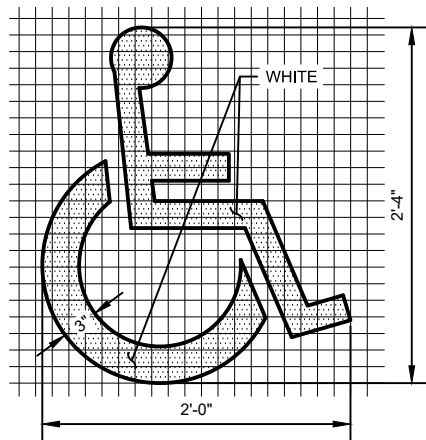
BARRIER FREE SIGNAGE
NO SCALE



CROSSWALK & STOP LINE STRIPING DETAIL
NO SCALE



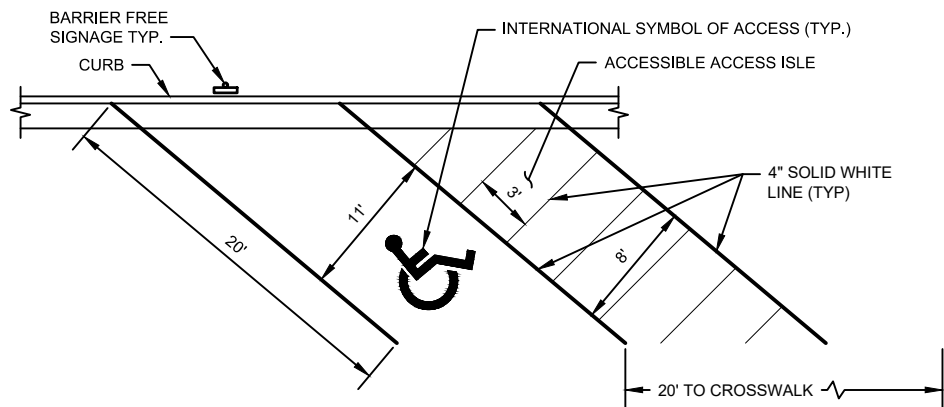
ANGLE PARKING STRIPING DETAIL
NO SCALE



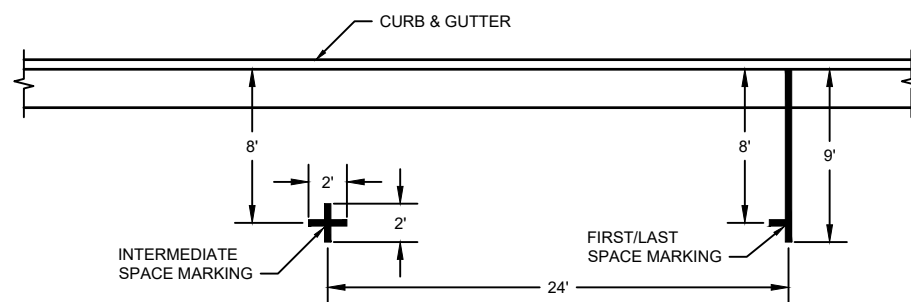
INTERNATIONAL SYMBOL OF ACCESS
NO SCALE

GENERAL NOTES:

1. DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE SPECIFICATIONS.
2. A DETAILED DRAWING OF THE DISABLED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.
3. WDOT SPEC. MEANS THE STATE OF WISCONSIN STANDARD SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, AS AMENDED BY THE MOST CURRENT INTERIM SUPPLEMENTAL SPECIFICATION.
4. PROVIDE DISABLED PARKING STALLS AT LOCATIONS SHOWN ON THE DRAWINGS. STALL AND ACCESS ISLE DIMENSIONS SHALL BE AS SHOWN ON THE DETAIL UNLESS INDICATED OTHERWISE ON THE DRAWING.
5. PROVIDE A DISABLED SYMBOL AND BARRIER FREE SIGNAGE FOR EACH STALL SHOWN ON THE DRAWING.
6. PROVIDE WHEEL STOPS WHEN SHOWN ON THE DRAWINGS.
7. THE MAXIMUM SURFACE SLOPE, ACROSS STALLS OR ACCESSIBLE ROUTES, IN ANY DIRECTION, SHALL BE 2%.



ACCESSIBLE PARKING STALL
NO SCALE

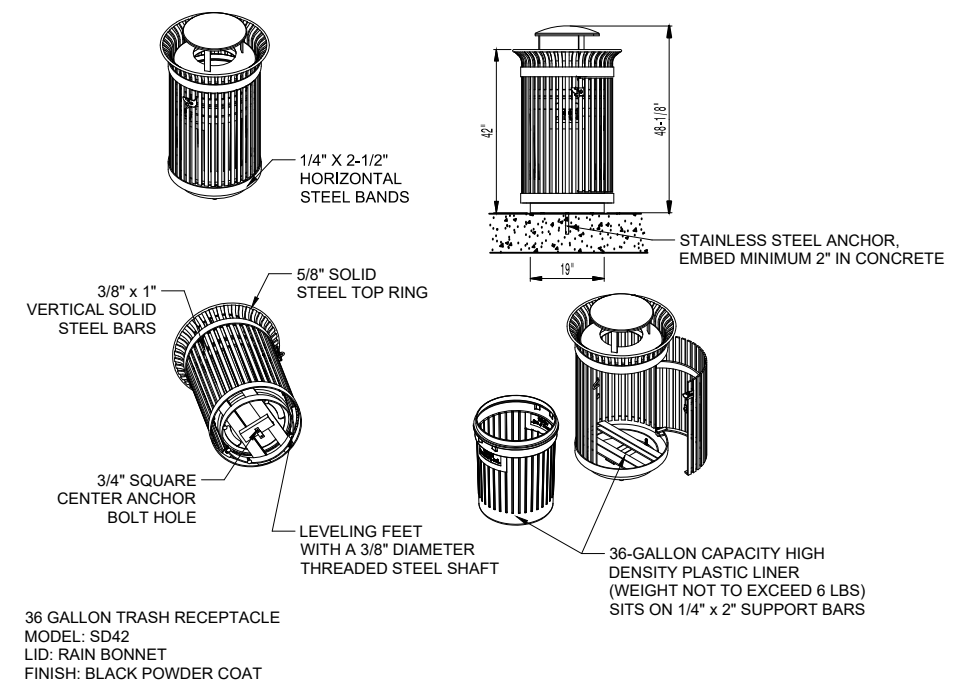


PARALLEL PARKING STRIPING DETAIL
NO SCALE

VICTOR STANLEY, INC.®
Manufacturers of Quality Site Furnishings since 1962.

* ALL DIMENSIONS ARE IN INCHES *

P.O. DRAWER 330 - DUNKIRK, MD 20754 USA
TOLL FREE: (800) 368-2573 (USA & CANADA)
TEL (301) 855-8300 - FAX (410) 257-7579
WEB SITE: HTTP://WWW.VICTORSTANLEY.COM



TRASH RECEPTACLE AND MOUNTING DETAIL
NO SCALE

PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

PLOT DATE: 5/7/18, P:\520a\52400524035\CADD\Construction Drawings\00524035 Misc Details.dwg

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MISCELLANEOUS DETAILS

FILE NO.
00524035
SHEET
G10

Victor Stanley, Inc.

P.O. DRAWER 330 - DUNKIRK, MD 20754 USA
TEL (301) 855-8300 - FAX (410) 257-7579

PG 1 OF 2

PRODUCT SPECIFICATIONS

CADD Department
DRAWN R.D.N.

IEWS 7
REV. 1/20/98

**CLASSIC SERIES
C-10**
Standard 6 Foot Length
Shown With Recycled
Second Site Systems Slats

All fabricated components are steel shot-blasted, etched, phosphatized and electrostatically powder-coated with TGIC polyester powder coatings.

All specifications are subject to change. Please contact factory for details.

Ductile Iron castings come with a 5 year warranty against breakage

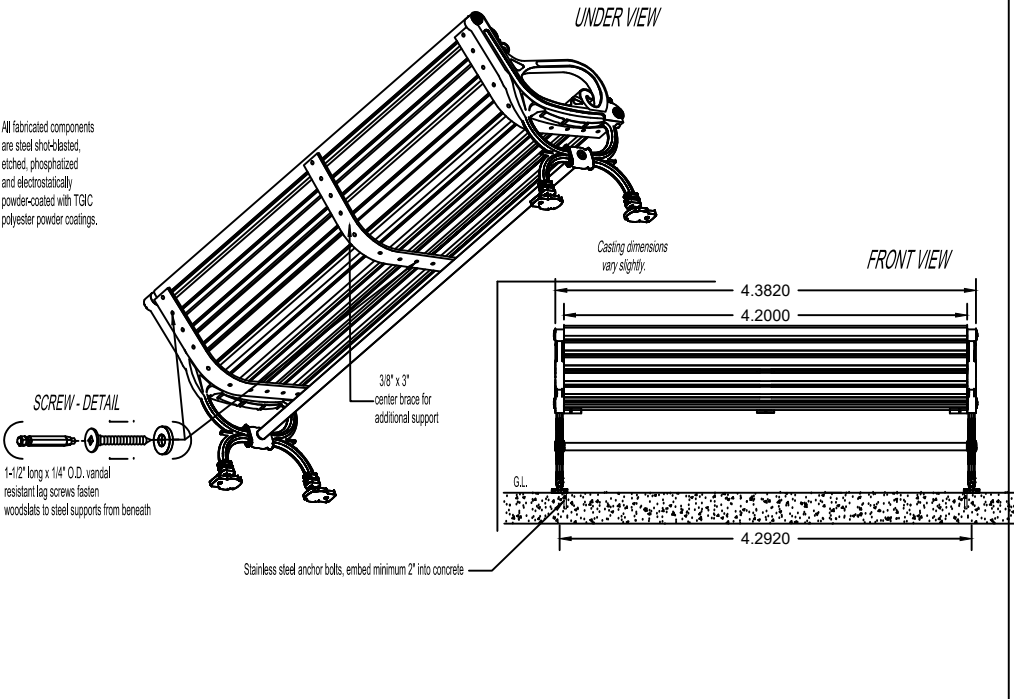
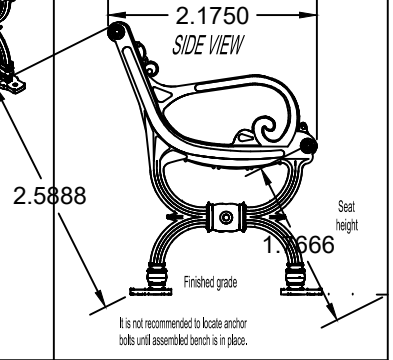
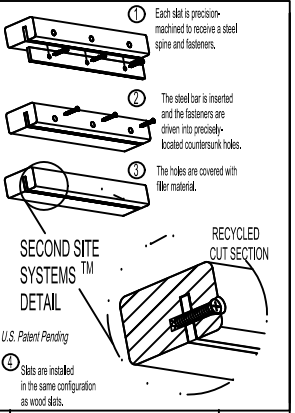
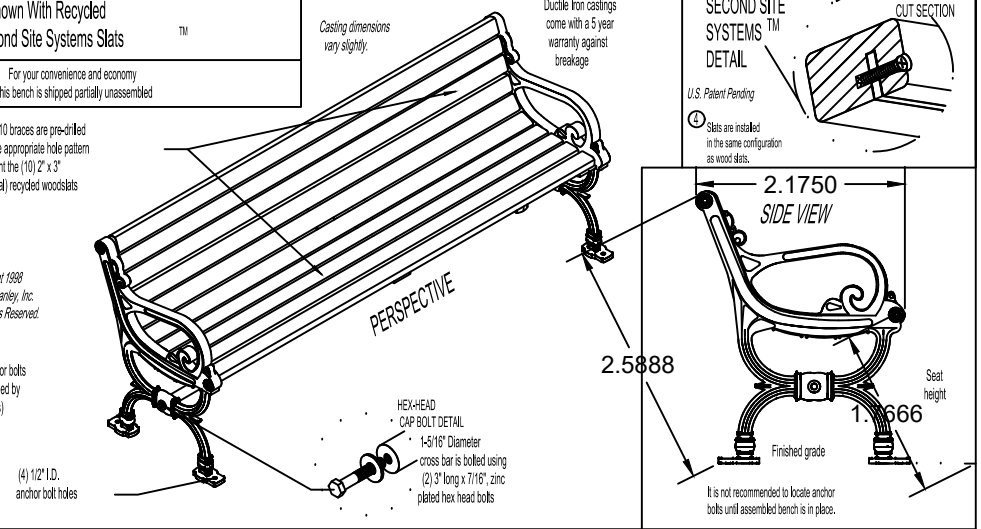
Casting dimensions vary slightly.

For your convenience and economy this bench is shipped partially unassembled

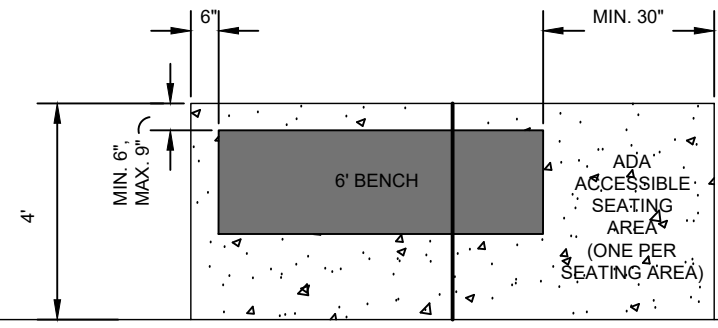
The C-10 braces are pre-drilled with the appropriate hole pattern to mount the (10) 2" x 3" (nominal) recycled woodslats

Copyright 1998
Victor Stanley, Inc.
All Rights Reserved

(Anchor bolts provided by others)



BENCH AND MOUNTING DETAILS
NO SCALE



- NOTE:**
1. MINIMUM PAD DEPTH 4'-0" FROM EDGE OF ADJACENT PAVEMENT.
 2. MINIMUM 5" THICK CONCRETE PAD.

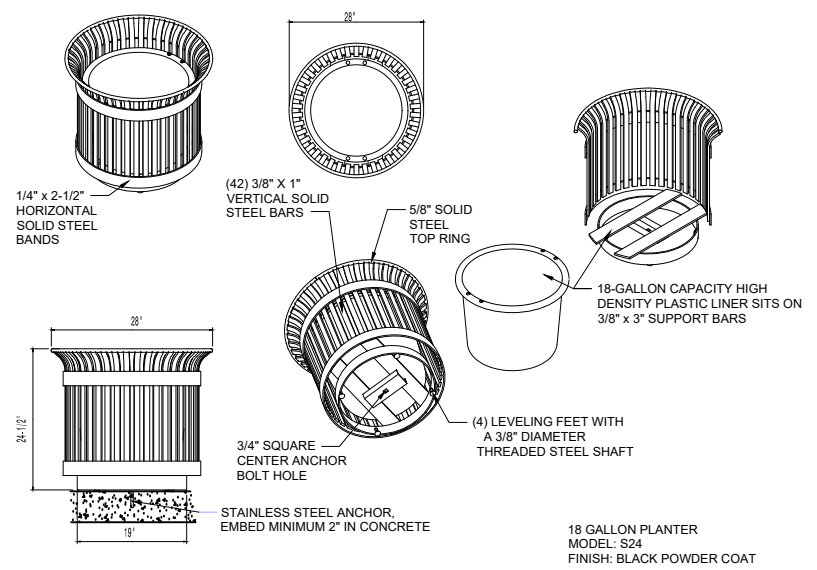
BENCH PAD DETAILS
NO SCALE



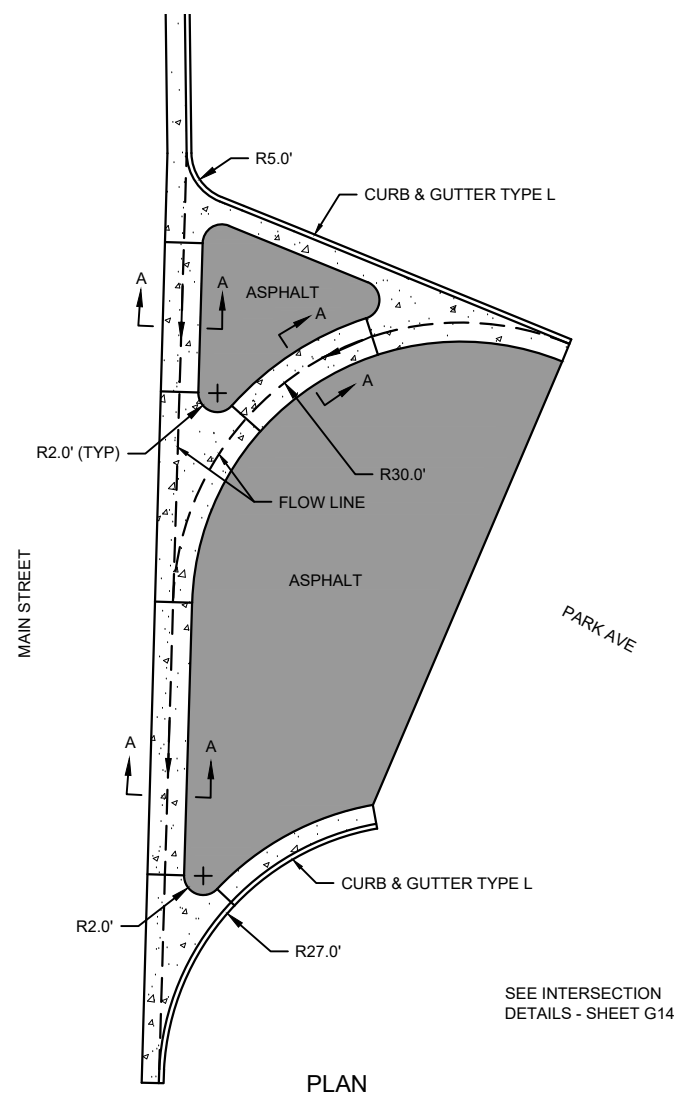
VICTOR STANLEY, INC.®
Manufacturers of Quality Site Furnishings since 1962.

* ALL DIMENSIONS ARE IN INCHES *

P.O. DRAWER 330 - DUNKIRK, MD 20754 USA
TOLL FREE: (800) 368-2573 (USA & CANADA)
TEL (301) 855-8300 - FAX (410) 257-7579
WEB SITE: HTTP://WWW.VICTORSTANLEY.COM

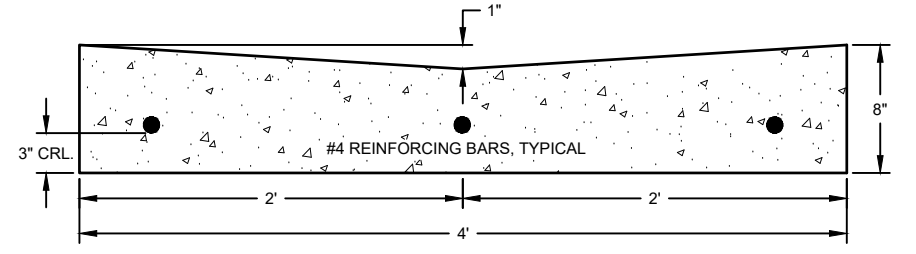


PLANTER DETAILS
NO SCALE



SEE INTERSECTION
DETAILS - SHEET G14

PLAN



SECTION A-A

- NOTES:**
- SPECIAL WATERWAY DETAIL SHALL BE USED WHEN SPECIFIED ON THE PLAN IN LIEU OF A SLOPE GUTTER AT PARK AVENUE INTERSECTION.
 - REINFORCING BARS SHALL BE EPOXY COATED AND INSTALLED IN THE SPECIAL WATERWAY AS SHOWN.
 - IN ALL CASES, CONCRETE CURB AND GUTTER SHALL BE PLACED ON UNDISTURBED EARTH OR THOROUGHLY COMPACTED CRUSHED STONE.

SPECIAL WATERWAY DETAIL
NO SCALE

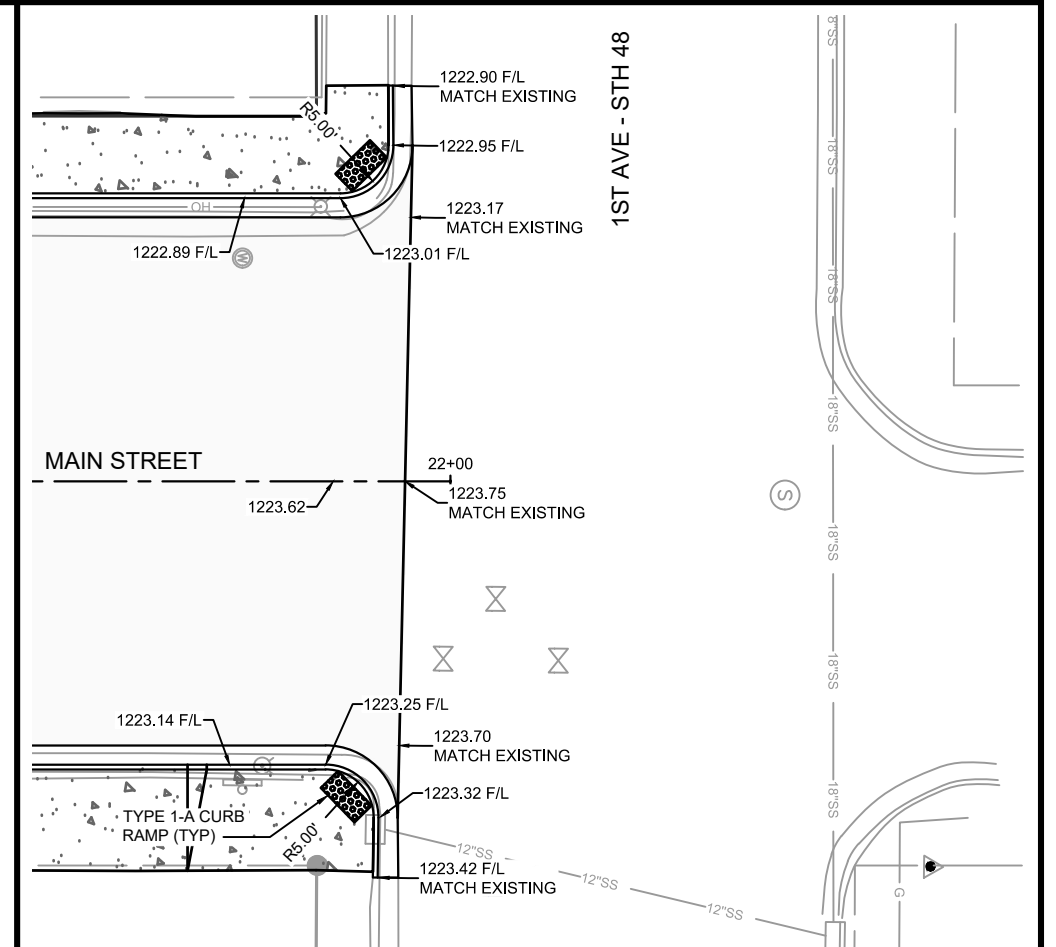
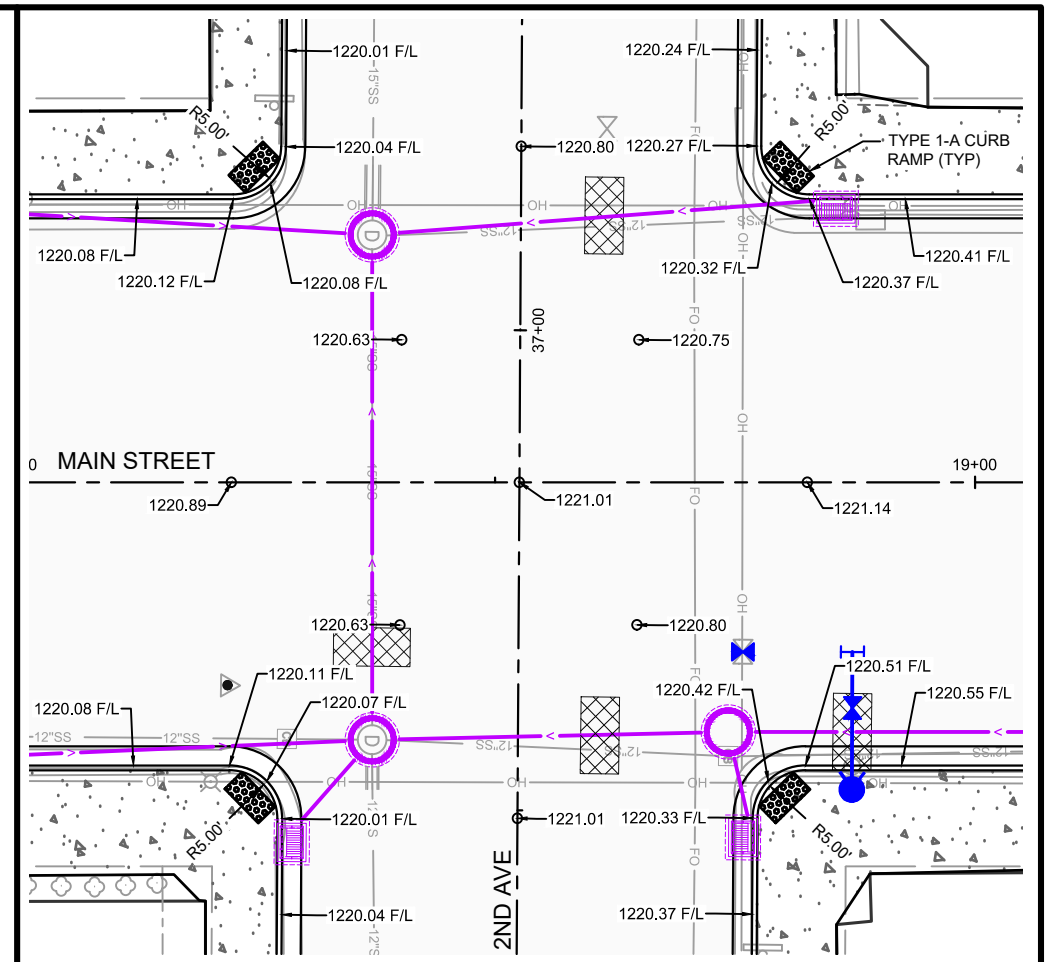
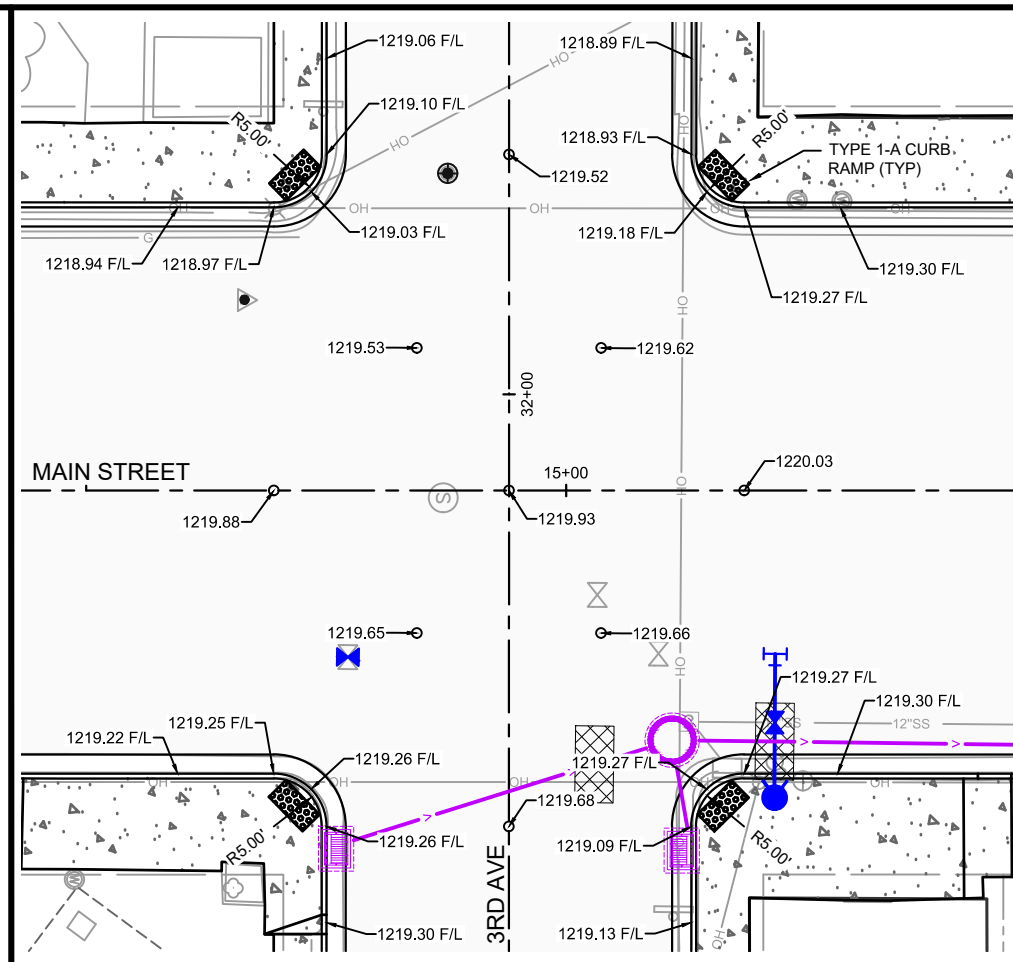
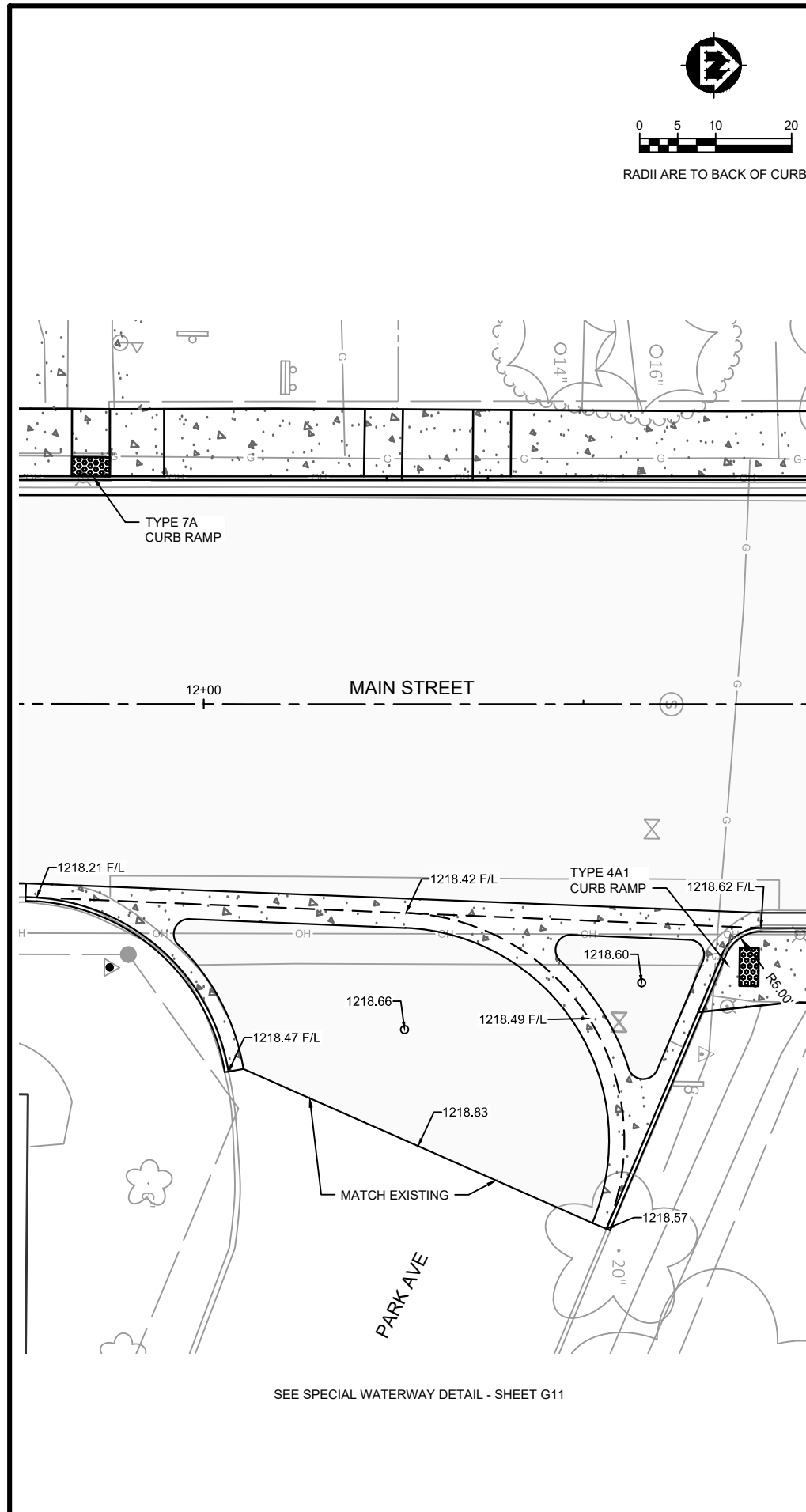
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.	DATE	REVISION	BY:
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54986
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MISCELLANEOUS DETAILS

FILE NO.	00524035
SHEET	G11



PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

PLOT DATE: 5/7/18, P:\520a\52400524035\CADD\Construction Drawings\00524035 Intersection Details.dwg

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

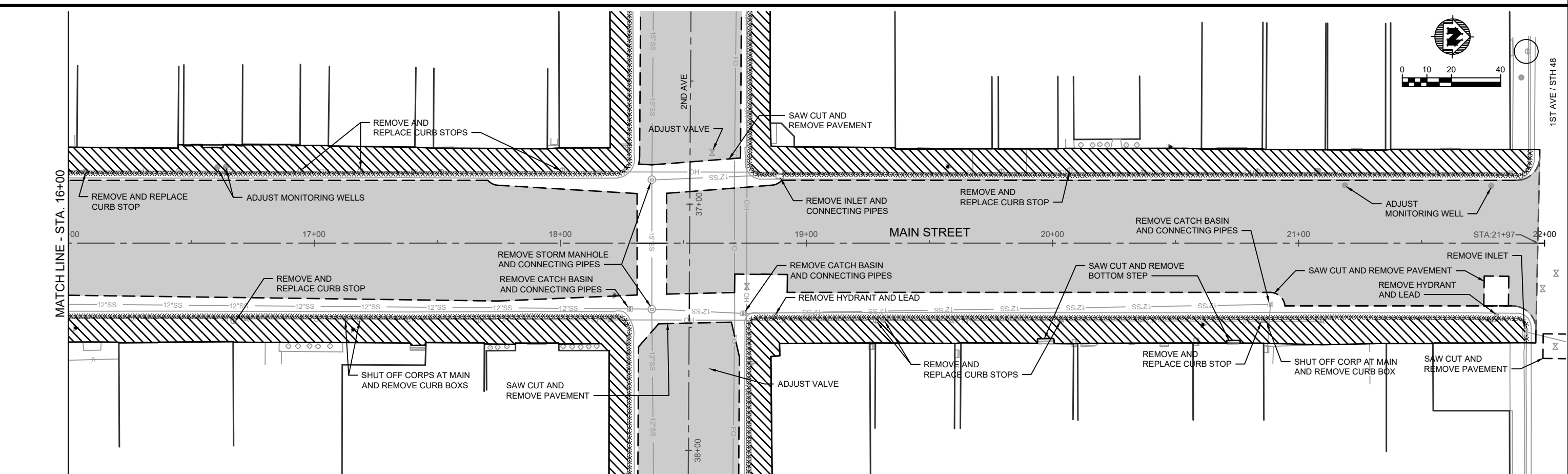
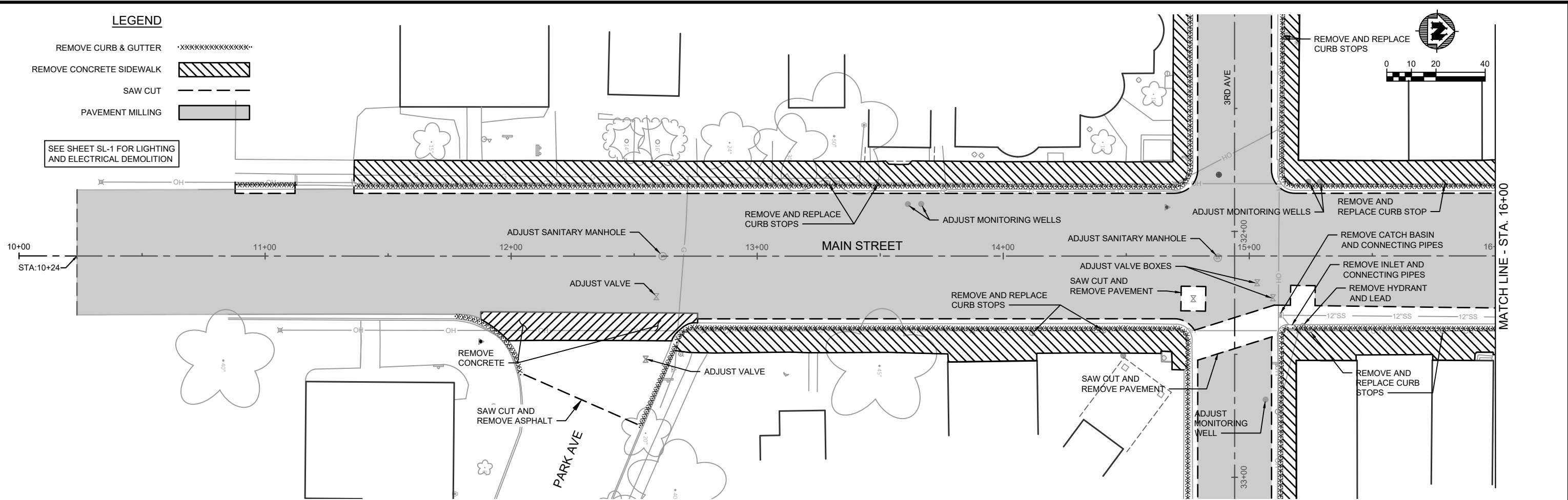
MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

INTERSECTION DETAILS
 FILE NO. 00524035
 SHEET G14

LEGEND

- REMOVE CURB & GUTTER
- REMOVE CONCRETE SIDEWALK
- SAW CUT
- PAVEMENT MILLING

SEE SHEET SL-1 FOR LIGHTING AND ELECTRICAL DEMOLITION



PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035						
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54988
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

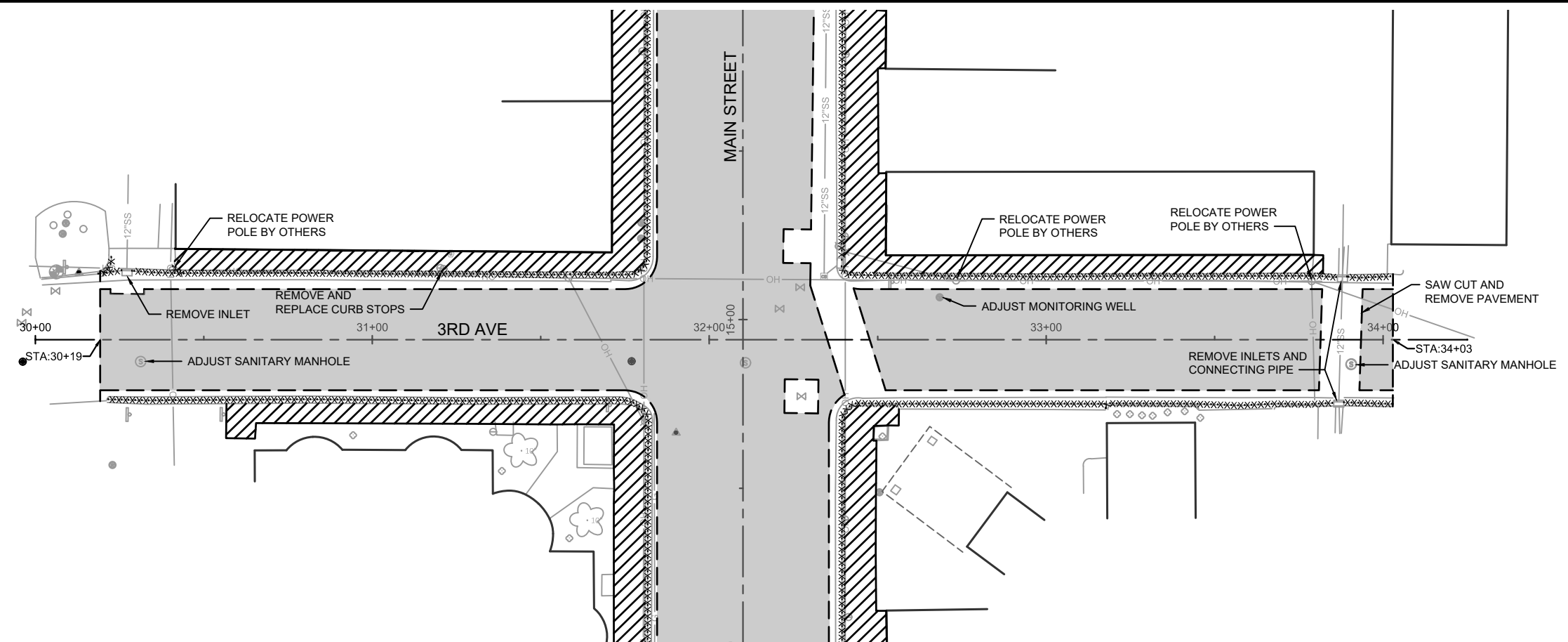
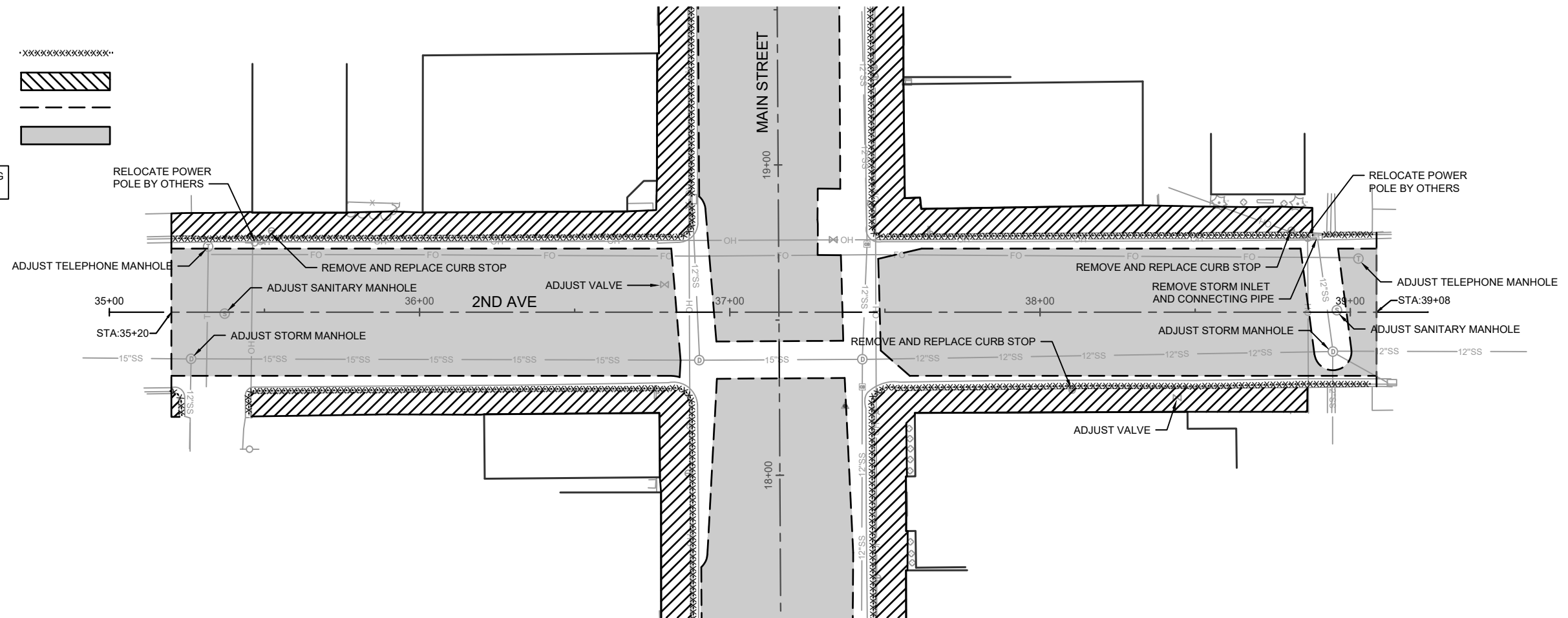
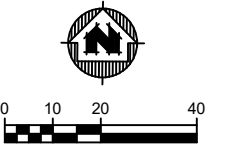
DEMOLITION AND REMOVALS PLAN

FILE NO.	00524035
SHEET	ST1

LEGEND

- REMOVE CURB & GUTTER -XXXXXXXXXXXXXXXXXX-
- REMOVE CONCRETE SIDEWALK [Hatched Box]
- SAW CUT - - - - -
- PAVEMENT MILLING [Grey Box]

SEE SHEET SL-1 FOR LIGHTING AND ELECTRICAL DEMOLITION



PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54986
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
© MSA Professional Services, Inc.

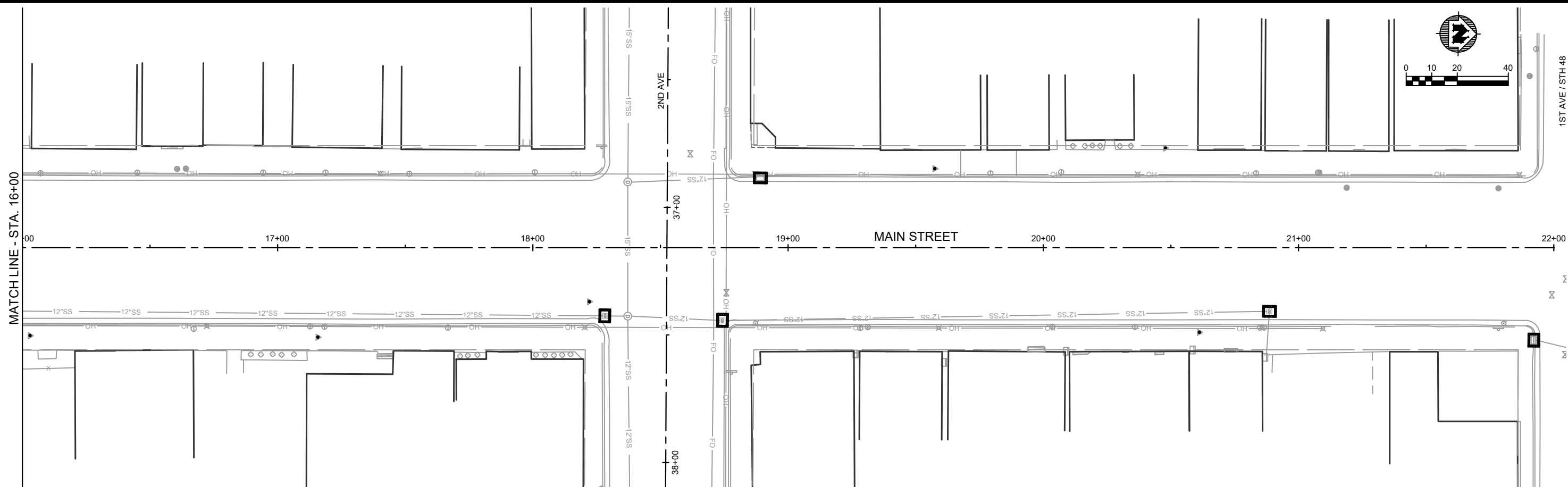
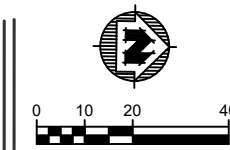
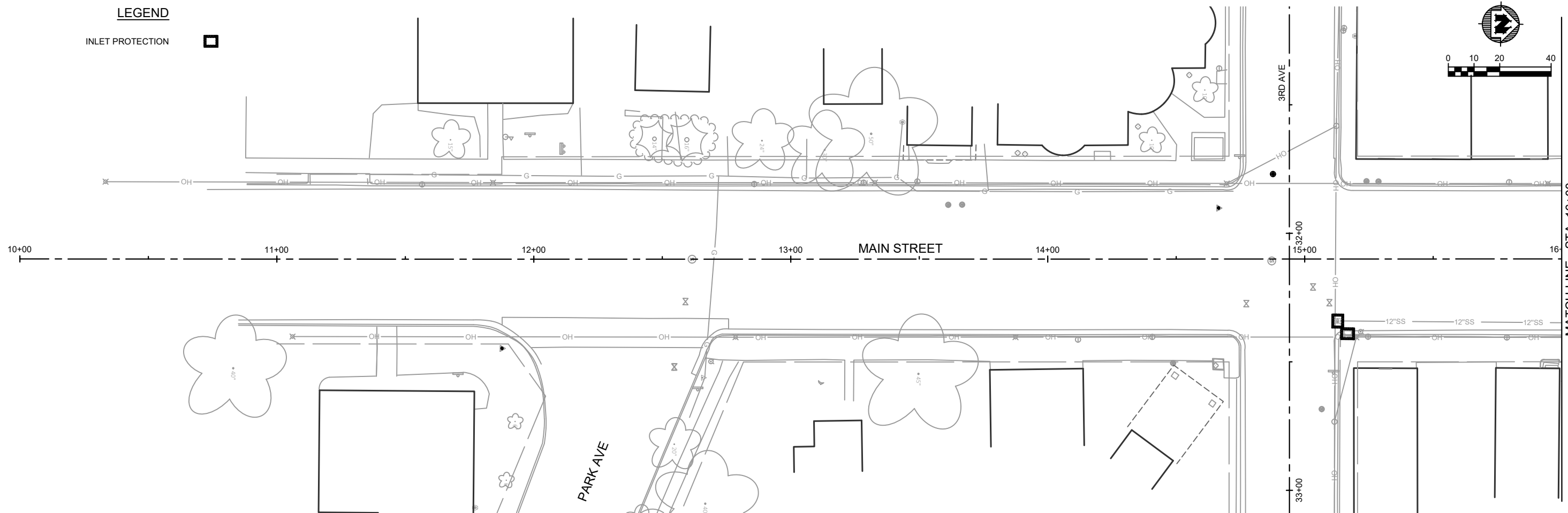
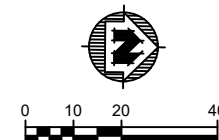
MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

DEMOLITION AND REMOVALS PLAN

FILE NO.
00524035
 SHEET
ST2

LEGEND

INLET PROTECTION 



PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				
PLOT DATE: 5/7/18, P:\520e\524\00524035\CADD\Construction Drawings\00524035 Erosion Control Plan.dwg							

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

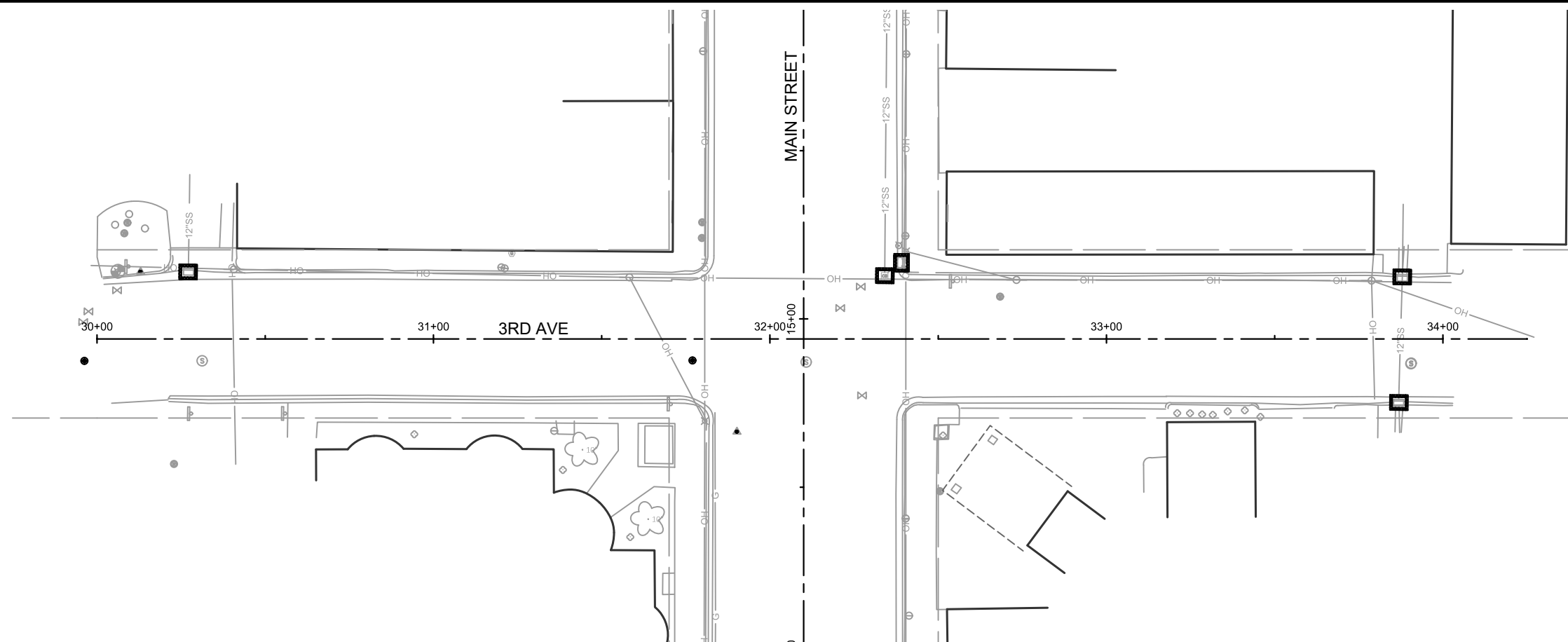
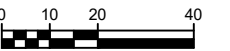
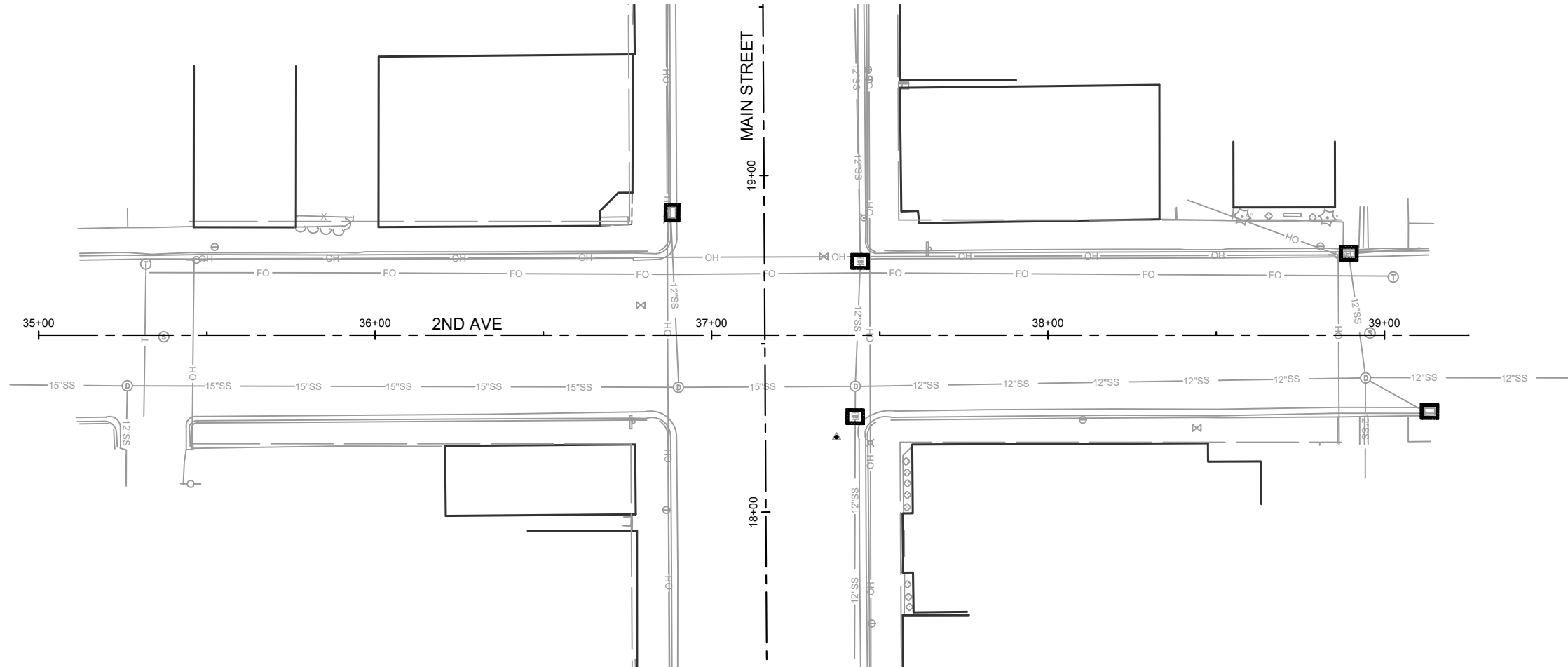
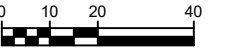
MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

EROSION CONTROL PLAN

FILE NO.
 00524035
 SHEET
 ST3

LEGEND

INLET PROTECTION 



PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				
PLOT DATE: 5/7/18, P:\520e\524\00524035\CADD\Construction Drawings\00524035 Erosion Control Plan.dwg							

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

EROSION CONTROL PLAN

FILE NO.
00524035
 SHEET
ST4

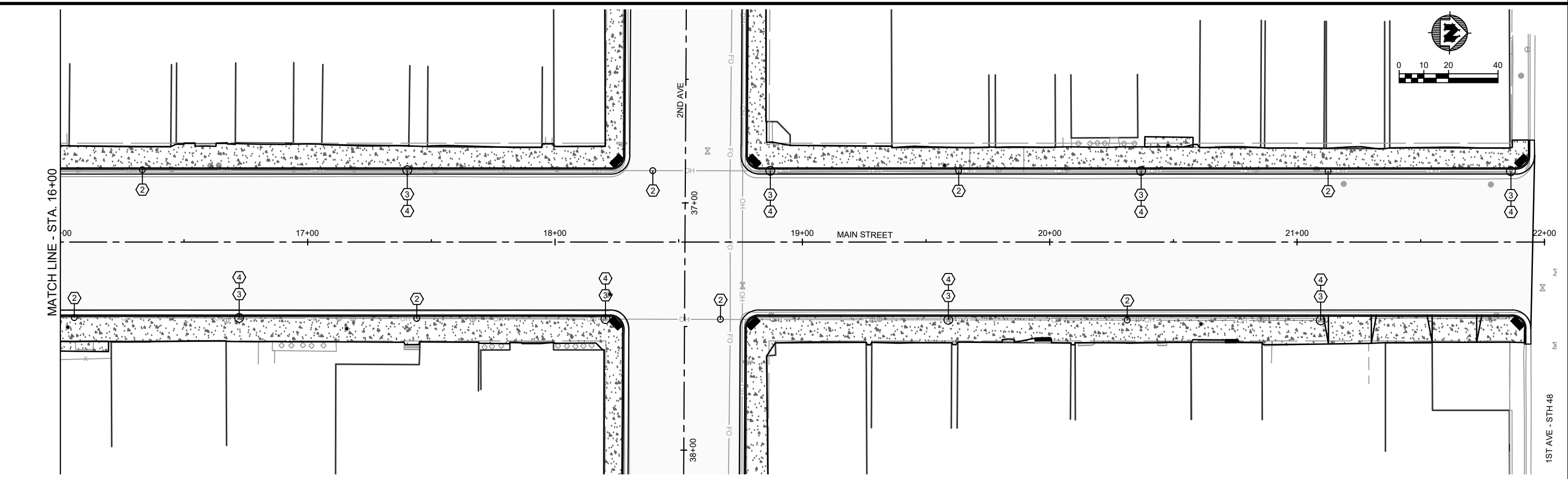
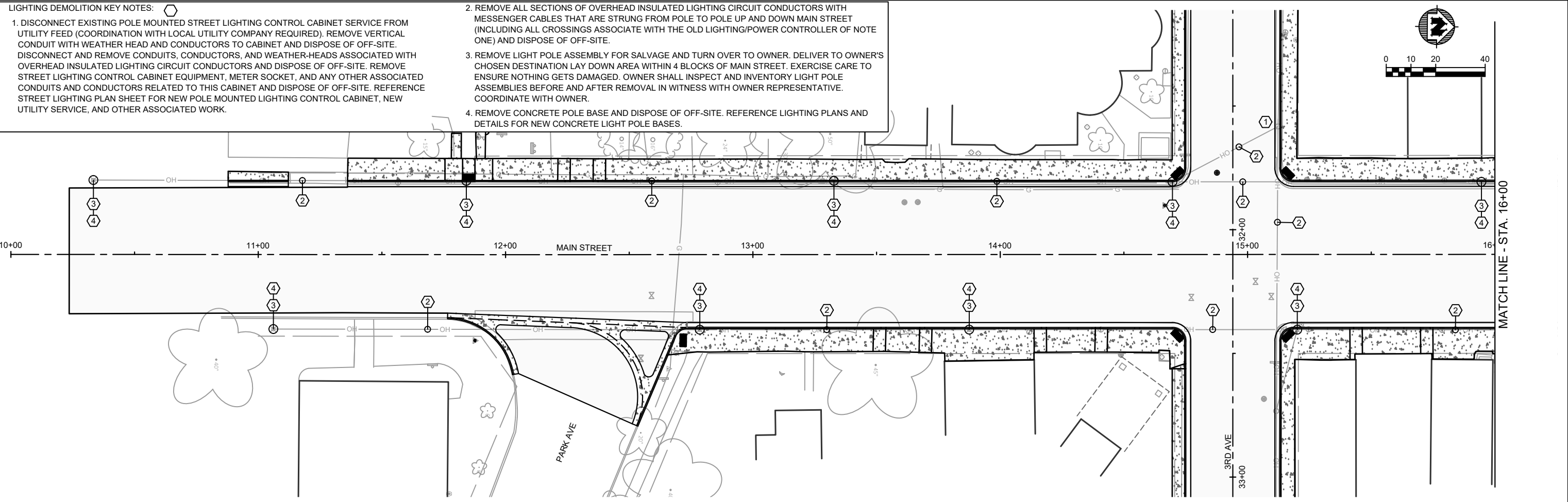
LIGHTING DEMOLITION KEY NOTES:

1. DISCONNECT EXISTING POLE MOUNTED STREET LIGHTING CONTROL CABINET SERVICE FROM UTILITY FEED (COORDINATION WITH LOCAL UTILITY COMPANY REQUIRED). REMOVE VERTICAL CONDUIT WITH WEATHER HEAD AND CONDUCTORS TO CABINET AND DISPOSE OF OFF-SITE. DISCONNECT AND REMOVE CONDUITS, CONDUCTORS, AND WEATHER-HEADS ASSOCIATED WITH OVERHEAD INSULATED LIGHTING CIRCUIT CONDUCTORS AND DISPOSE OF OFF-SITE. REMOVE STREET LIGHTING CONTROL CABINET EQUIPMENT, METER SOCKET, AND ANY OTHER ASSOCIATED CONDUITS AND CONDUCTORS RELATED TO THIS CABINET AND DISPOSE OF OFF-SITE. REFERENCE STREET LIGHTING PLAN SHEET FOR NEW POLE MOUNTED LIGHTING CONTROL CABINET, NEW UTILITY SERVICE, AND OTHER ASSOCIATED WORK.

2. REMOVE ALL SECTIONS OF OVERHEAD INSULATED LIGHTING CIRCUIT CONDUCTORS WITH MESSENGER CABLES THAT ARE STRUNG FROM POLE TO POLE UP AND DOWN MAIN STREET (INCLUDING ALL CROSSINGS ASSOCIATE WITH THE OLD LIGHTING/POWER CONTROLLER OF NOTE ONE) AND DISPOSE OF OFF-SITE.

3. REMOVE LIGHT POLE ASSEMBLY FOR SALVAGE AND TURN OVER TO OWNER. DELIVER TO OWNER'S CHOSEN DESTINATION LAY DOWN AREA WITHIN 4 BLOCKS OF MAIN STREET. EXERCISE CARE TO ENSURE NOTHING GETS DAMAGED. OWNER SHALL INSPECT AND INVENTORY LIGHT POLE ASSEMBLIES BEFORE AND AFTER REMOVAL IN WITNESS WITH OWNER REPRESENTATIVE. COORDINATE WITH OWNER.

4. REMOVE CONCRETE POLE BASE AND DISPOSE OF OFF-SITE. REFERENCE LIGHTING PLANS AND DETAILS FOR NEW CONCRETE LIGHT POLE BASES.



PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	MTP				
PLOT DATE: 5/7/18, P:\520e\524\00524035\CADD\Construction Drawings\00524035 Lighting Plans.dwg							

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54986
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

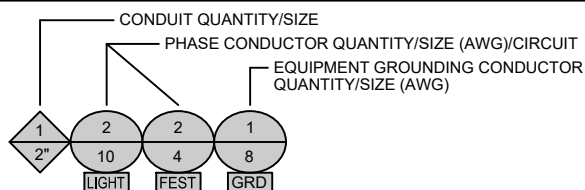
MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

STREET LIGHTING DEMOLITION PLAN

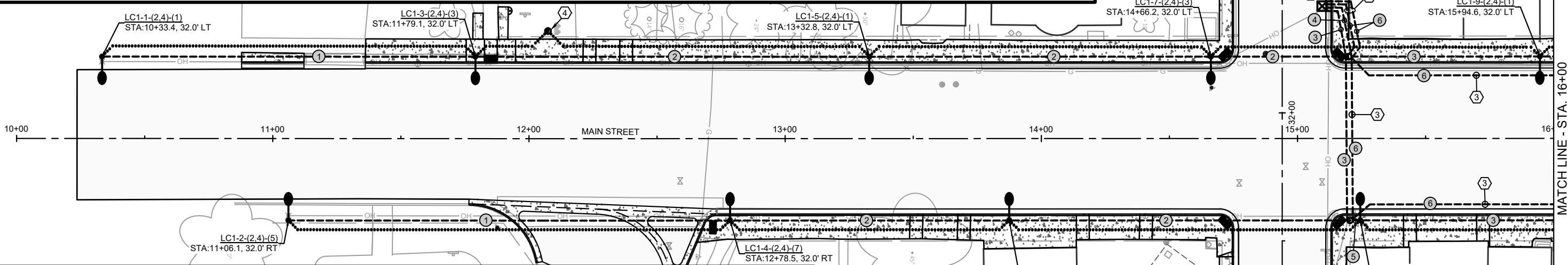
FILE NO.	00524035
SHEET	SL 1

LEGEND

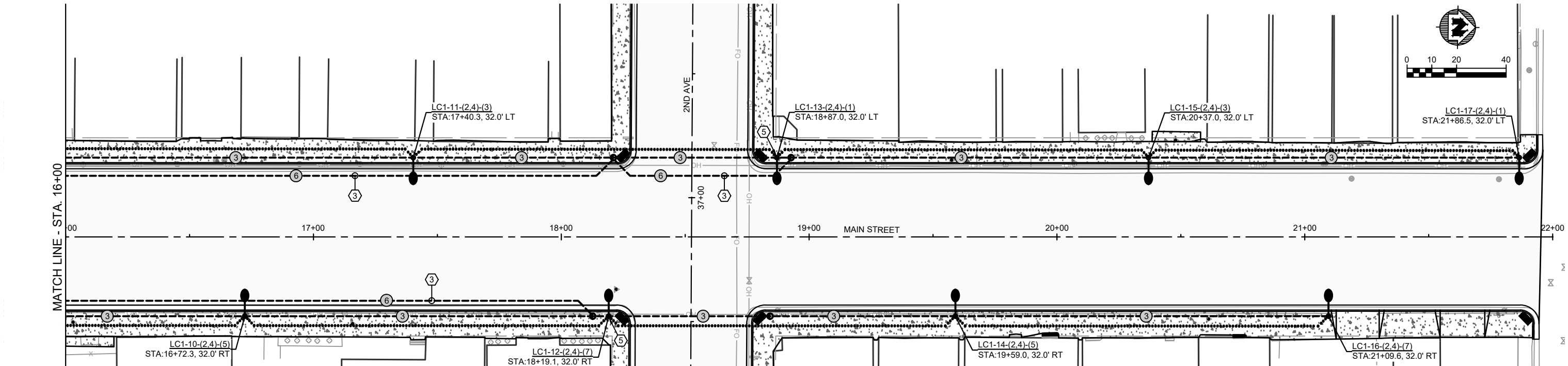
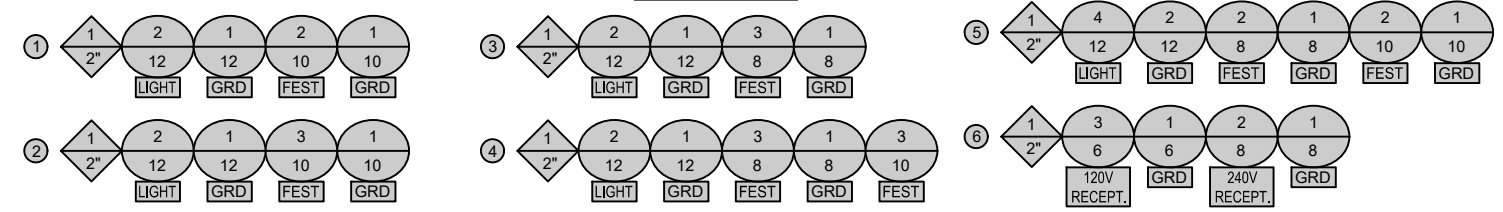
- LIGHT POLE ASSEMBLY (REF. PLANS AND SPECIFICATIONS)
- ☒ LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER POLE MOUNTED 7'-6" TO BOTTOM
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH UNLESS OTHERWISE NOTED (SCHEDULE 80 BELOW ROADWAY) (RGS ABOVE GRADE)
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH UNLESS OTHERWISE NOTED (FOR FUTURE SOUND BY OTHERS)
- PULL BOXES STEEL 24X42-INCH



- LIGHTING CONTROL CABINET DESIGNATION
- POLE NUMBER
- LIGHTING CIRCUIT(S)
- FESTOON RECEPTACLE (ALTERNATING CIRCUITS SHARING A NEUTRAL)
- X-X-(X,X)-(X) STA. XXX+XX.X, XX.X' RT/LT— LOCATION (TO CENTER OF POLE)
- X-X(T)-XX
- LUMINAIRE ARM LENGTH (FEET)
- POLE TYPE ('T' INCLUDES TRANSFORMER BASE)
- LUMINAIRE DESIGNATION (LED TYPE)



WIRING LEGEND



- STREET LIGHTING KEY NOTES:**
1. PROVIDE A NEW 200 AMP, 120/240 VOLT, SINGLE PHASE METERED ELECTRICAL SERVICE ON THIS UTILITY POLE TO SERVE NEW POLE MOUNTED LIGHTING CONTROL CABINET ASSEMBLY. PROVIDE A NEW POLE MOUNTED METER SOCKET PER UTILITY COMPANY REQUIREMENTS. PROVIDE SERVICE CONDUIT MAST WITH WEATHER-HEAD AND CONDUCTORS PER UTILITY COMPANY REQUIREMENTS. PROVIDE A STAINLESS STEEL NEMA 4X HINGED, GASKETED AND LOCKABLE CABINET ASSEMBLY WITH ALL INTERNAL ELECTRICAL EQUIPMENT (PER SPECIFICATIONS) TO SERVE THE PROJECT'S POWER, LIGHTING AND CONTROLS REQUIREMENTS. LOWEST MOUNTED POINT OF ANY EQUIPMENT SHALL NOT EXTEND BELOW 7'-6" ABOVE FINISHED GRADE.
 2. PROVIDE (2) SEPARATE 2" RIGID GALVANIZED STEEL PVC CONDUITS (CONVERTED TO NON-METALLIC SCHEDULE 40 UNDERGROUND) BETWEEN LIGHTING CONTROLS CABINET AND IN-GROUND PULL BOX. REFERENCE NOTE 5 FOR CIRCUITING INDEPENDENT OF THE LIGHTING AND FESTOON RECEPTACLES.
 3. PROVIDE (1) SEPARATE 2" NON-METALLIC PVC CONDUIT (SCHEDULED PER LEGEND'S LOCATION). REFERENCE NOTE 5 FOR CIRCUITING INDEPENDENT OF THE LIGHTING AND FESTOON RECEPTACLES.
 4. PROVIDE (2) 1" NON-METALLIC PVC EMPTY CONDUITS UNDERGROUND BETWEEN 18"-30" ROUTED BETWEEN THIS PULL BOX AND THE NORTH SIDE OF THE MUNICIPAL BUILDING TOWARDS THE BACK GARAGE AREA'S NORTH WALL. COORDINATE WITH OWNER TO BRING CONDUITS INTO THE BUILDING NEAR THE BACK AT A LOCATION ON THE NORTH WALL AGREED TO BY THE OWNER. EXPOSED CONDUIT ABOVE GRADE SHALL BE NON-METALLIC SCHEDULE 80 PVC. PROVIDE BUILDING PENETRATION AND FIRE SEAL FOR BOTH CONDUITS AND TERMINATE WITH BUSHINGS JUST INSIDE EXPOSED WALL WHERE OWNER CAN GAIN ACCESS FOR FUTURE SOUND SYSTEM USE. PENETRATION SHALL BE 10' ABOVE FINISHED GRADE UNLESS OTHERWISE ADVISED BY THE OWNER.
 5. PROVIDE THE FOLLOWING: AT APPROXIMATELY 10' A.F.G., PROVIDE 3 SEPARATE SINGLE GANG INTEGRALLY MOUNTED BOXES FACING SIDEWALK SIDE (MOUNTED VERTICAL OF EACH OTHER). (2) BOXES SHALL EACH CONTAIN ONE DUPLEX GFCI RECEPTACLE WITH HEAVY DUTY METAL "WHILE-IN-USE" COVERS FED WITH 2 SEPARATE CIRCUITS (6 AND 8 EAST SIDE; 9 AND 11 WEST SIDE). PROVIDE A 240 VOLT SIMPLEX SINGLE TWIST LOCK RECEPTACLE WITH HEAVY DUTY METAL "WHILE-IN-USE" COVER FED WITH CIRCUITS (10 AND 12 EAST SIDE; 13, AND 15 WEST SIDE).

PROJECT NO. 00524035	SCALE AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE 5/04/2018	DRAWN BY: JAS				
F.B.:	CHECKED BY: MTP				
PLOT DATE: 5/7/18, P:\520e\52400524035\CADD\Construction Drawings\00524035 Lighting Plans.dwg					

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

STREET LIGHTING PLAN

FILE NO. 00524035
SHEET SL2

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

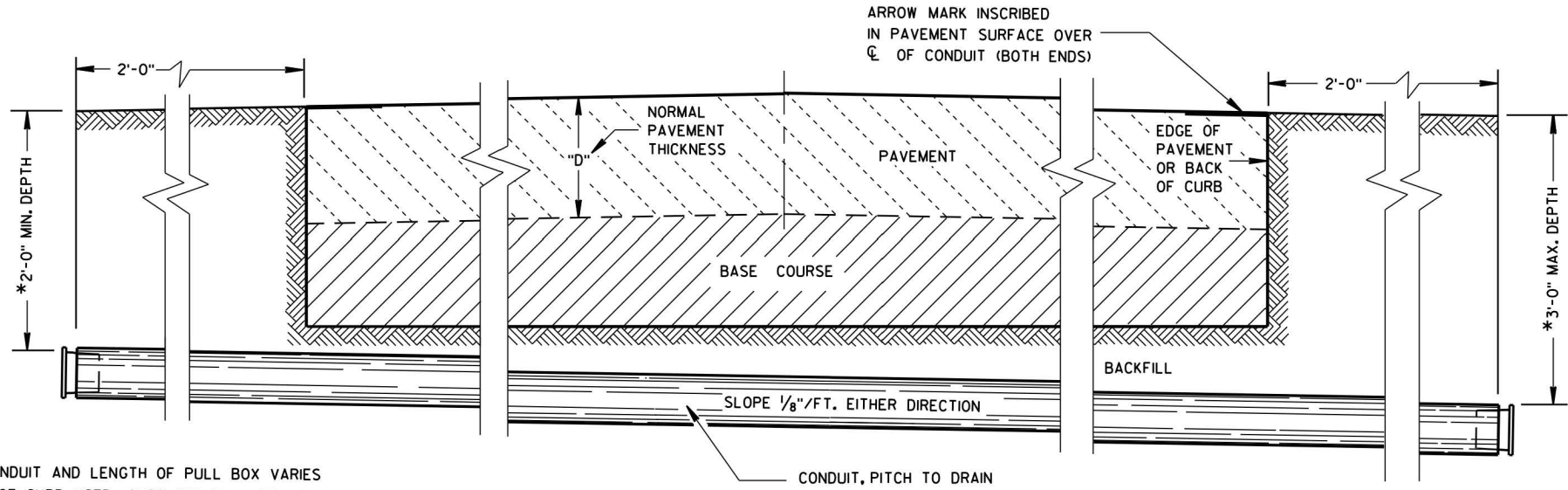
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.I.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

**SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.	DATE	REVISION	BY:
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	MTP				

MSA
PROFESSIONAL SERVICES

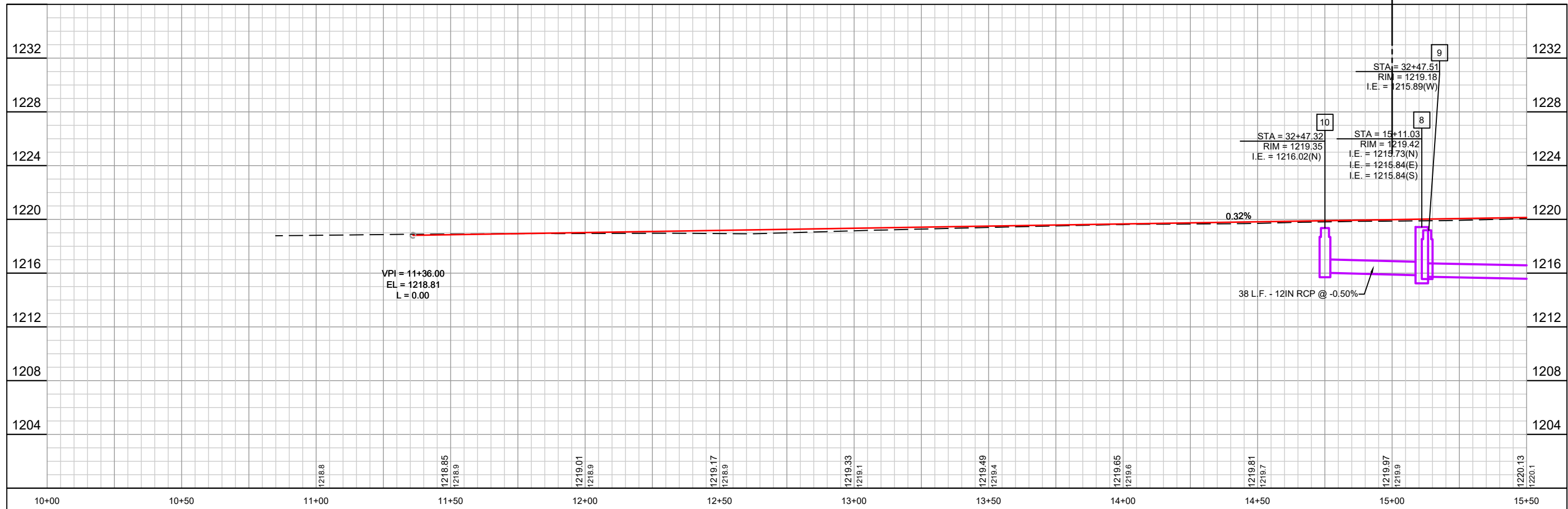
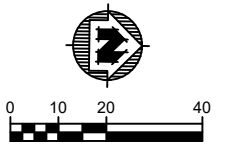
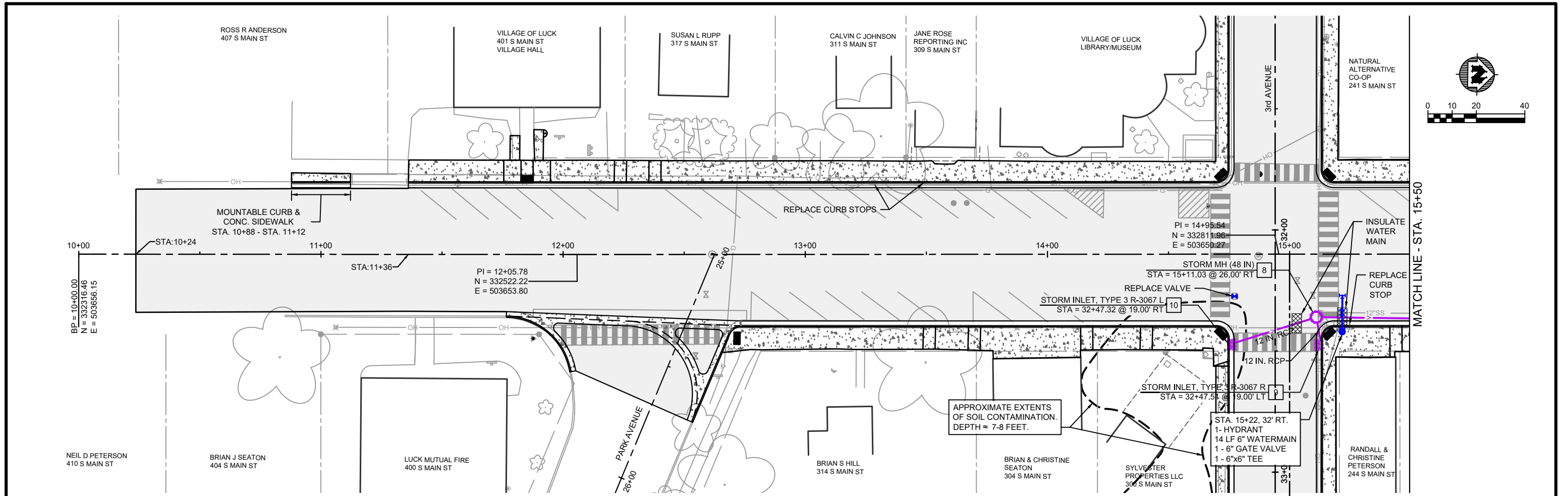
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING

11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

STREET LIGHTING DETAILS

FILE NO. 00524035
SHEET SL3



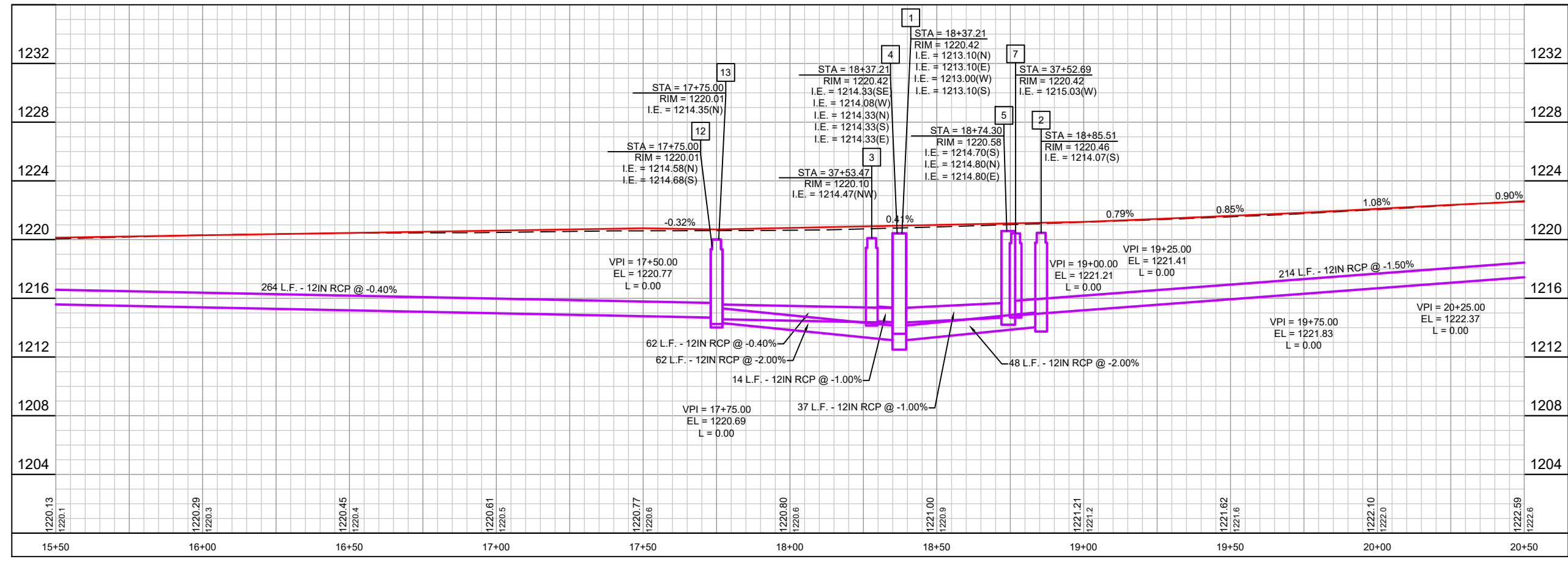
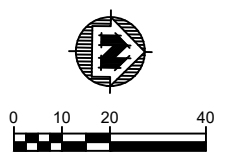
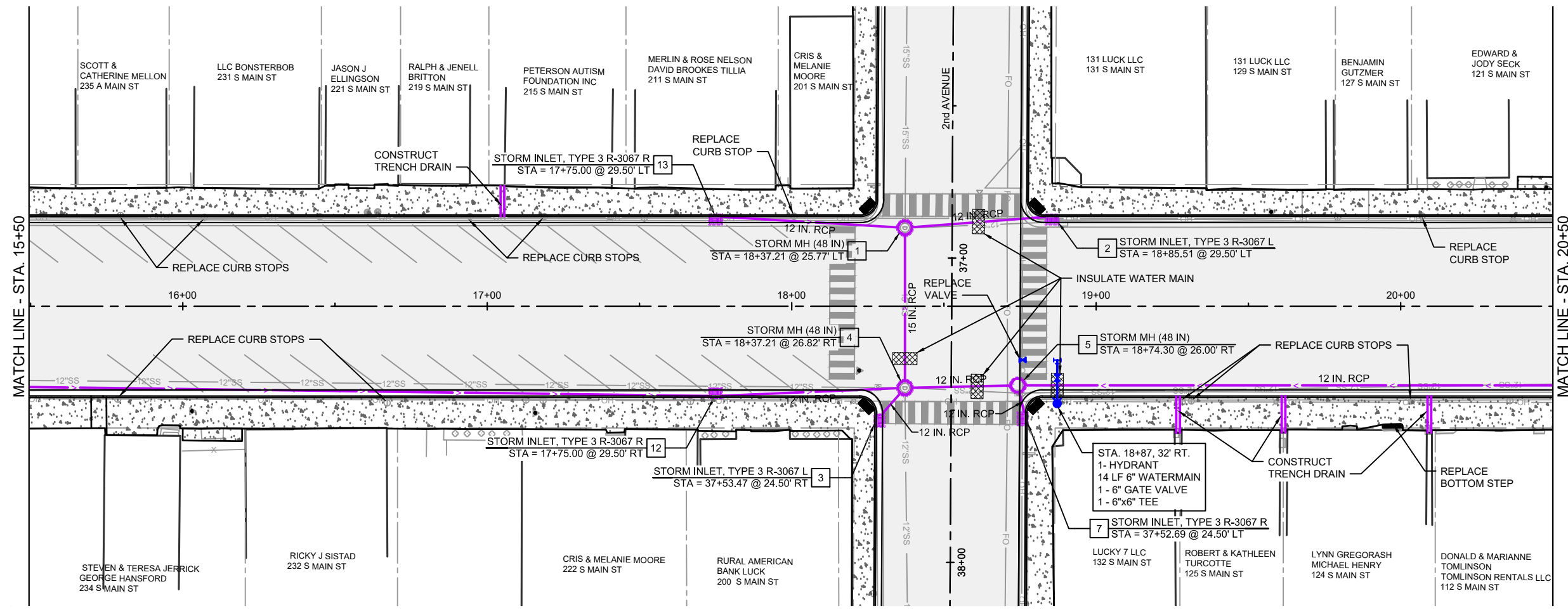
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS								
F.B.:		CHECKED BY:	TKA								
PLOT DATE: 5/7/18, P:\520e\524\00524035\CADD\Construction Drawings\00524035 Plan Profile Main Street (3).dwg											

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

PLAN & PROFILE - MAIN STREET

FILE NO.	00524035
SHEET	R1



PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035						
PROJECT DATE:	5/04/2018					
F.B.:	CHECKED BY:	TKA				

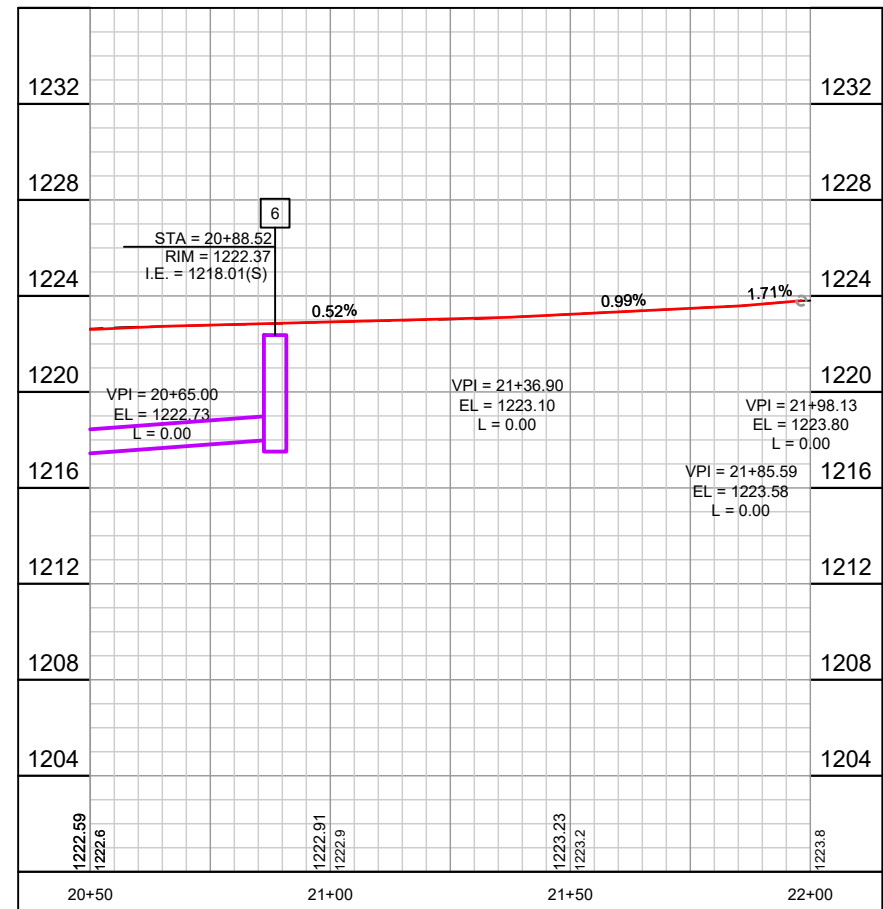
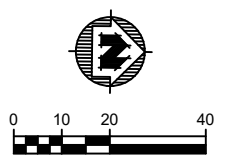
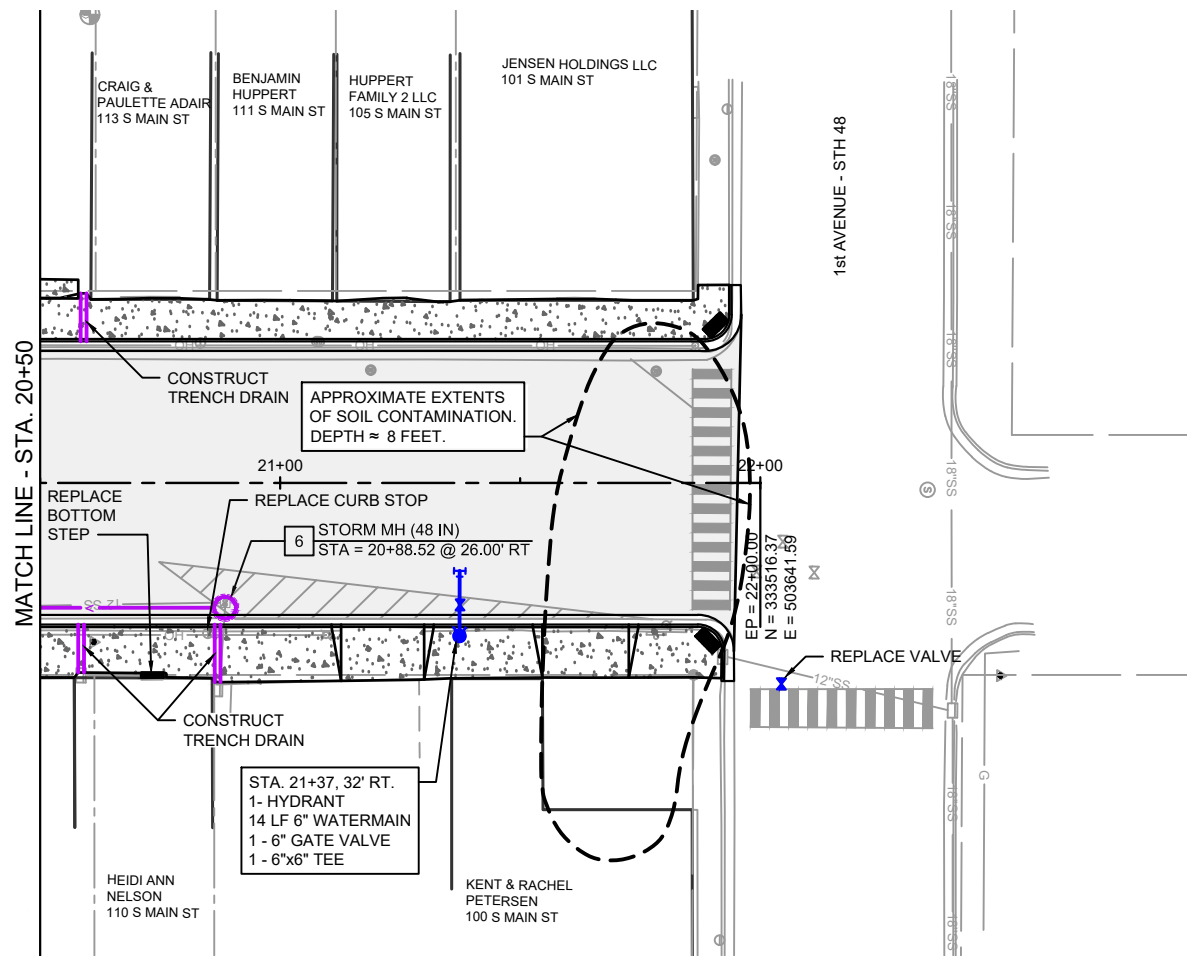
MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

PLAN & PROFILE - MAIN STREET

FILE NO.	00524035
SHEET	R2

PLOT DATE: 5/7/18, P:\520e\52400524035\CADD\Construction Drawings\00524035 Plan Profile Main Street (3).dwg



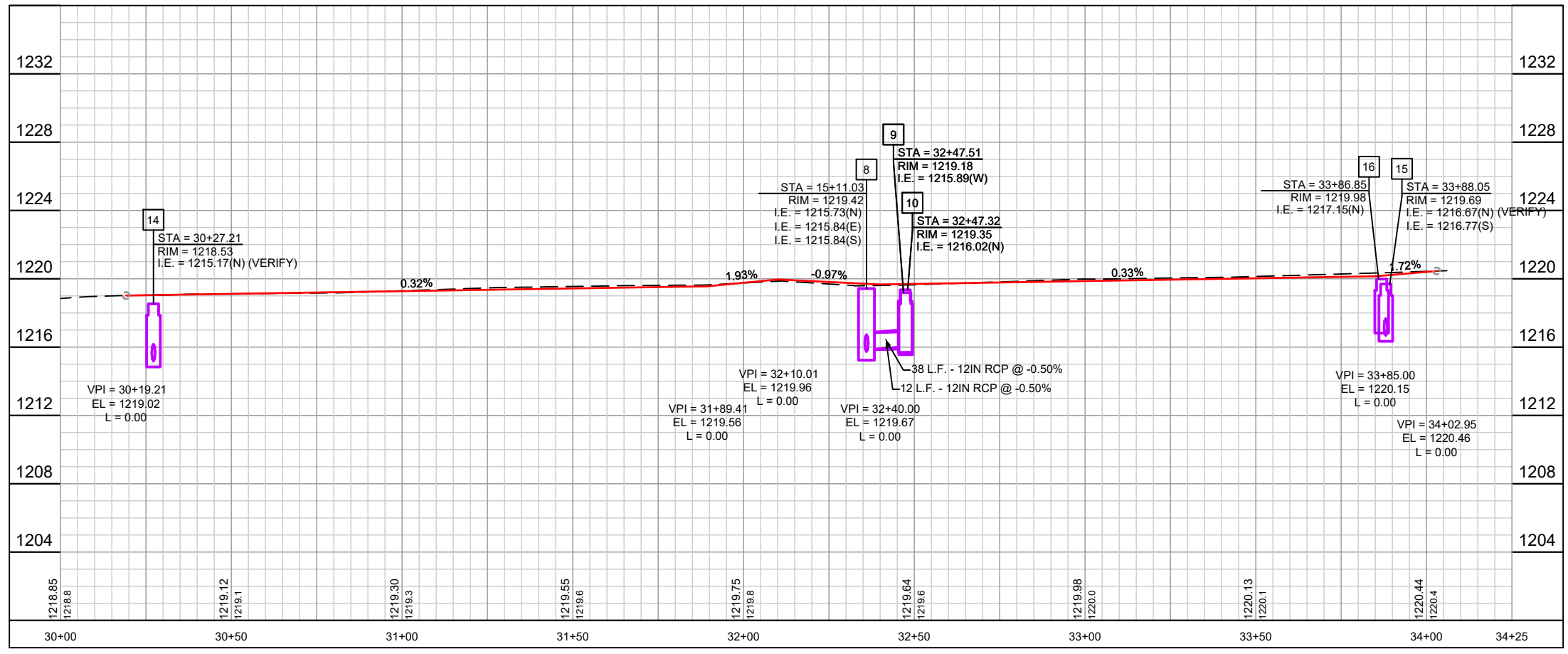
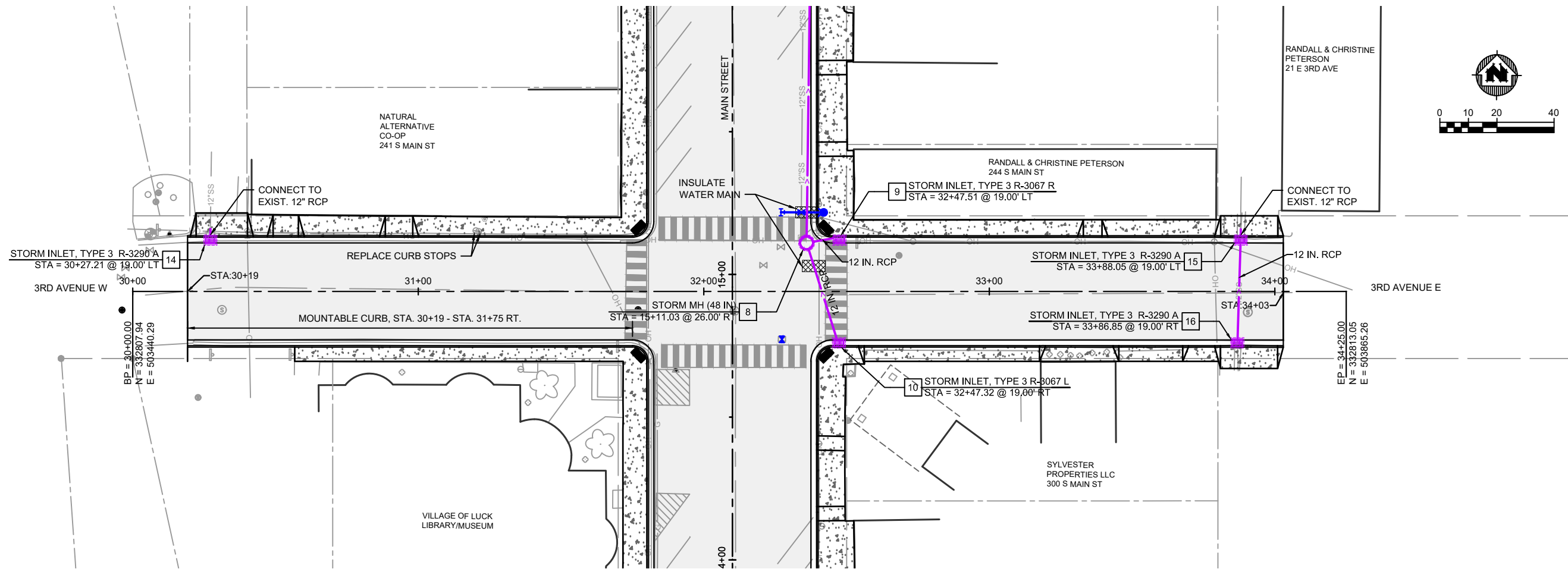
PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				
PLOT DATE: 5/7/18, P:\520e\524\00524035\CADD\Construction Drawings\00524035 Plan Profile Main Street (3).dwg							

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

PLAN & PROFILE - MAIN STREET

FILE NO.
00524035
 SHEET
R3



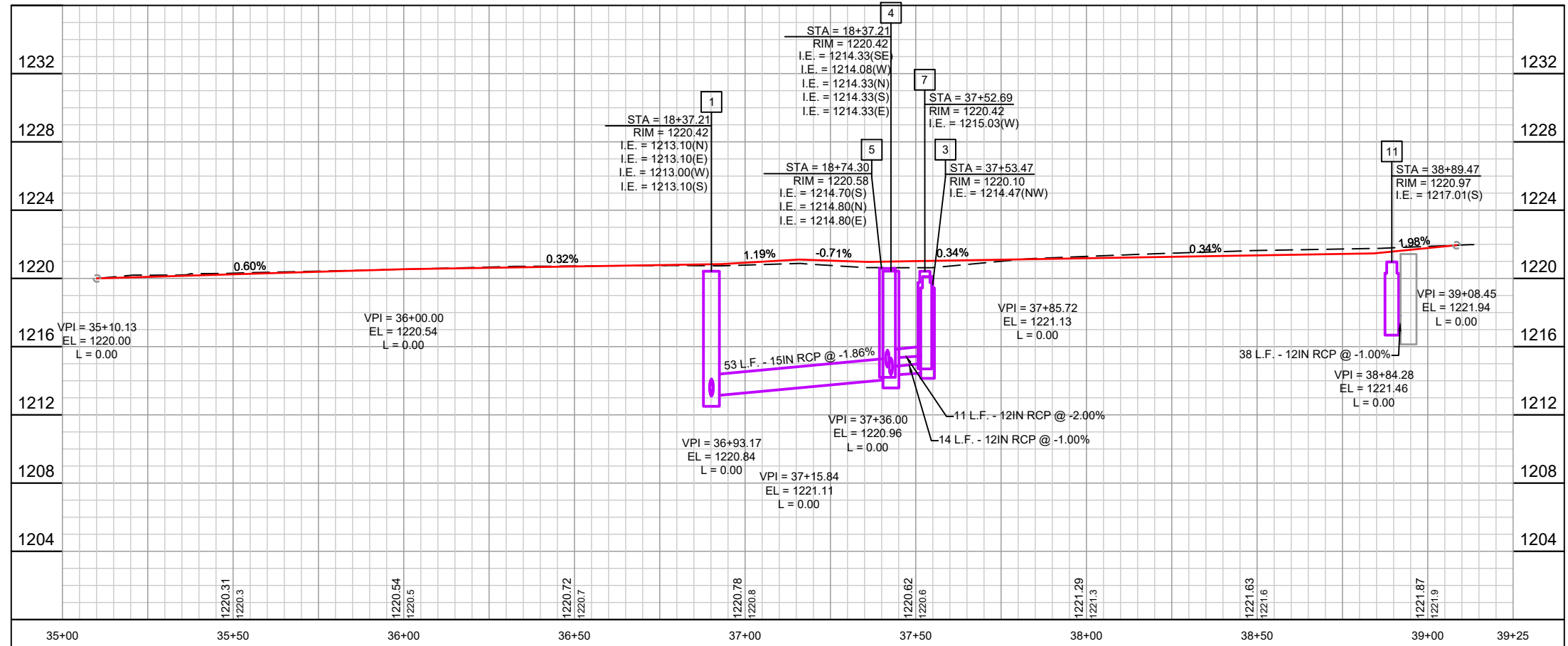
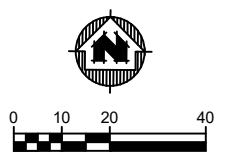
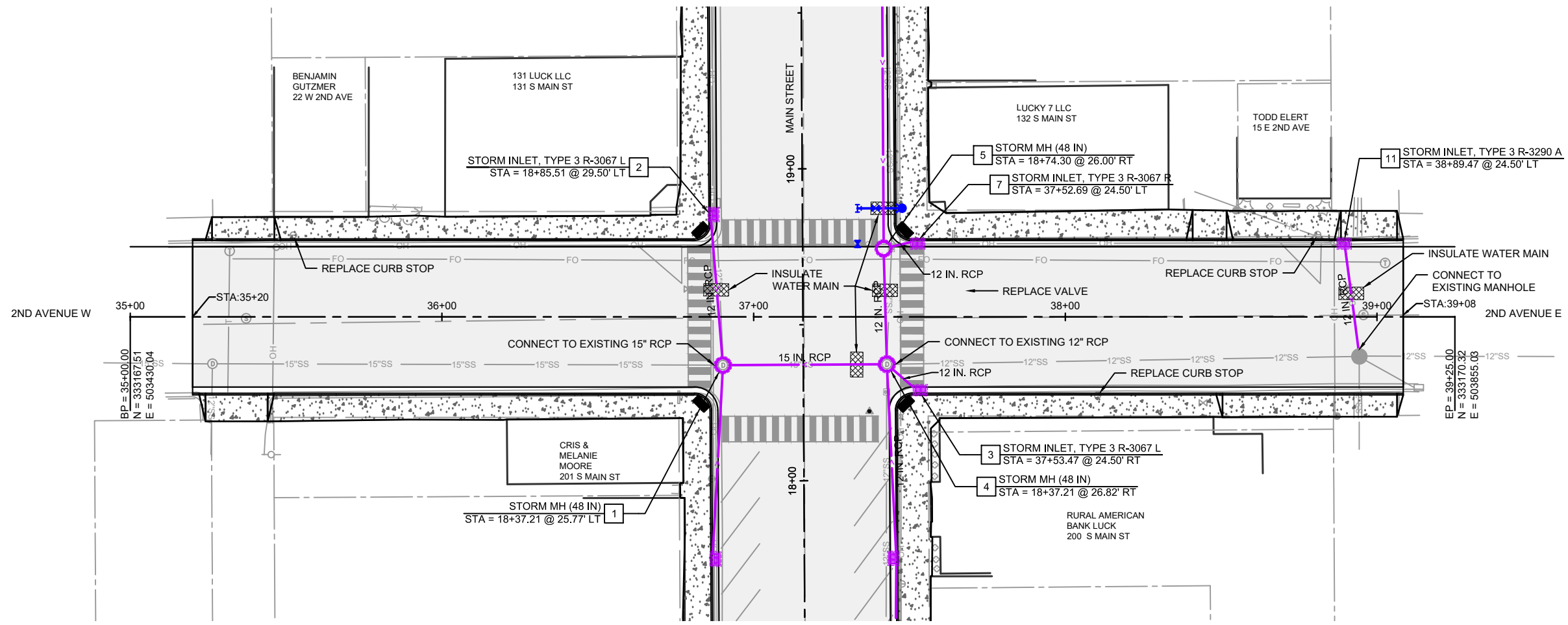
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			
PLOT DATE: 5/7/18, P:\520e\524\00524035\CADD\Construction Drawings\00524035 - Plan Profile Third Ave.dwg						

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

PLAN & PROFILE - THIRD AVENUE

FILE NO.	00524035
SHEET	R4



PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

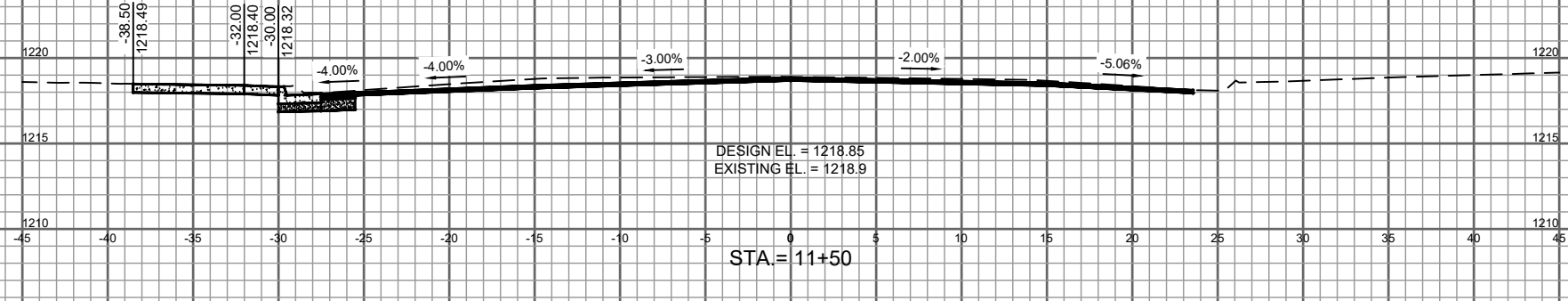
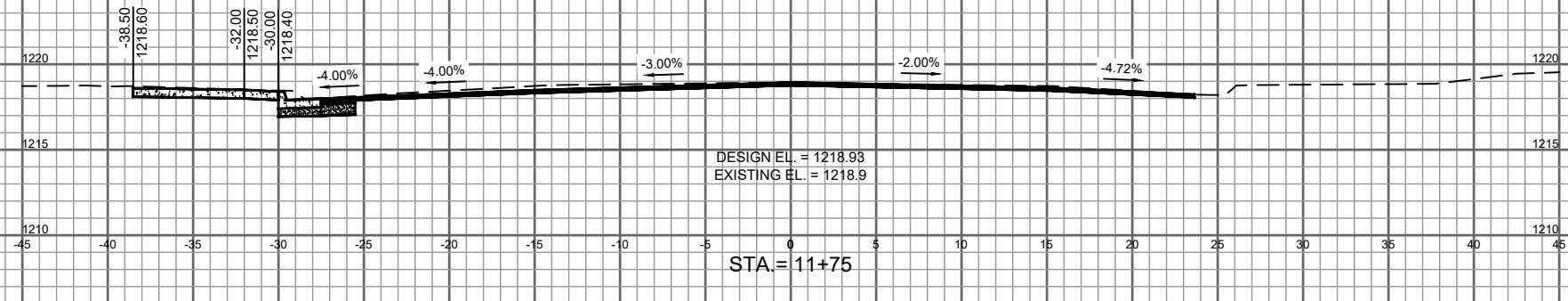
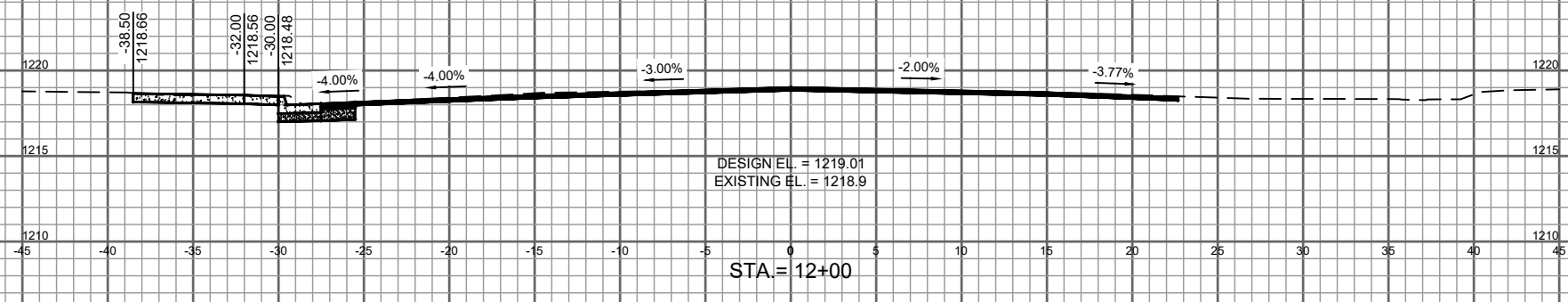
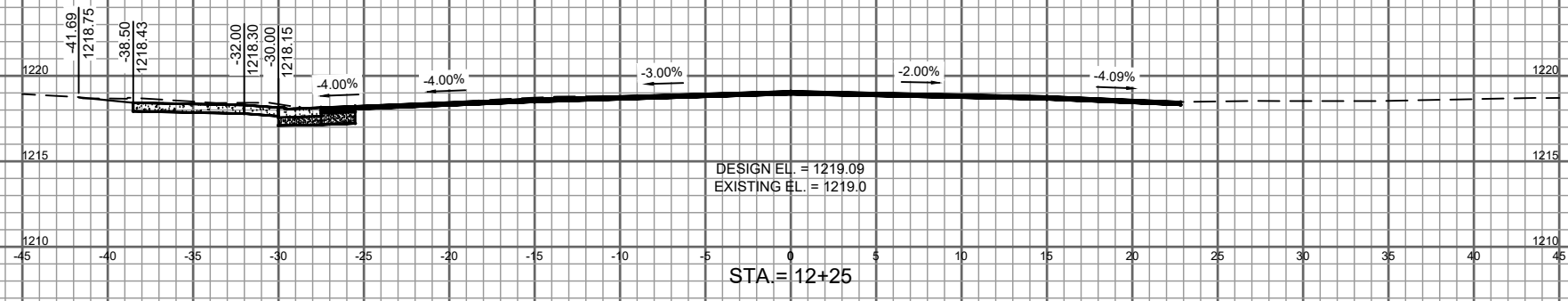
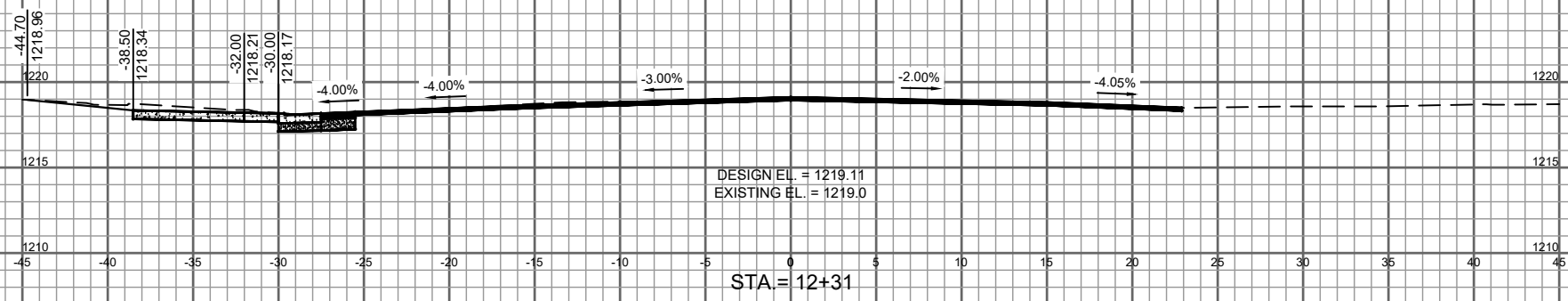
MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

PLAN & PROFILE - SECOND AVENUE

FILE NO.
00524035
 SHEET
R5

PLOT DATE: 5/7/18, P:\520e\524\00524035\CADD\Construction Drawings\00524035 Plan Profile Second Ave.dwg



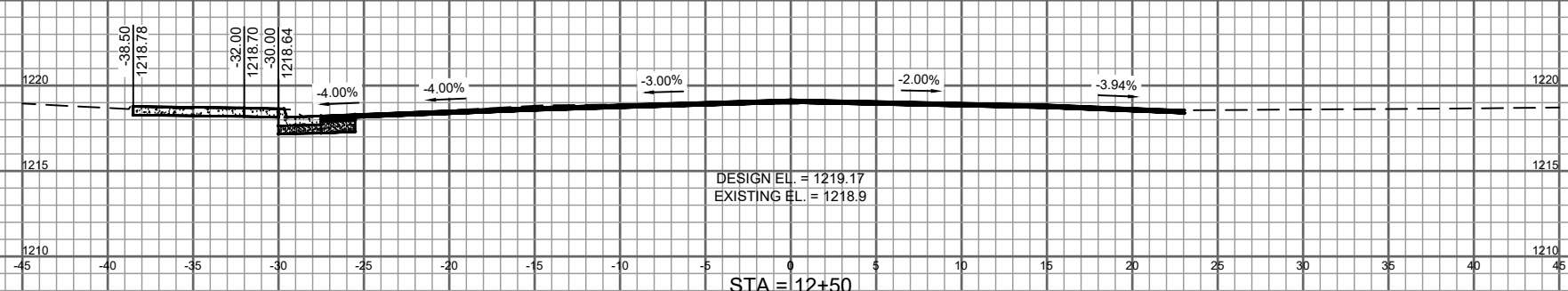
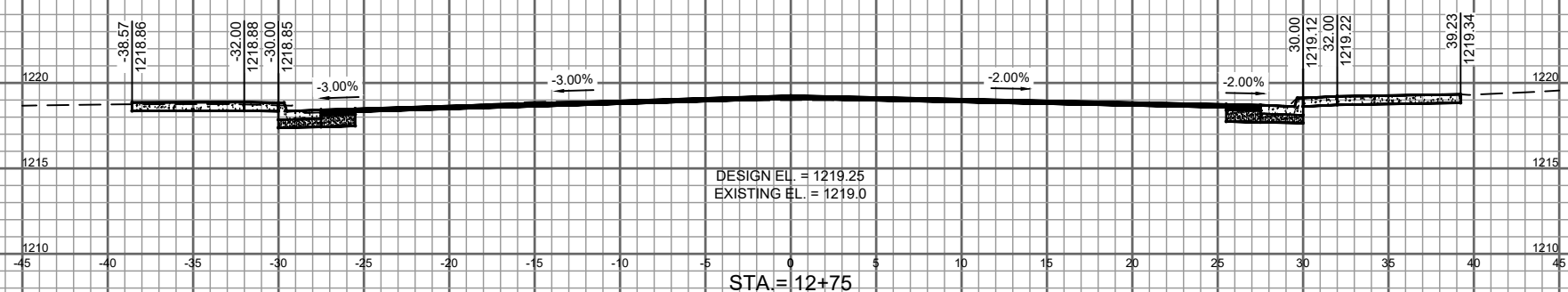
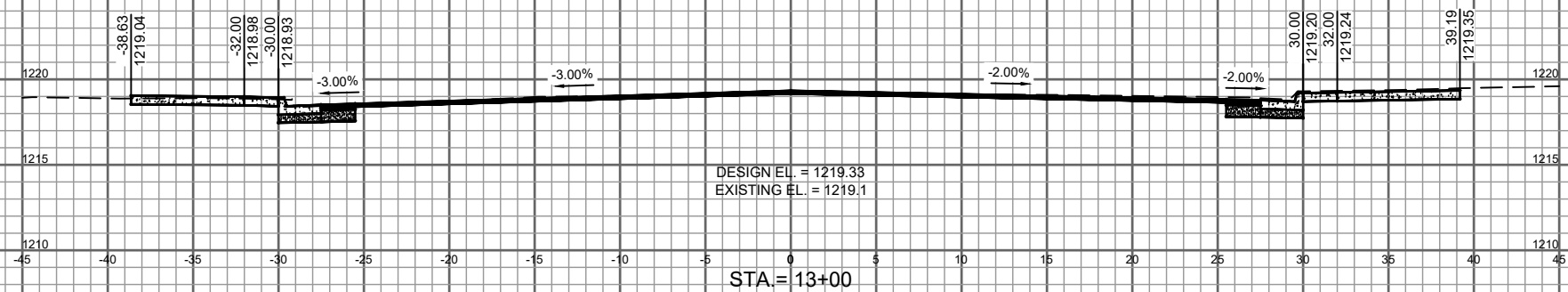
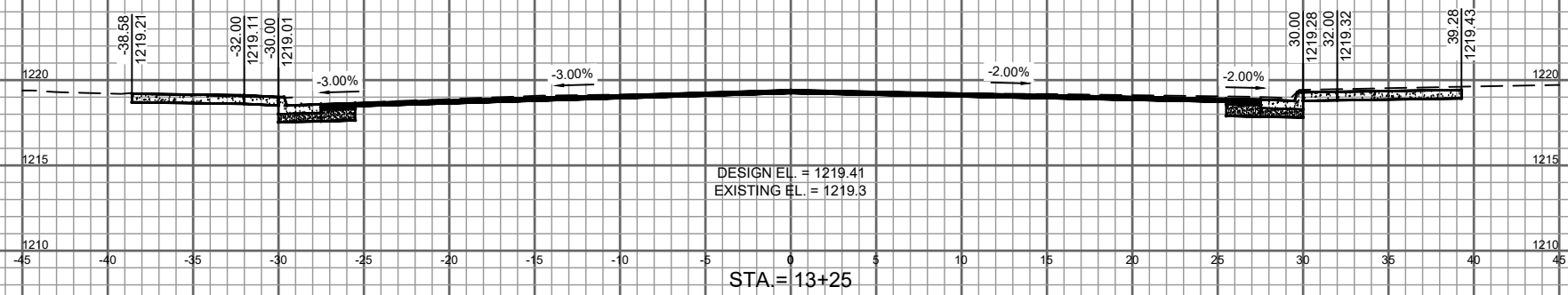
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS								
F.B.:		CHECKED BY:	TKA								

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (1)

FILE NO.	00524035
SHEET	CS1



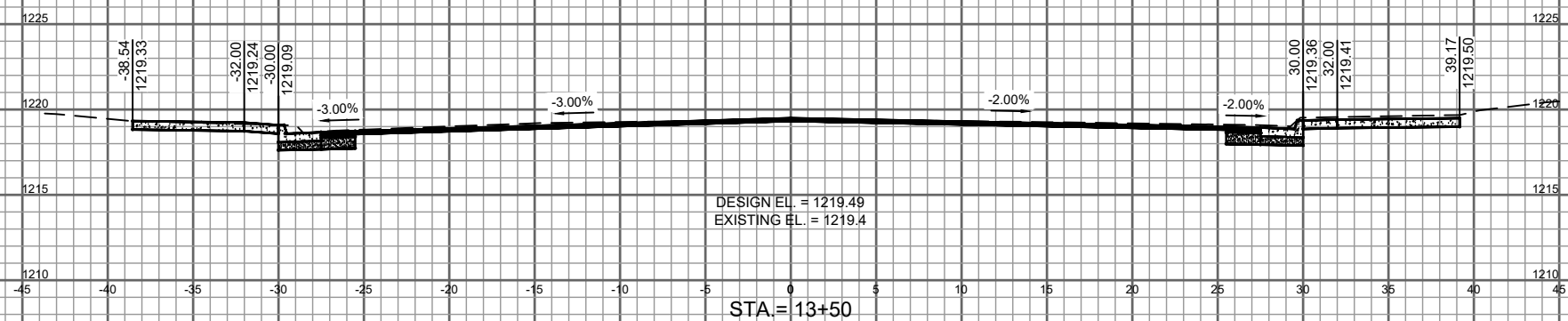
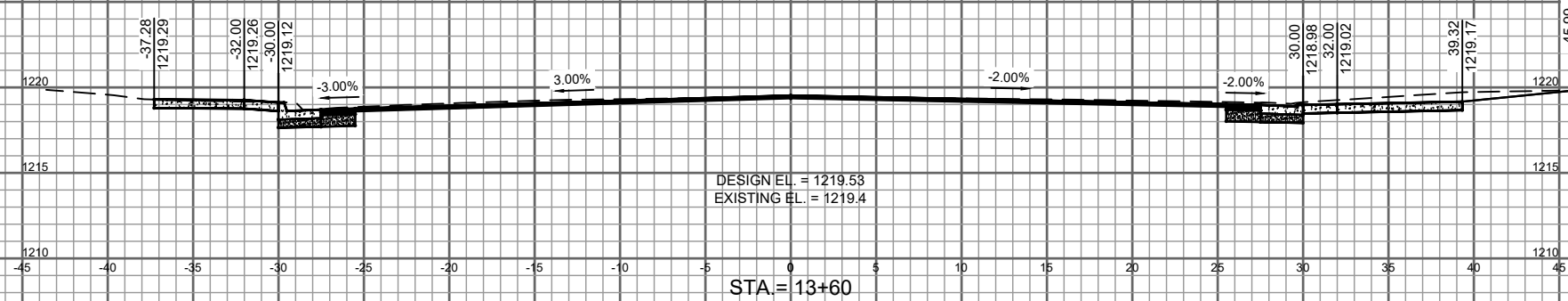
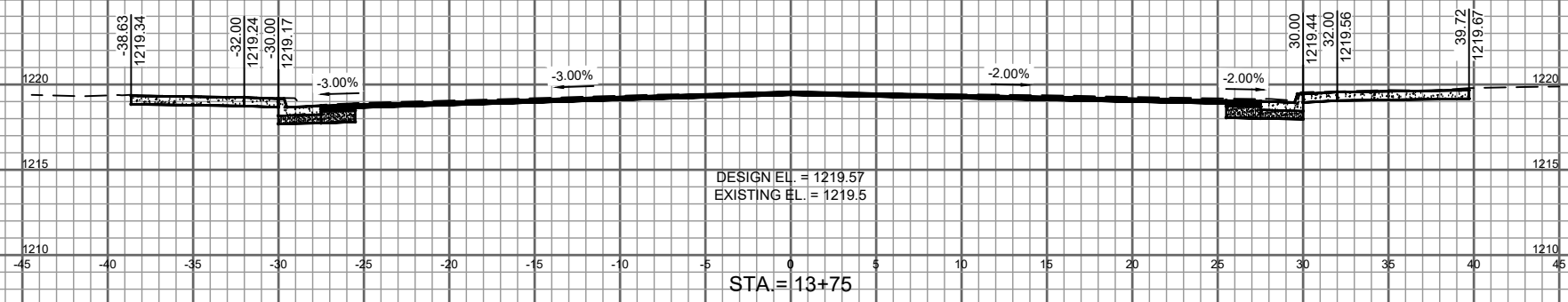
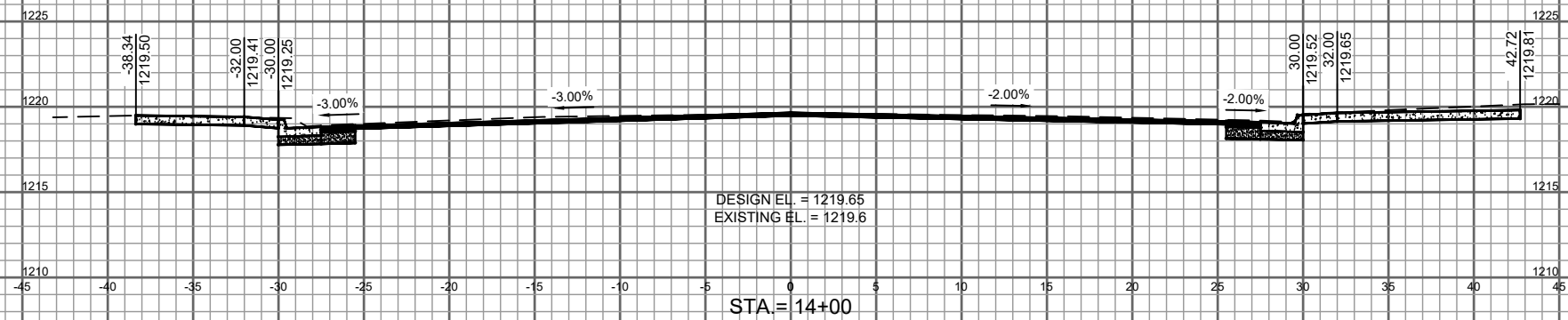
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54868
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (2)

FILE NO.	00524035
SHEET	CS2

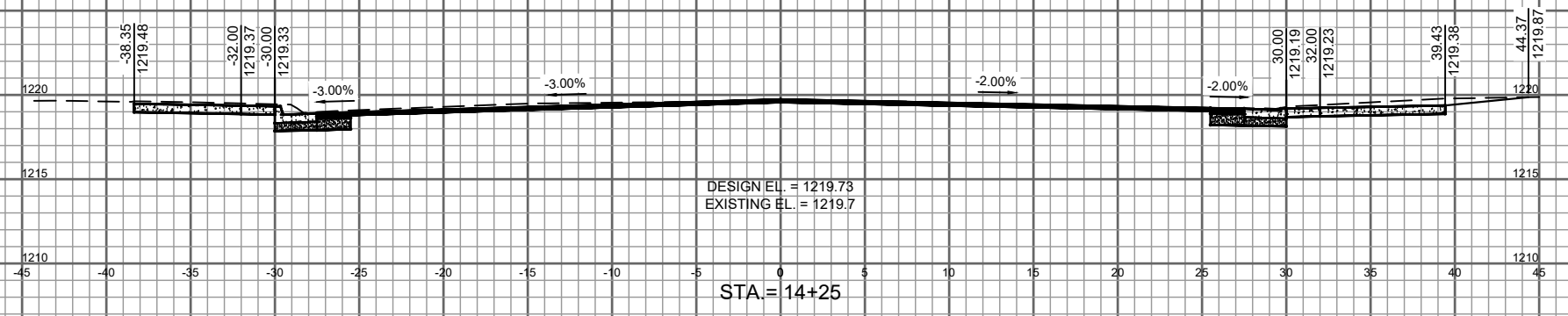
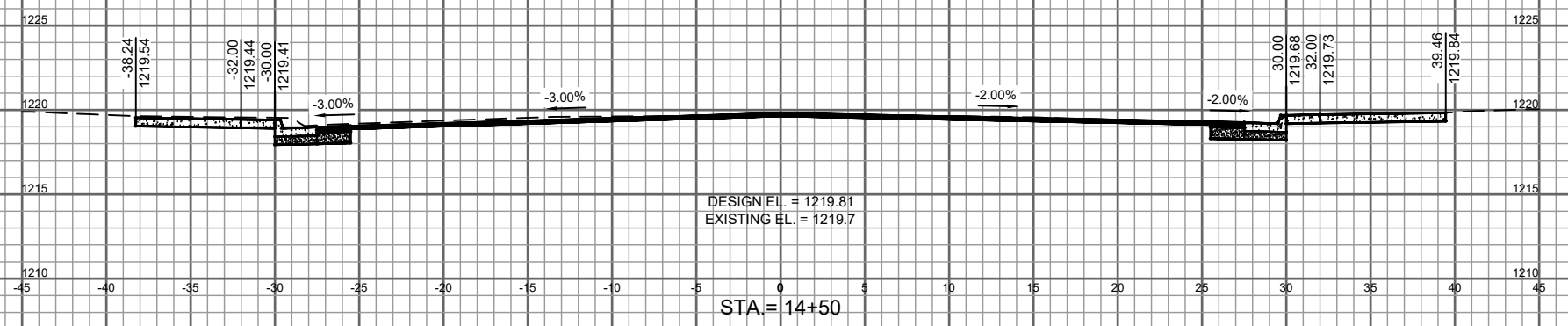
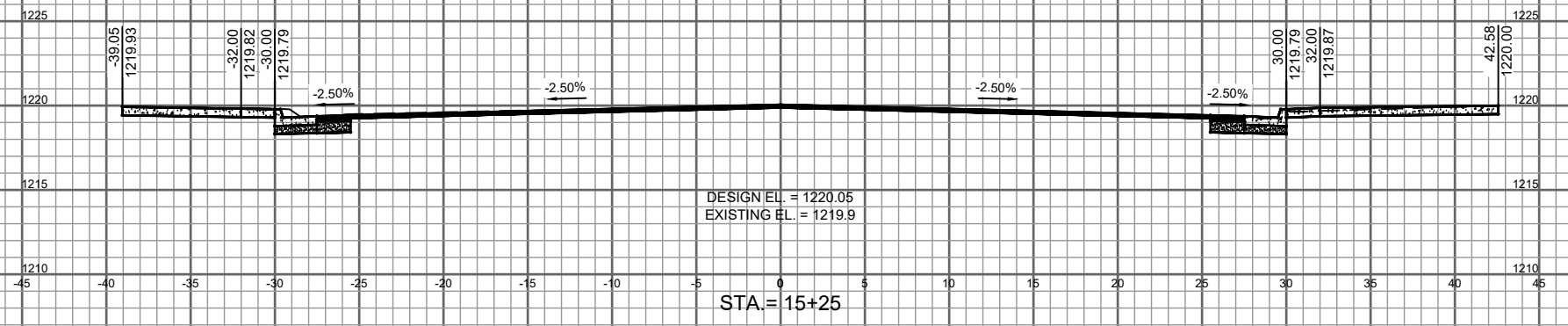
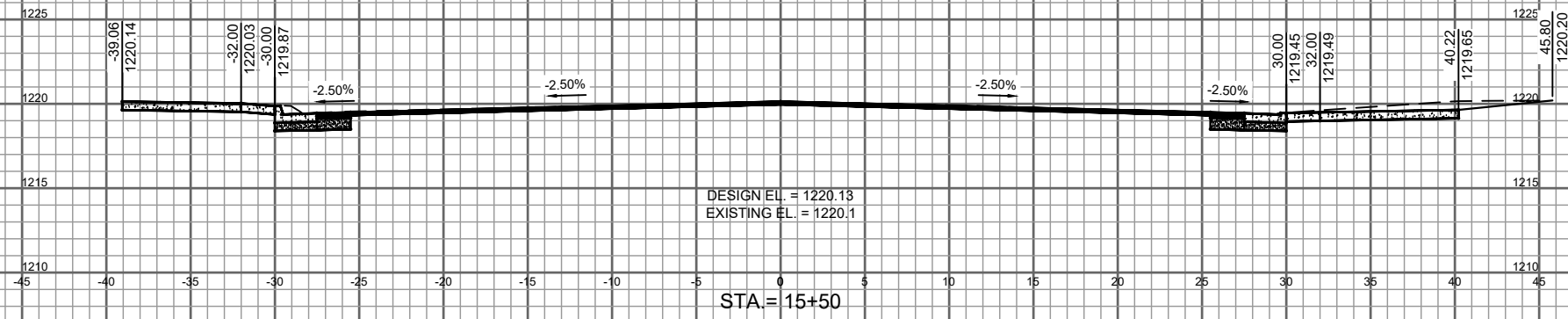


PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54988
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (3)
 SHEET
 CS3



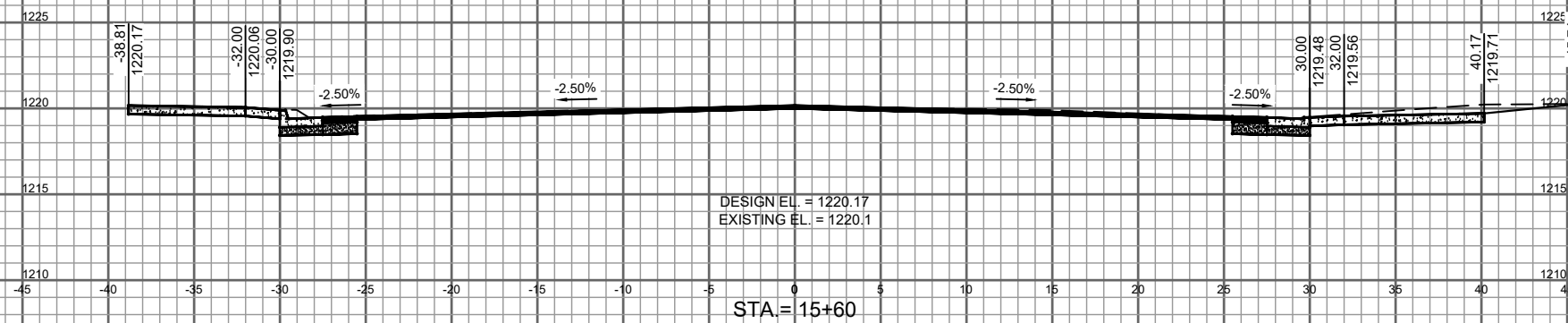
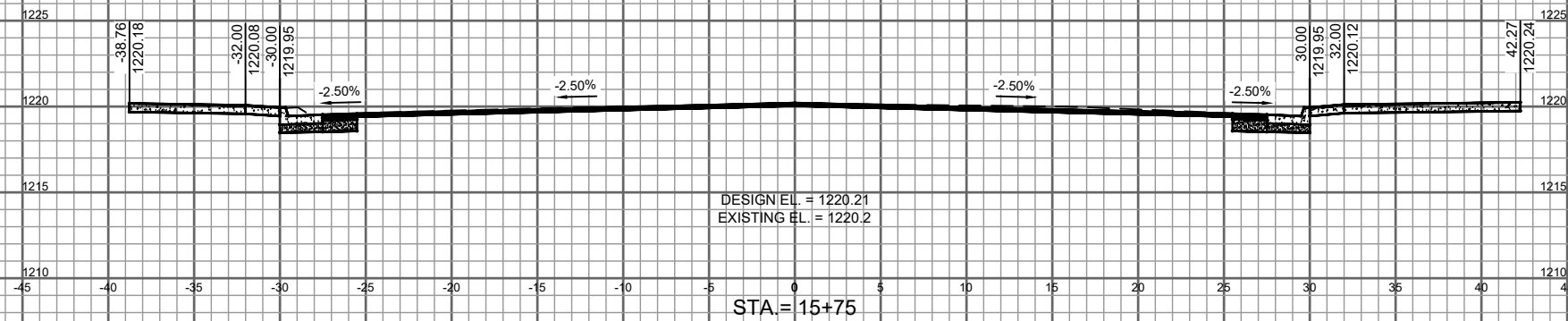
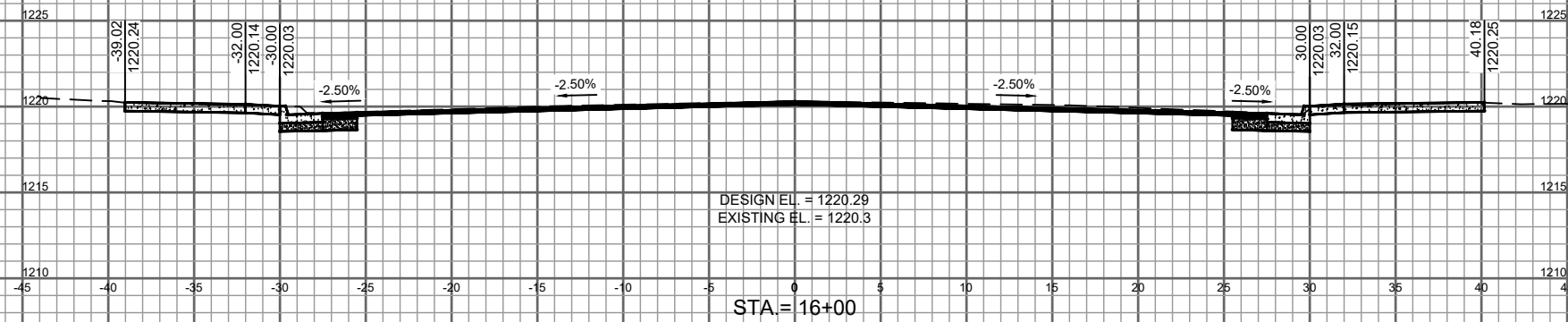
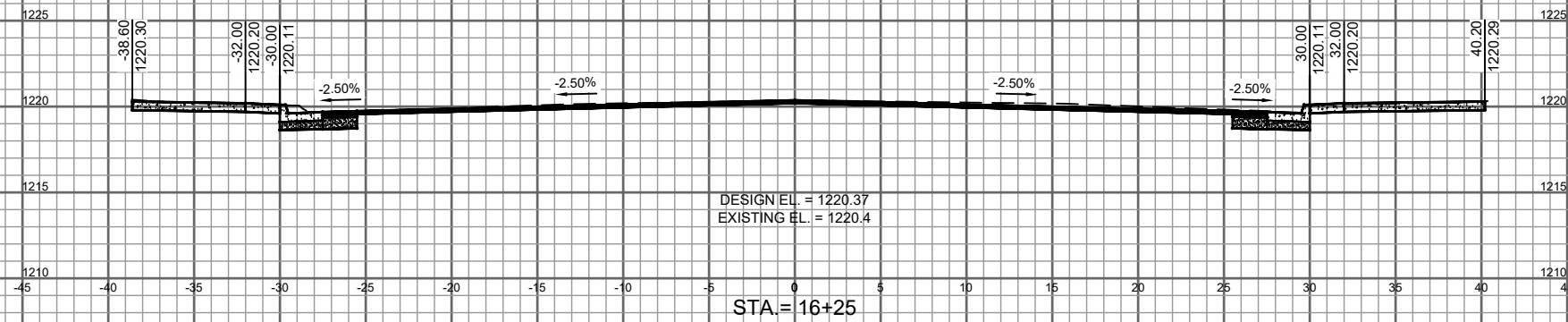
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54988
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (4)

FILE NO.	00524035
SHEET	CS4



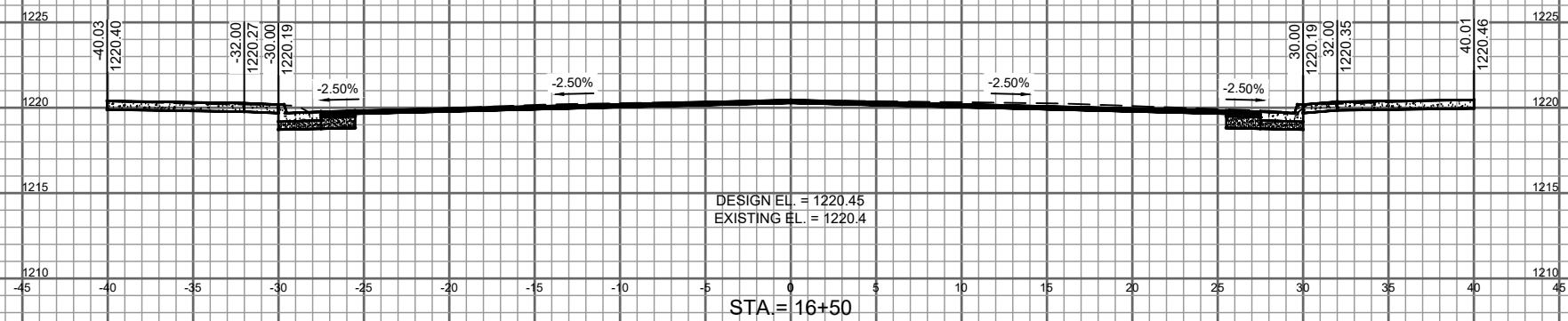
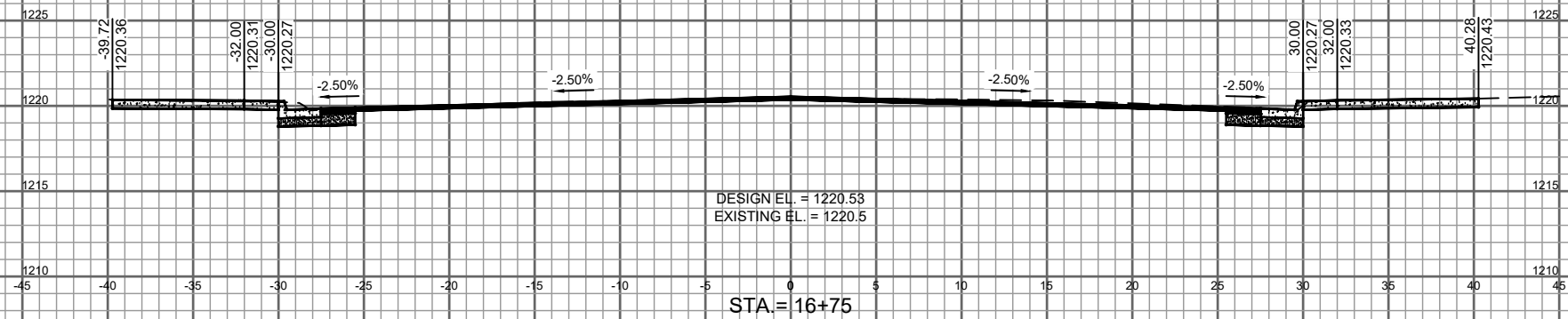
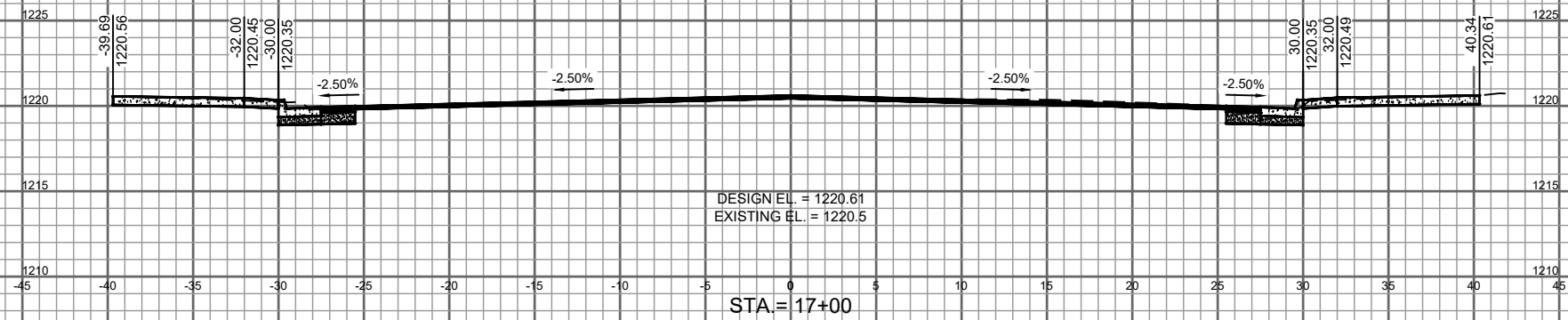
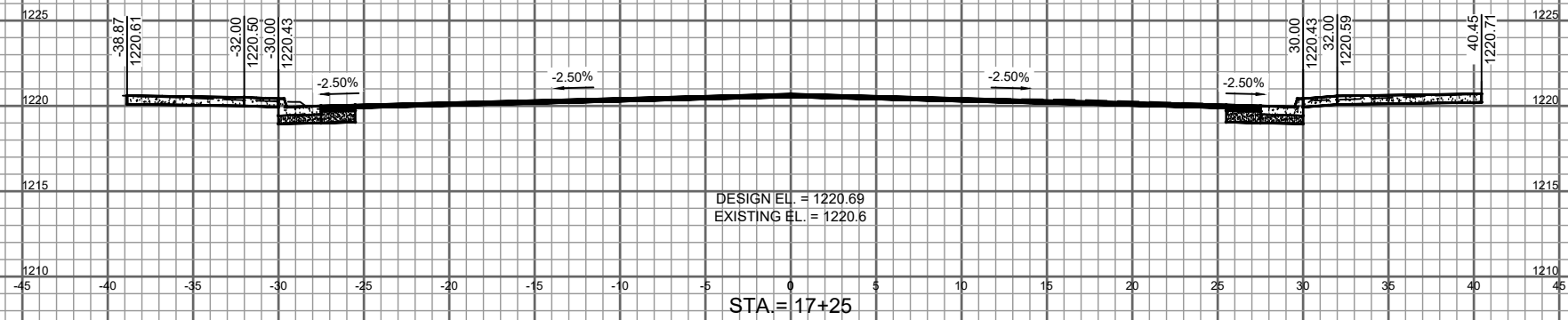
PROJECT NO.	00524035	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54988
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (5)

FILE NO.	00524035
SHEET	CS5



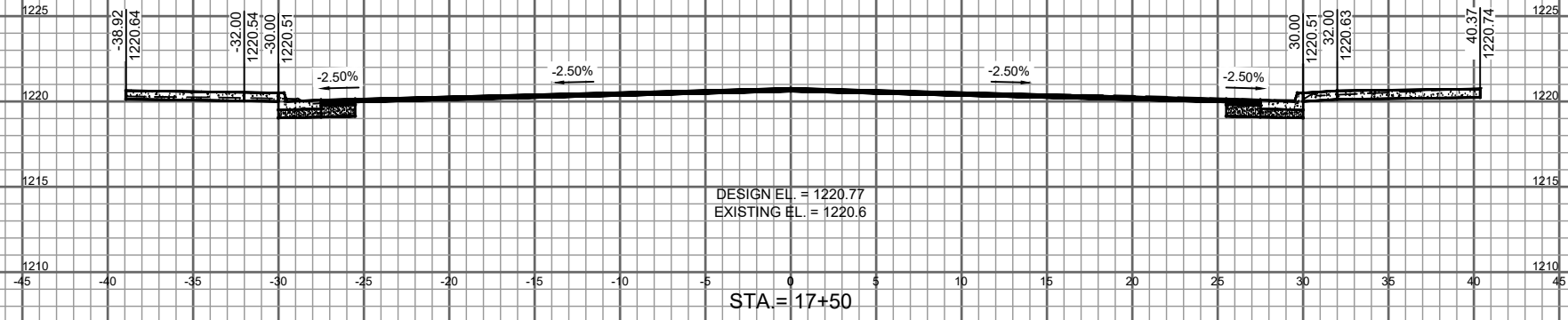
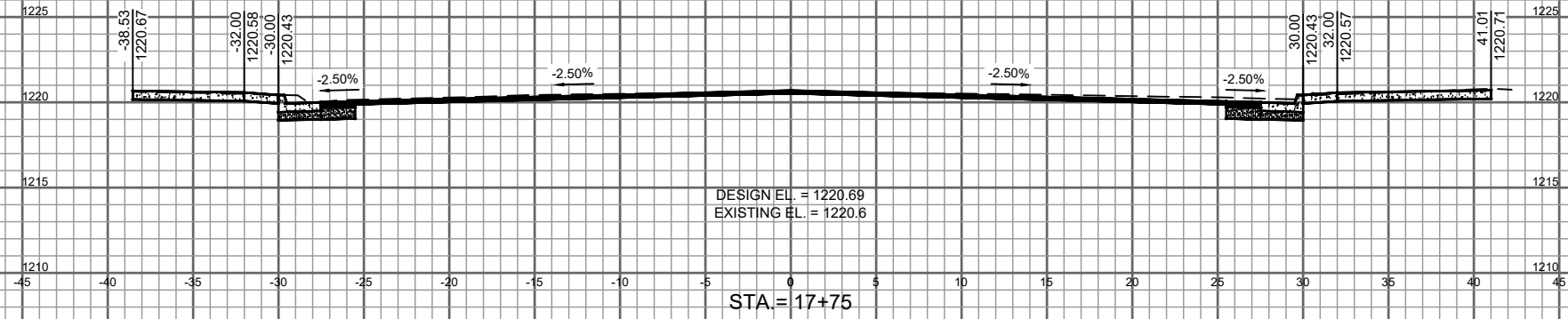
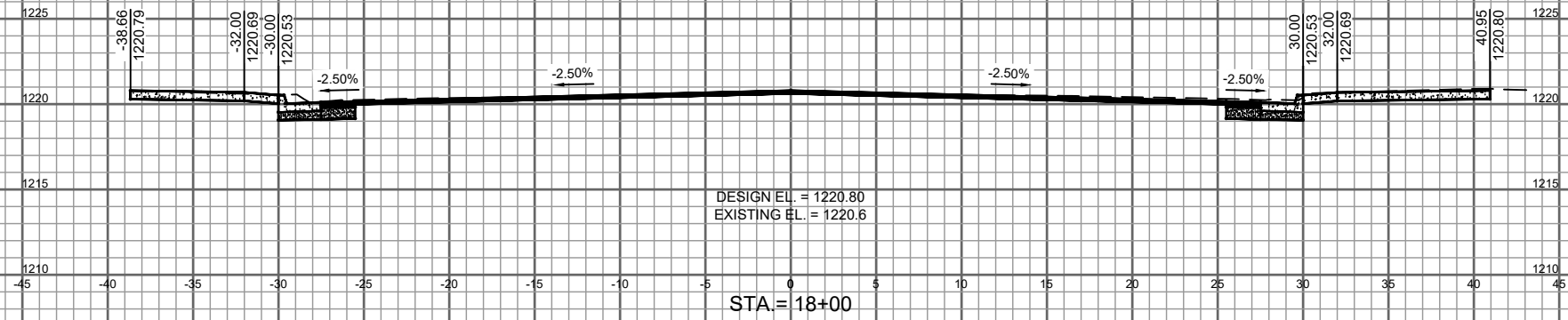
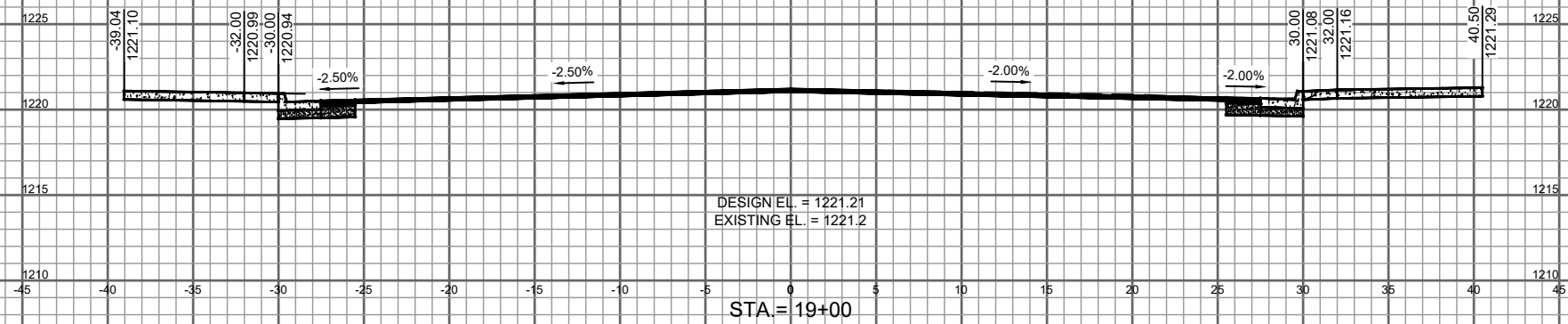
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035						
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54988
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (6)

FILE NO.
00524035
SHEET
CS6



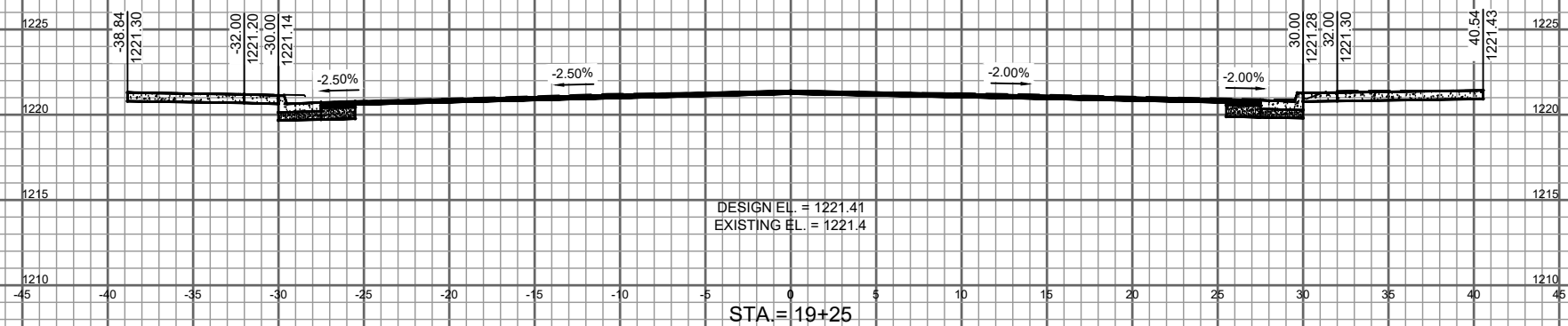
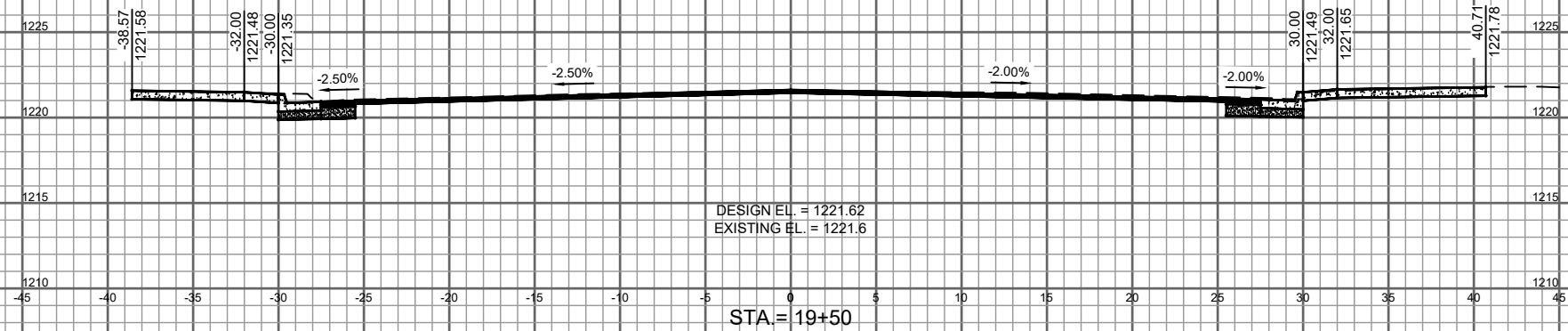
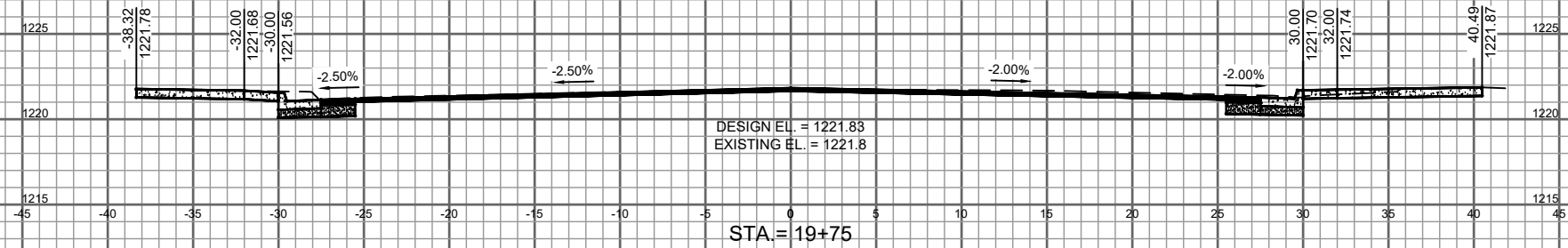
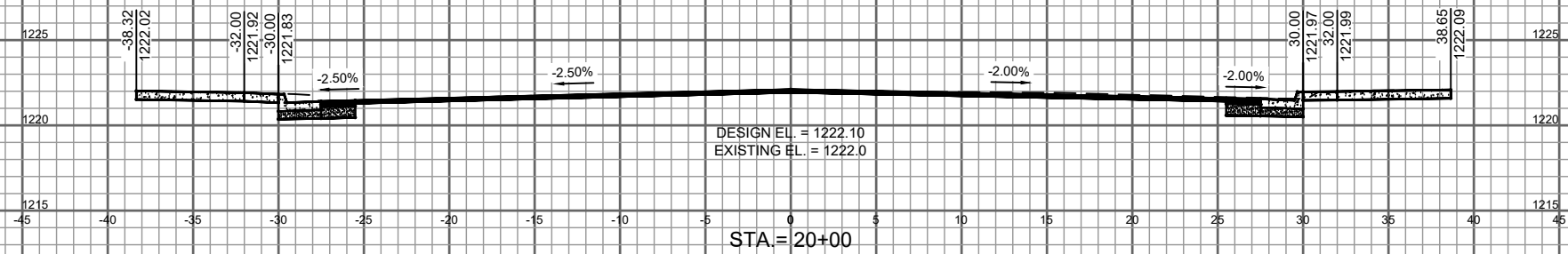
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035						
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54986
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (7)

FILE NO.
00524035
SHEET
CS7



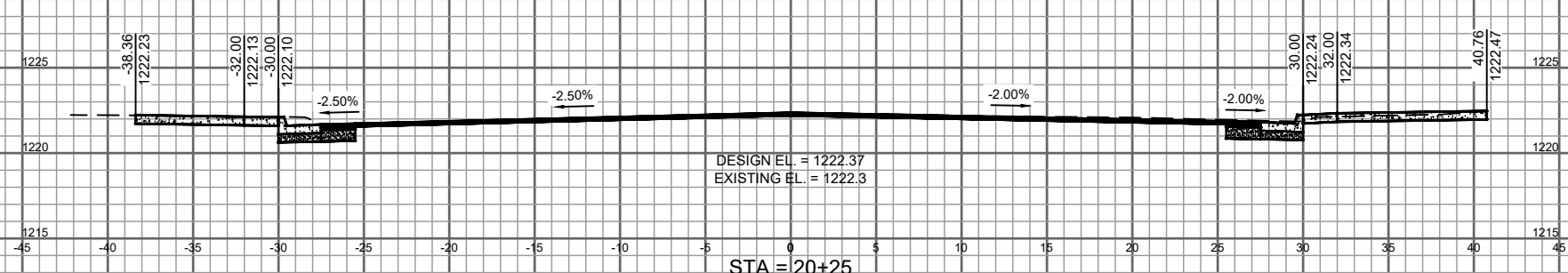
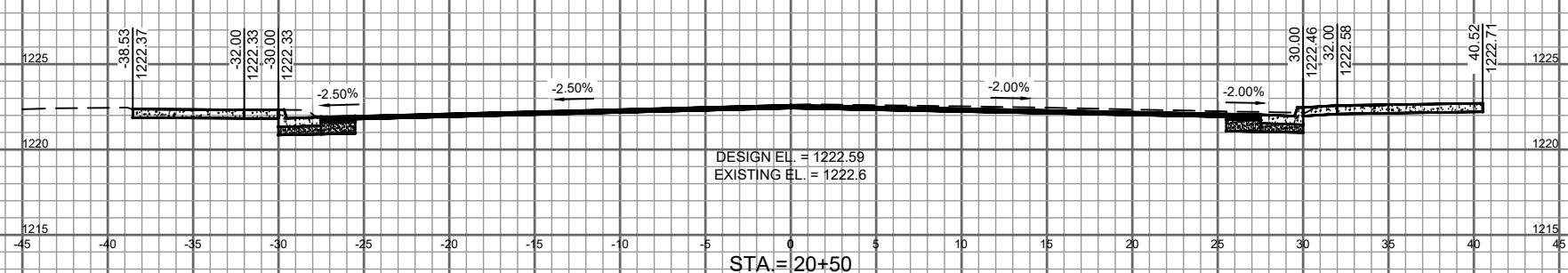
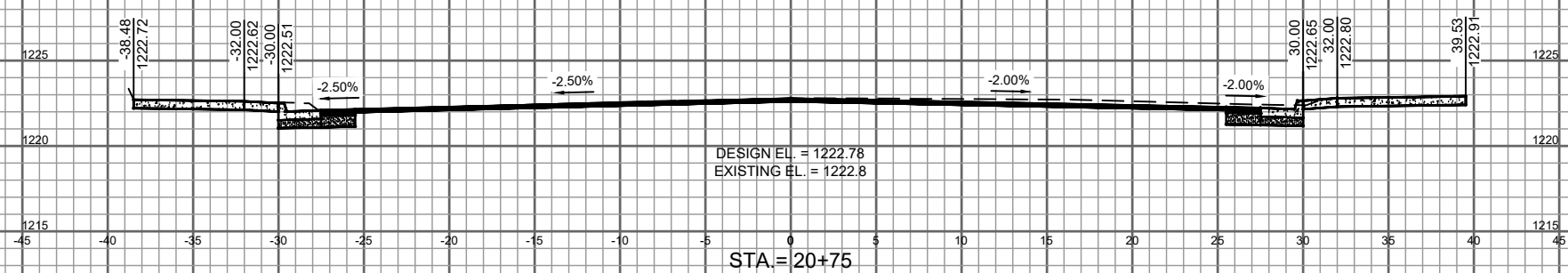
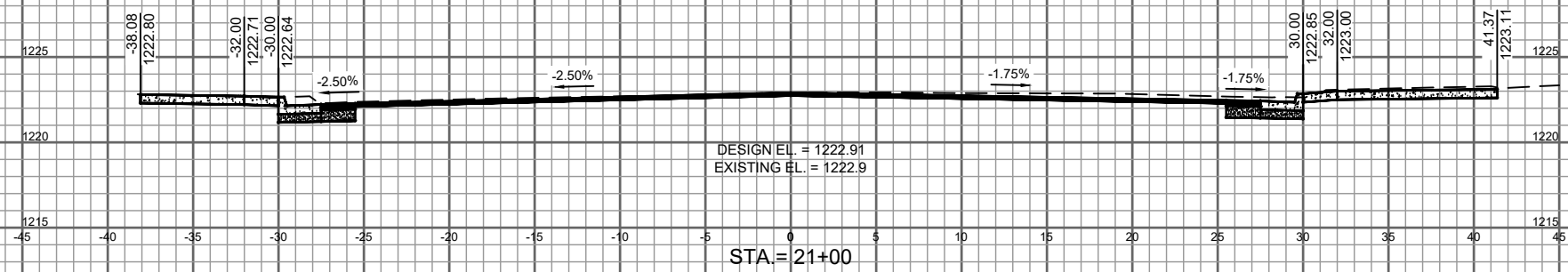
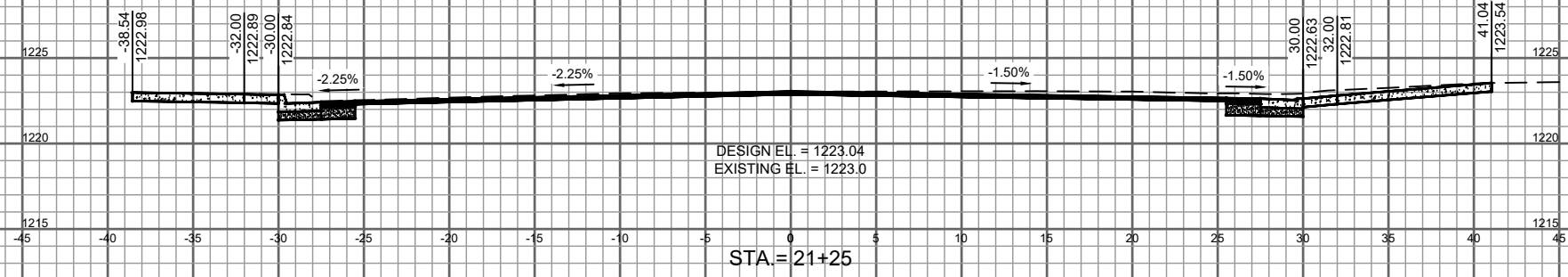
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.	DATE	REVISION	BY:
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS				
F.B.:		CHECKED BY:	TKA				

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54988
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (8)

FILE NO.	00524035
SHEET	CS8



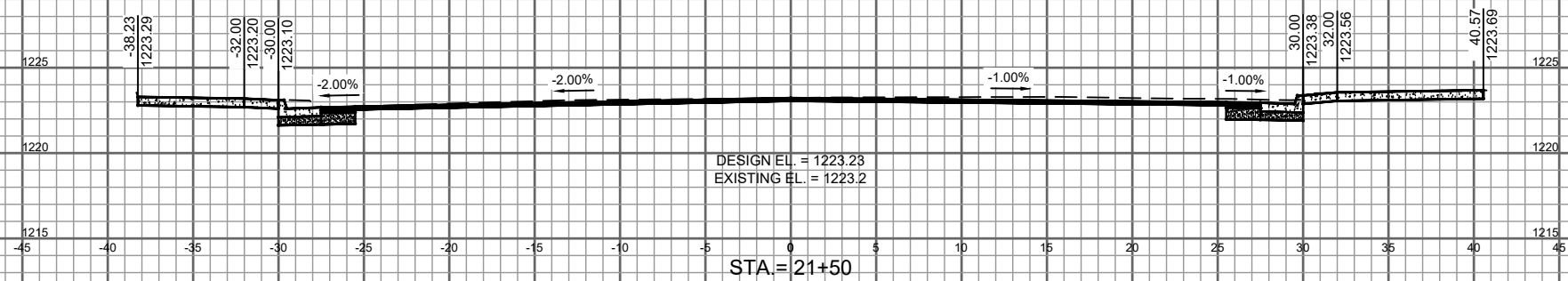
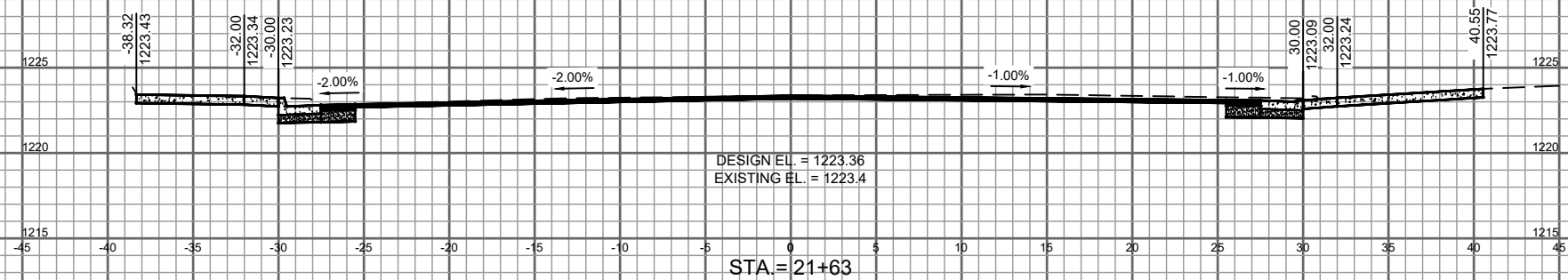
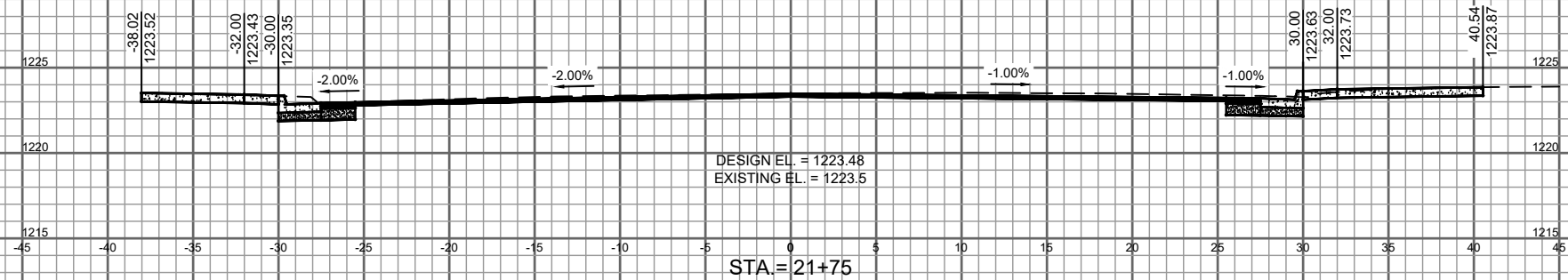
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54986
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (9)

FILE NO.	00524035
SHEET	CS9



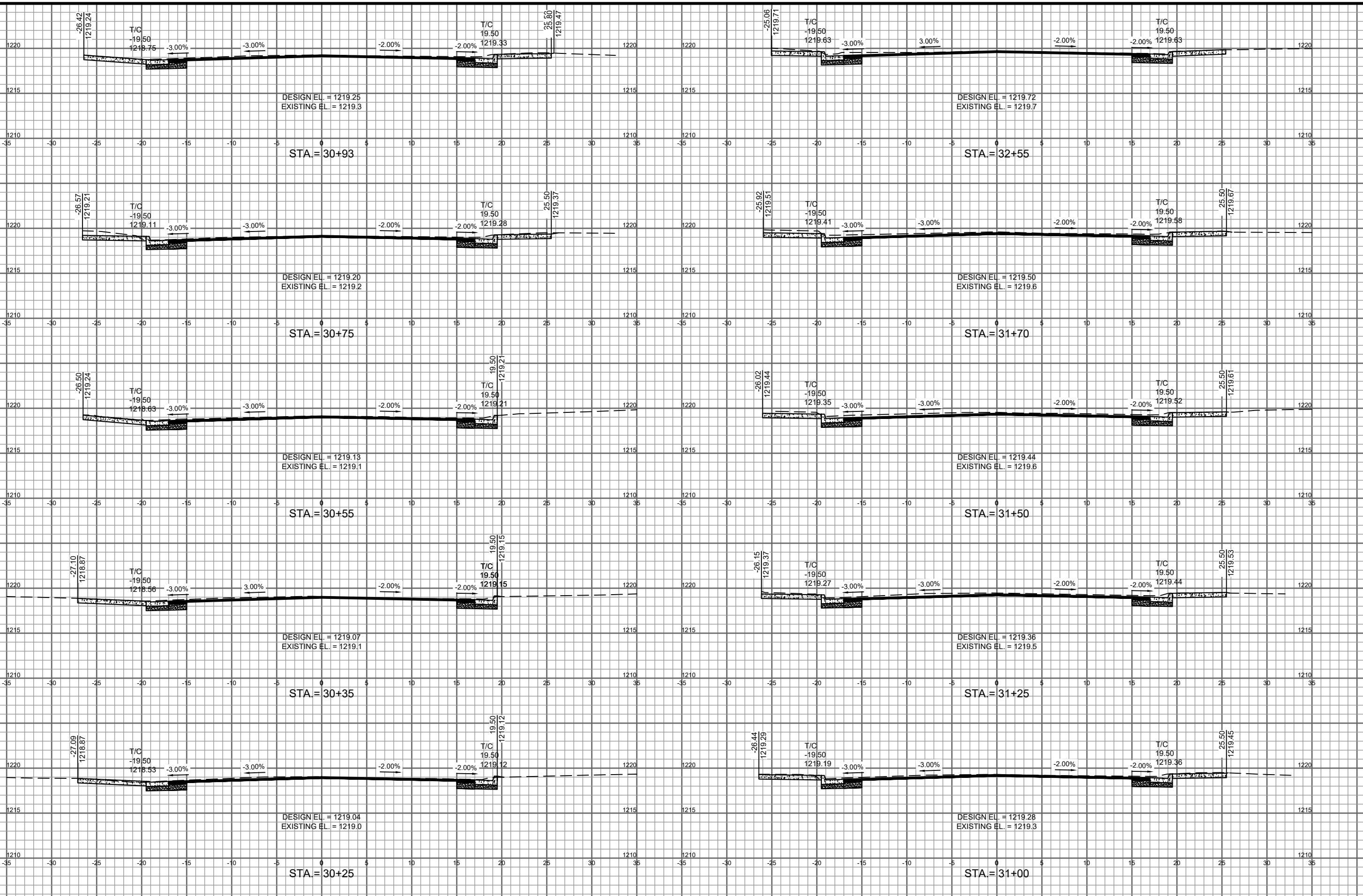
PROJECT NO.	SCALE	AS SHOWN	NO.	DATE	REVISION	BY
00524035	AS SHOWN					
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS			
F.B.:		CHECKED BY:	TKA			

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54988
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

MAIN STREET CROSS SECTIONS - (10)
 SHEET
 CS10

FILE NO.
 00524035



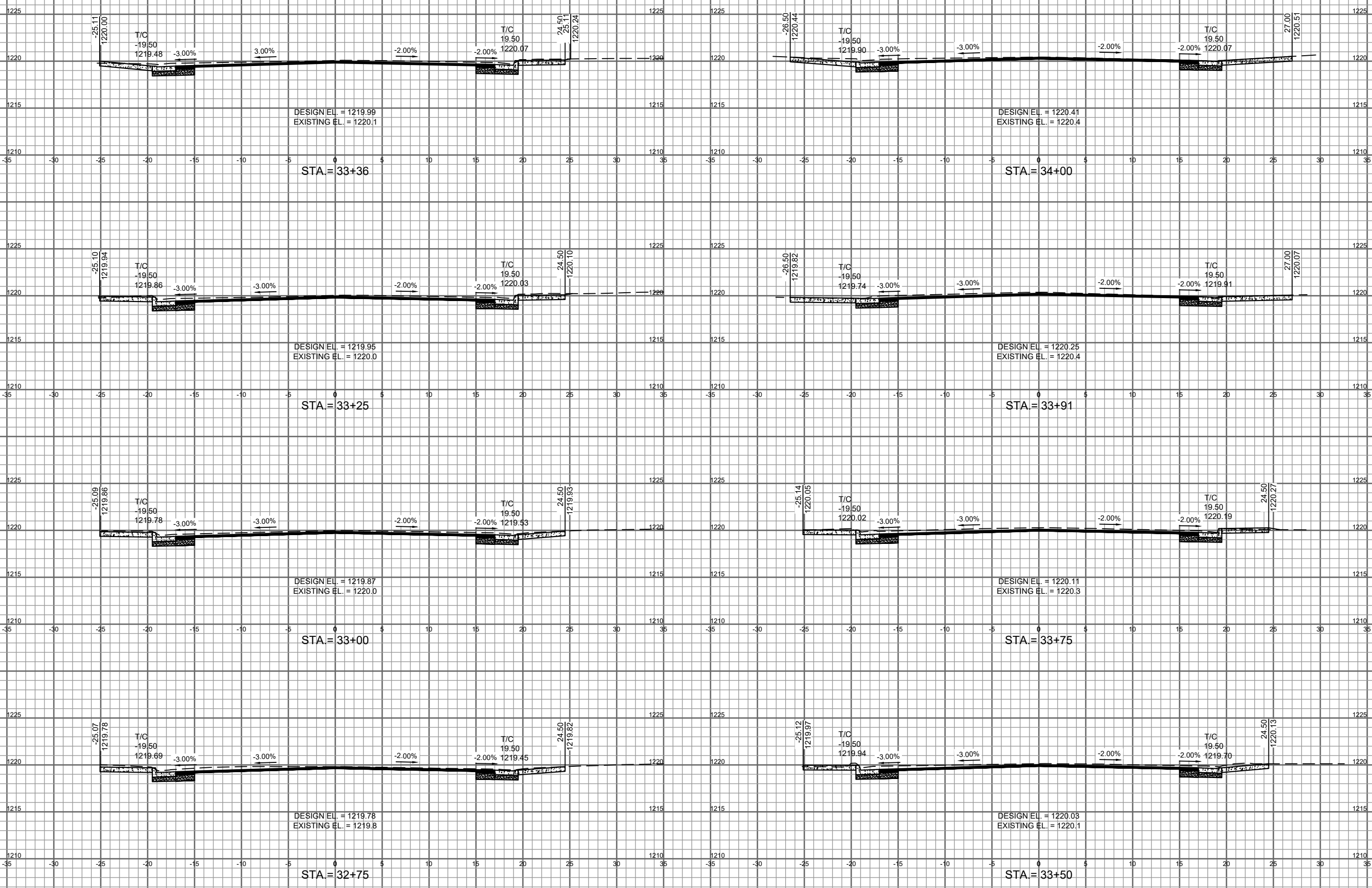
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS	CHECKED BY:	TKA						
F.B.:											

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

CS11 3RD AVE CROSS SECTIONS - (1)

FILE NO.	00524035
SHEET	---



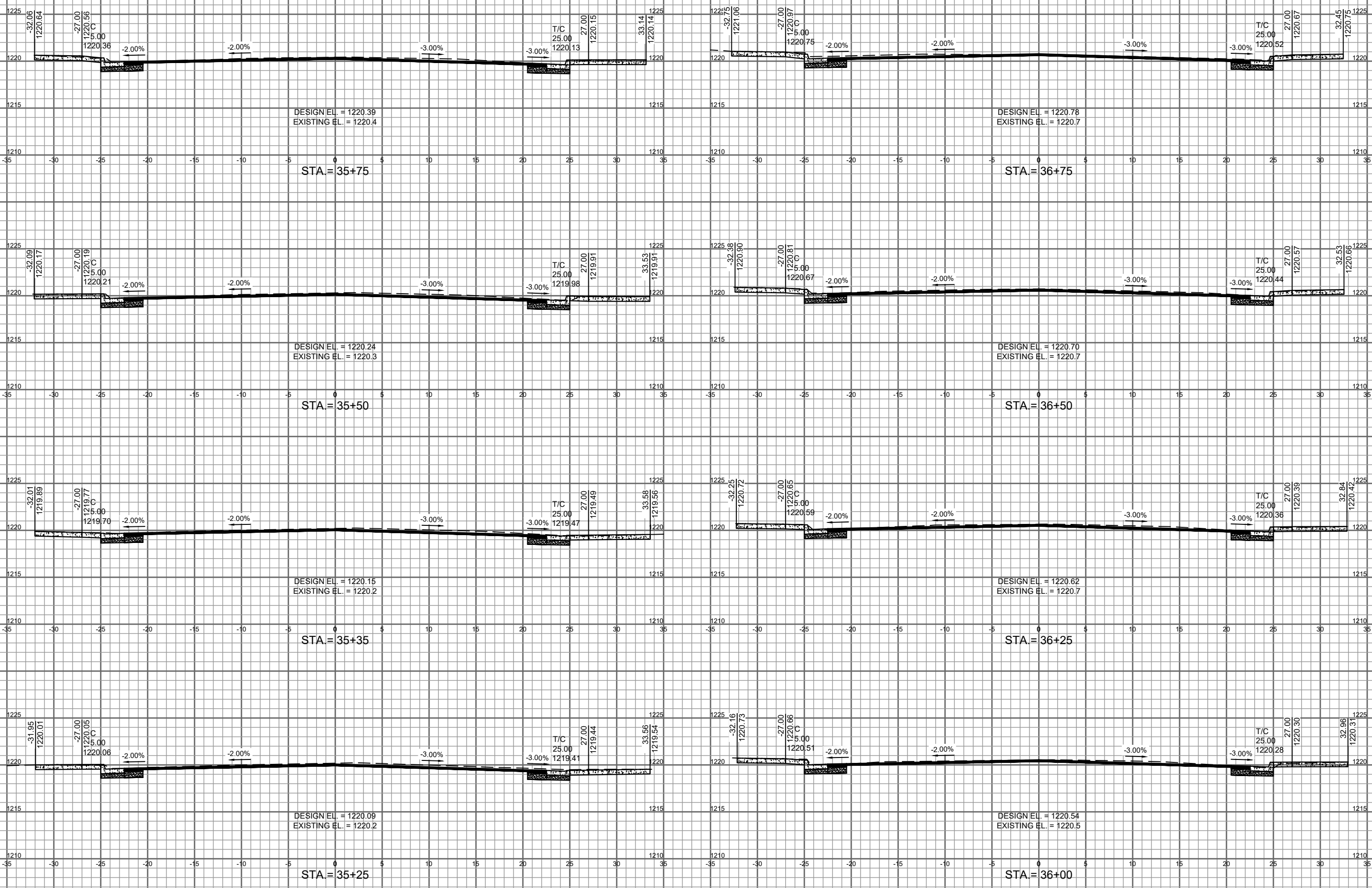
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS	CHECKED BY:	TKA						
F.B.:											

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54868
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

CS12 3RD AVE CROSS SECTIONS - (2)

FILE NO. 00524035
 SHEET



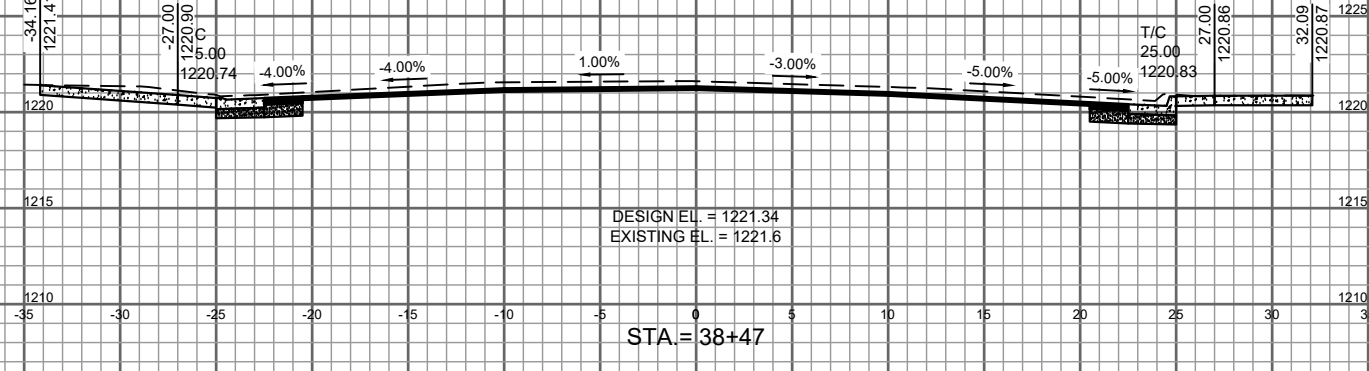
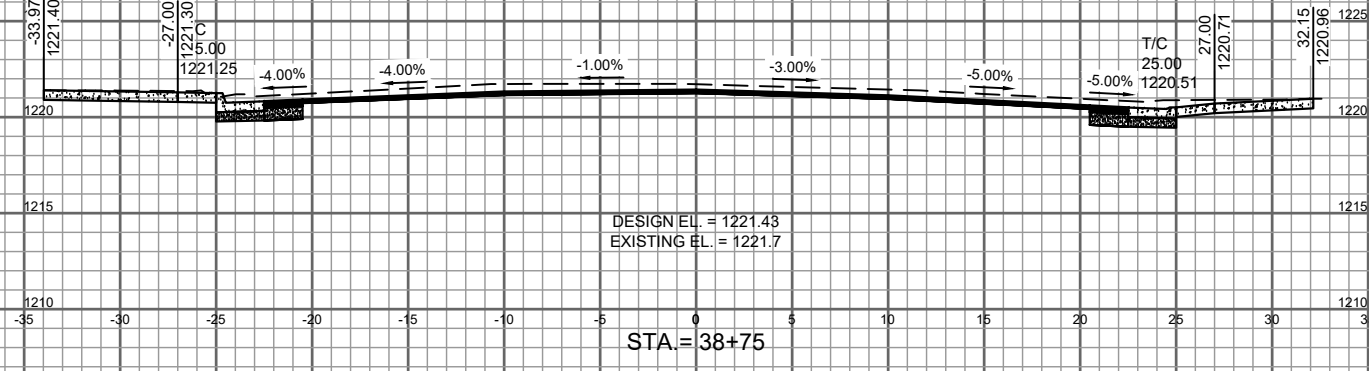
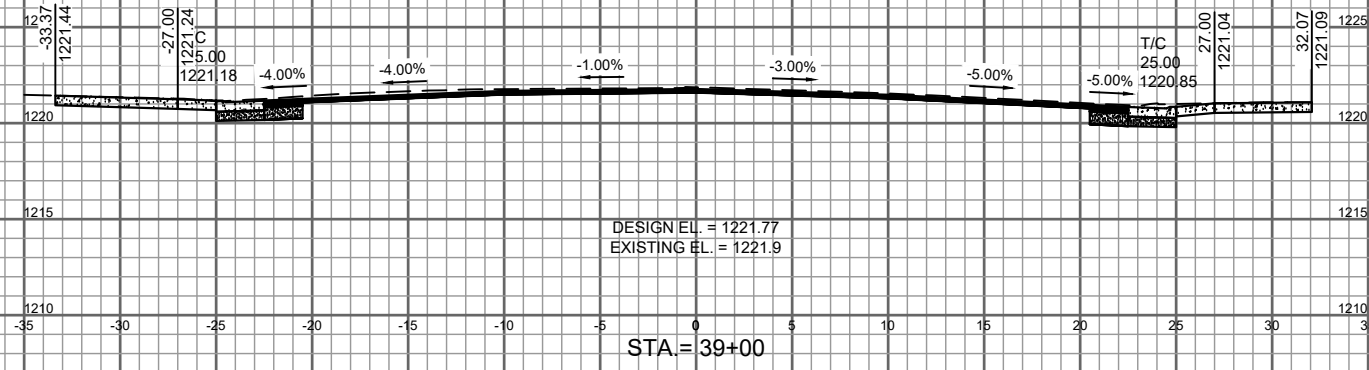
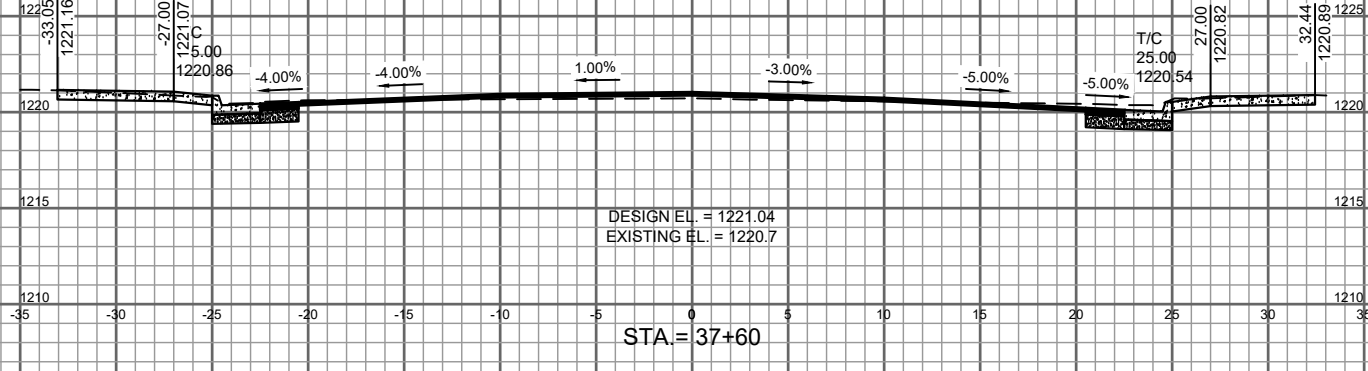
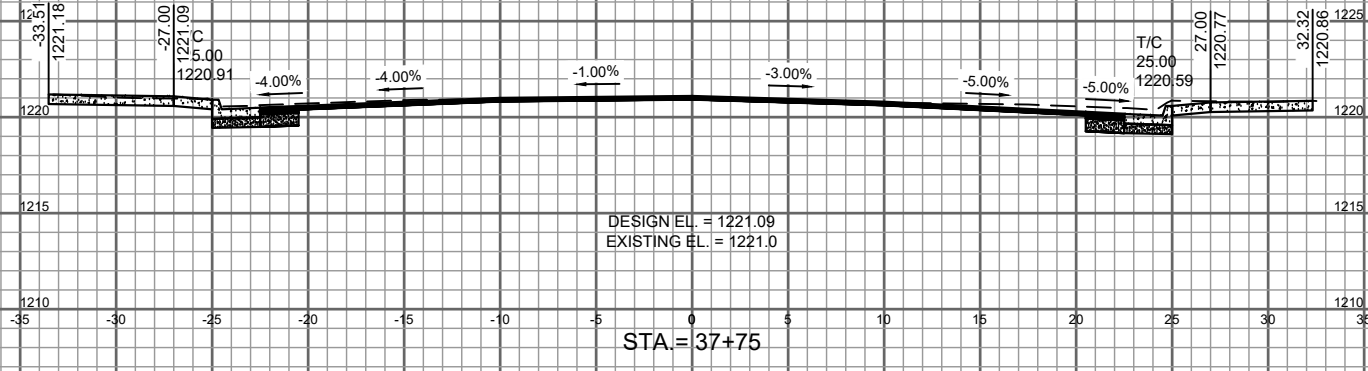
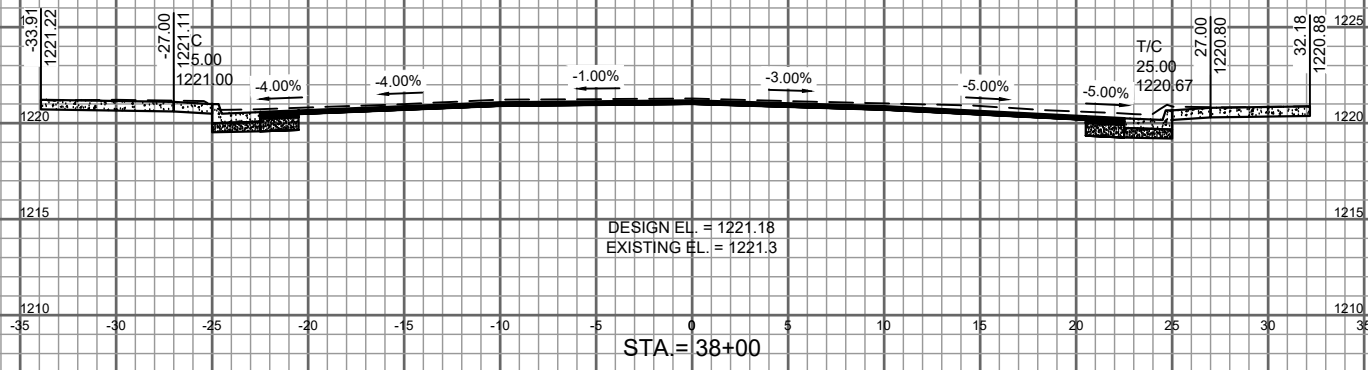
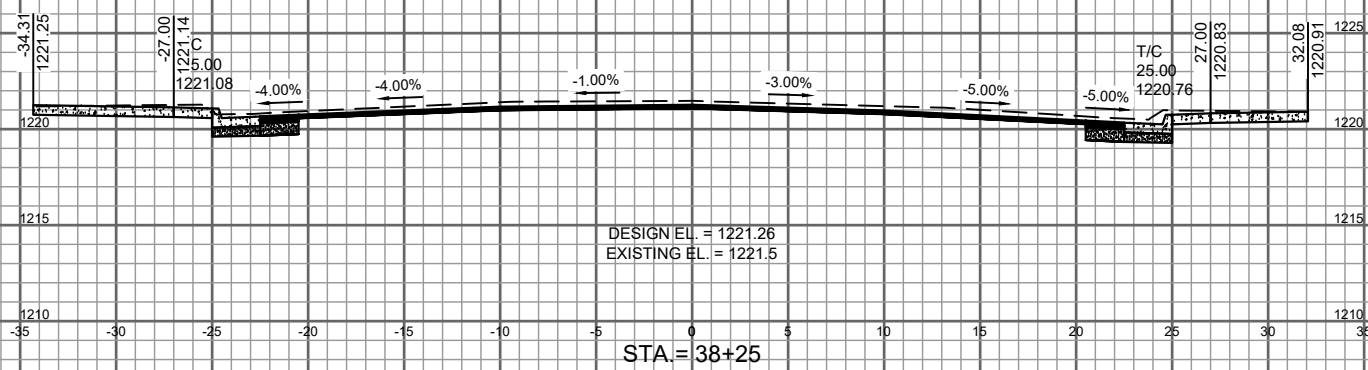
PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS								
F.B.:		CHECKED BY:	TKA								

MSA
 ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
 FUNDING | PLANNING | SURVEYING
 11 E Marshall St Rice Lake, WI 54968
 (715) 234-1009 (888) 869-1215
 www.msa-ps.com
 © MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
 VILLAGE OF LUCK
 POLK COUNTY, WISCONSIN

2ND AVE CROSS SECTIONS - (1)

FILE NO.:	00524035
SHEET:	CS13



PROJECT NO.:	00524035	SCALE:	AS SHOWN	NO.:		DATE:		REVISION:		BY:	
PROJECT DATE:	5/04/2018	DRAWN BY:	JAS								
F.B.:		CHECKED BY:	TKA								

MSA
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
11 E Marshall St Rice Lake, WI 54968
(715) 234-1009 (888) 869-1215
www.msa-ps.com
© MSA Professional Services, Inc.

MAIN STREET IMPROVEMENTS
VILLAGE OF LUCK
POLK COUNTY, WISCONSIN

2ND AVE CROSS SECTIONS - (2)

FILE NO.:	00524035
SHEET:	CS14

1 SECTION 01 21 00

2
3 ALLOWANCES

4 PART 1 GENERAL

5 1.01 APPLICABLE PROVISIONS

6 A. Applicable provisions of Division 01 shall govern work of this section.

7 1.02 APPLICABLE PUBLICATIONS (NONE)

8 1.03 DESCRIPTION OF WORK

9 A. To provide adequate budget and bonding to cover items not precisely determined
10 prior to bidding, include in the Contract Price the costs or quantities described in this
11 Section.

12 B. Adjustment of Cost:

- 13 1. If cost or quantity is more or less than the specified allowance, Contract Price
14 will be adjusted by Change Order, unless stated otherwise herein.
15 2. Submit documentation for engineer review for the actual costs or quantities
16 after completion of Work. Documentation shall include actual invoices or
17 billing statements and evidence of payment.

18 C. Designate in schedule of values costs and quantities required under each allowance.

19 1.04 RELATED WORK ELSEWHERE

20 A. Procurement and Contracting Requirements - Division 00 (All Sections)

21 1.05 SUBMITTALS (NONE)

22 1.06 OPERATION/MAINTENANCE MANUALS AND INSTRUCTIONS (NONE)

23 1.07 SPECIFIC ALLOWANCES

24 A. Electric Service

- 25 1. The Contractor shall coordinate new electric services. For bidding purposes,
26 the Contractor shall include \$5000 in his bid for electric service. This cost
27 shall cover installation/upgrade of new electric service to the site.

28 B. Contaminated Soil Disposal Fees

- 29 1. The Contractor shall pay fees for disposal of contaminated soil at Owner
30 identified facility. For bidding purposes, the Contractor shall include \$500 in
31 his bid. The allowance is to cover landfill fees only. All costs for excavating,
32 handling and hauling shall be included in the unit price bid for related work.

1 01.04 SECTION 01 55 26 TRAFFIC CONTROL

- 2 A. The overall traffic control plan provided in the project plans is representative of
3 complete street closure authorized for single day closures for operations such as
4 milling, paving, and curb placement. For closures lasting more than two
5 consecutive days, contractor shall develop plan to phase construction so that only
6 one side of the street or one block of street (both sides) is closed at one time. Traffic
7 control plan shall be submitted in accordance with Section 01 55 26 Traffic Control.

8 DIVISION 02 - SITE CONSTRUCTION

9 02.01 SECTION 02 61 13 Excavating and Handling of Contaminated Material

- 10 A. Contaminated soils have been identified in the project area at the following
11 approximate locations:
12 1. Main Street, Station 14+25 to 15+00 (Right)
13 2. Main Street, Station 21+50 to 22+00
- 14 B. Contractor shall coordinate the schedule for excavations in these areas with
15 Engineer, so Engineer can make appropriate personnel and equipment available at
16 the site for separating contaminated soils from uncontaminated soils during the
17 excavation. No excavation of suspected contaminated soils shall occur without
18 Engineer present to separate material.
- 19 C. If suspected contaminated materials are encountered at these, or any other location,
20 on the project, when Engineer does not have appropriate personnel present,
21 immediately cease work in that vicinity, install protection barriers to protect public
22 safety, and contact Engineer. Work may continue in unaffected areas of the project.
23 If an emergency situation is noted, contact proper authorities.
- 24 D. Any contaminated materials disturbed for completion of the work shall be handled
25 and disposed of in accordance with Section 02 61 13 Excavating and Handling of
26 Contaminated Material.

27 DIVISION 03 - CONCRETE

28 03.01 SECTION 03 30 00 Cast-In-Place Concrete

- 29 A. In lieu of curing compound, contractor shall use TK Products Achro Seal AS-1
30 applied according to manufacturer's instructions.

SECTION 02 61 13

EXCAVATING AND HANDLING OF CONTAMINATED MATERIAL

PART 1 GENERAL

1.01 APPLICABLE PROVISIONS

A. Applicable provisions of Division 01 shall govern work of this section.

1.02 APPLICABLE PUBLICATIONS

A. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto.

1. American Society for Testing and Materials (ASTM), Annual Book of ASTM Standards, Current Edition.
2. Code of Federal Regulations (CFR), Title 29, Chapter XVII - Occupational Safety and Health Administration (OSHA), Department of Labor, Parts 1910.120 and 1926 Regulations, Current Edition.
3. State of Wisconsin Department of Natural Resources (WDNR), Standard Conservation Practice Standards, Current Edition; webpage www.dnr.state.wi.us/runoff/stormwater/techstds.htm.
4. State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, Current Edition at time of bid opening.
5. Wisconsin Administrative Code (WAC), Department of Natural Resources, Environmental Protection, Regulations, Current Edition.

1.03 DESCRIPTION OF WORK

A. The work under this section shall include all excavating, trenching, stockpiling, and backfilling of contaminated soil encountered during completion of the Work, and the removal of contaminated soil for disposal as indicated on the contract drawings and specified herein.

1.04 RELATED WORK ELSEWHERE

A. Procurement and Contracting Requirements – Division 00 (all sections).

B. Erosion and Sedimentation Controls – Division 31.

1.05 SUBMITTALS (NONE)

1 PART 2 PRODUCTS AND MATERIALS

2 2.01 INSITU BACKFILL MATERIAL

3 A. Previously excavated soil free of organic debris, clay balls, and aggregate larger than
4 1-1/2 inches as approved by Engineer.

5 2.02 IMPORTED GRANULAR FILL

6 A. All granular subbase and granular fill materials shall conform to Section 209 of the
7 State of Wisconsin, Department of Transportation, Standard Specifications.

8 PART 3 CONSTRUCTION METHODS

9 3.01 EXCAVATION

10 A. Petroleum Contaminated Soil Designation. Engineer shall designate excavated
11 material as either “contaminated” or “non-contaminated” for stockpiling purposes.
12 Determination will be based upon appearance, odor, and organic vapor
13 concentrations as measured in the field with either a photo-ionization detection
14 (PID), flame-ionization detection (FID), or gas chromatography (GC).

15 B. General. All excavations of every description and of whatever substances
16 encountered shall be performed to the depths indicated or as otherwise specified.

17 1. Temporary contaminated soil stockpiles shall be placed on 6 mil plastic
18 sheeting, covered with 6 mil plastic sheeting, and secured to prevent wind or
19 rain erosion, and to reduce human exposure. Stockpile locations shall be as
20 directed by the Owner.

21 2. During excavation, material suitable and approved for backfilling shall be
22 piled in an orderly manner a sufficient distance from the banks of the
23 excavation to avoid overloading and to prevent slides or cave-ins. All
24 excavated materials not required or suitable for backfill shall be removed and
25 wasted as specified.

26 3. During excavation, Contractor shall take care not to mix contaminated and
27 non-contaminated material. Any material contaminated due to direct act or
28 negligence of Contractor shall be removed from the site and appropriately
29 disposed of at Contractor’s sole cost.

30 4. Grading shall be done as may be necessary to prevent surface water from
31 flowing into trenches or the excavation. Contractor shall remove any water
32 accumulated in the excavation by pumping or by other approved methods.
33 Water accumulated in an area of soil contamination shall be assumed to be
34 contaminated, unless proven otherwise through appropriate analytical
35 laboratory testing. Any costs incurred for testing and disposal of
36 accumulated water shall be the responsibility of the Contractor. Disposal of
37 said water shall conform to regulatory and permit requirements.

1 5. Contractor shall provide sufficient barricades and protective devices adjacent
2 to excavations to safeguard against injury. Contractor shall provide and
3 maintain sufficient safety lanterns at walks, roadways and parking areas to
4 provide safety at night.

5 C. Trench Excavation. Trenches shall be of the necessary width for proper placement
6 of pipe. The banks of pipe trenches shall conform to OSHA requirements and to the
7 Wisconsin Administrative Code. Contractor is responsible for all safety
8 requirements of said codes.

9 1. Care shall be taken not to overexcavate. The bottom of the trenches shall be
10 accurately graded to provide uniform bearing and support for each section of
11 the pipe. Bell holes and depressions for joints shall be dug after the trench
12 bottom has been graded, and in order that the pipe rest on the prepared
13 bottom for as nearly its full length as practicable, bell holes and depressions
14 shall be only of such length, depth, and width as required for properly
15 making the particular type of joint. Stones shall be removed as necessary to
16 avoid point bearing.

17 2. Where rock excavation is required in trenches for pipe, the rock shall be
18 excavated to a minimum overdepth of 6 inches below the trench depths
19 indicated or specified.

20 3. Except as hereinafter specified for wet or other unstable material, overdepths
21 shall be backfilled as and with materials specified for backfilling the lower
22 portion of trenches. Whenever wet or otherwise unstable material that is
23 incapable of properly supporting the pipe is encountered in the bottom of the
24 trench, such material shall be overexcavated to a depth that allows for
25 construction of a stable pipe bedding. The trench shall be backfilled to the
26 proper grade with suitable approved materials.

27 3.02 BACKFILLING AND COMPACTION

28 A. Contractor shall place suitable backfill materials in compacted one-foot lifts, unless
29 otherwise specified.

30 B. Contractor shall import clean backfill material as required and specified to
31 supplement approved on-site backfill material. Contractor shall also provide
32 supplemental base course and topsoil as necessary to restore site to surface
33 restoration grade.

34 C. Compaction of all material shall be by mechanical means. Contractor shall provide
35 all necessary equipment required to obtain specified compaction. Vibratory
36 equipment shall be used for compaction of granular materials. Sheepsfoot rollers or
37 impact type compactors shall be used for fine-grained (silt or clay) soils.
38 Compaction by travel of grading or excavation equipment is not considered adequate
39 for uniform compaction. Small vibratory compactors are required wherever fill is
40 placed adjacent to foundation walls, footings and piers.

- 1 D. Contractor shall mechanically compact backfill soil in uniform layers. Contractor
2 shall provide the following compaction percentages based on dry density as
3 determined for the materials in accordance with the Modified Proctor test method per
4 ASTM D1557, Procedure C.
- 5 1. 95% compaction in areas of structures, roads, or pavement;
 - 6 2. 90% compaction in all other areas throughout excavation.
- 7 E. All required sampling, preparing of specimens, and testing except as modified by
8 these Specifications shall be performed by an independent laboratory selected by
9 both the Contractor and Engineer and paid for by the Owner. The laboratory shall
10 meet the requirements of ASTM E329. The Engineer will determine when
11 compaction tests shall be made.
- 12 F. Should after settlement occur, succeeding any of the above backfilling methods,
13 Contractor shall scarify the surface of the fill material and place additional fill
14 material in the same manner as herein described so that the surface elevation
15 conforms to the existing surrounding grade. No additional compensation shall be
16 allowed for repairing filled areas where after settlement occurs.
- 17 G. Any testing required because of failure of backfill to meet specification requirements
18 shall be paid for by the Contractor. Test reports shall be sent to the Contractor with
19 copies to the Engineer.
- 20 H. Where peat, muck, quicksand, or other unsuitable subsoil material is encountered on-
21 site, the Engineer shall be notified with respect to over-excavation, disposal, use, and
22 placement of alternate backfill material.

23 3.03 REMOVAL OF WATER

- 24 A. General. At all times during the excavation period and until its completion and
25 acceptance at final inspection, ample means and equipment shall be provided with
26 which to remove promptly, and dispose of properly, all water entering any
27 excavation or other parts of the work. The excavation shall be kept dry and
28 groundwater levels shall be kept low enough to prevent a quicksand condition from
29 ruining the trench bottom. Water pumped or drained from the work herein shall be
30 disposed of as stated in Part D of this section.
- 31 B. Damage. Any and all damage caused by dewatering the work shall be promptly
32 repaired by the Contractor. Dewatering shall be done as required at no additional
33 cost to the Owner.
- 34 C. Permits. Approval from the Wisconsin Department of Natural Resources, Private
35 Water Supply Section will be required for all dewatering wells which singly or in
36 aggregate produce 70 or more gallons per minute. The applicable address is:
37

- 5 D. Disposal. Water shall be considered contaminated and shall be collected and
6 properly disposed off-site. No water shall be discharged into sanitary sewers without
7 permission of the applicable municipality or sanitary district. Cost of disposal of
8 water shall be incidental unless determined by Engineer to be constituted as extra
9 work as defined in the General Conditions.

10 3.04 MATERIAL DISPOSAL

11 A. Material Disposal and Responsibility

- 12 1. Disposal of all excess excavated material on this project, whether designated
13 as contaminated or non-contaminated, will be the responsibility of the
14 Contractor. It shall be the responsibility of the Contractor to provide any
15 additional testing required by the WDNR approved disposal facility.
16 2. Costs for testing, permitting, handling, and transport and disposal of the
17 contaminated soil (if any) shall be included in the Contract Unit Price for
18 contaminated soil disposal.
19 3. Should the laboratory results confirm that material initially designated to be
20 contaminated is non-contaminated, the material shall be considered non-
21 contaminated with regard to disposal and cost of disposal.
22 4. Engineer will provide required notification to DNR prior to commencement
23 of disposal activities.
24 5. Each vehicle providing off-site transportation of contaminated soil shall have
25 a solid waste collection and transportation service license as required by NR
26 502.06, Wisconsin Administration Code.

27 PART 4 MEASUREMENT AND PAYMENT

28 4.01 GENERAL

- 29 A. General. Excavating and Handling of Contaminated Material shall be paid for at the
30 bid price in accordance with one of the following methods, unless indicated
31 otherwise in the Bid Schedule or Special Procedures - Division 01.
- 32 B. All work specified herein shall be considered in each of the measurement and
33 payment method(s) stipulated, unless indicated otherwise in the Bid Schedule or
34 Special Procedures - Division 01.

1 4.02 EXCAVATING AND HANDLING OF CONTAMINATED MATERIAL

2 A. Excavating and Handling of Contaminated Material, Inclusive. When no quantity is
3 provided, excavating and handling of contaminated material shall be included in the
4 payment for contract work related to the associated job. This payment shall include
5 all work defined as Excavating and Handling of Contaminated Material.

6 4.03 CONTAMINATED SOIL REMOVED

7 A. Contaminated Soil Removal, Ton. Measurement for Contaminated Soil Removal
8 shall be per ton, as determined by weight at disposal facility. Payment shall be made
9 at the contract unit price bid per ton of contaminated soil removed, properly handled
10 at the site, removed from the site, and properly disposed of, and replaced with clean
11 backfill.

12 END OF SECTION

Appendix B

Additional Information on Potentially Contaminated Sites

Equity Cooperative
301 S. Main Street

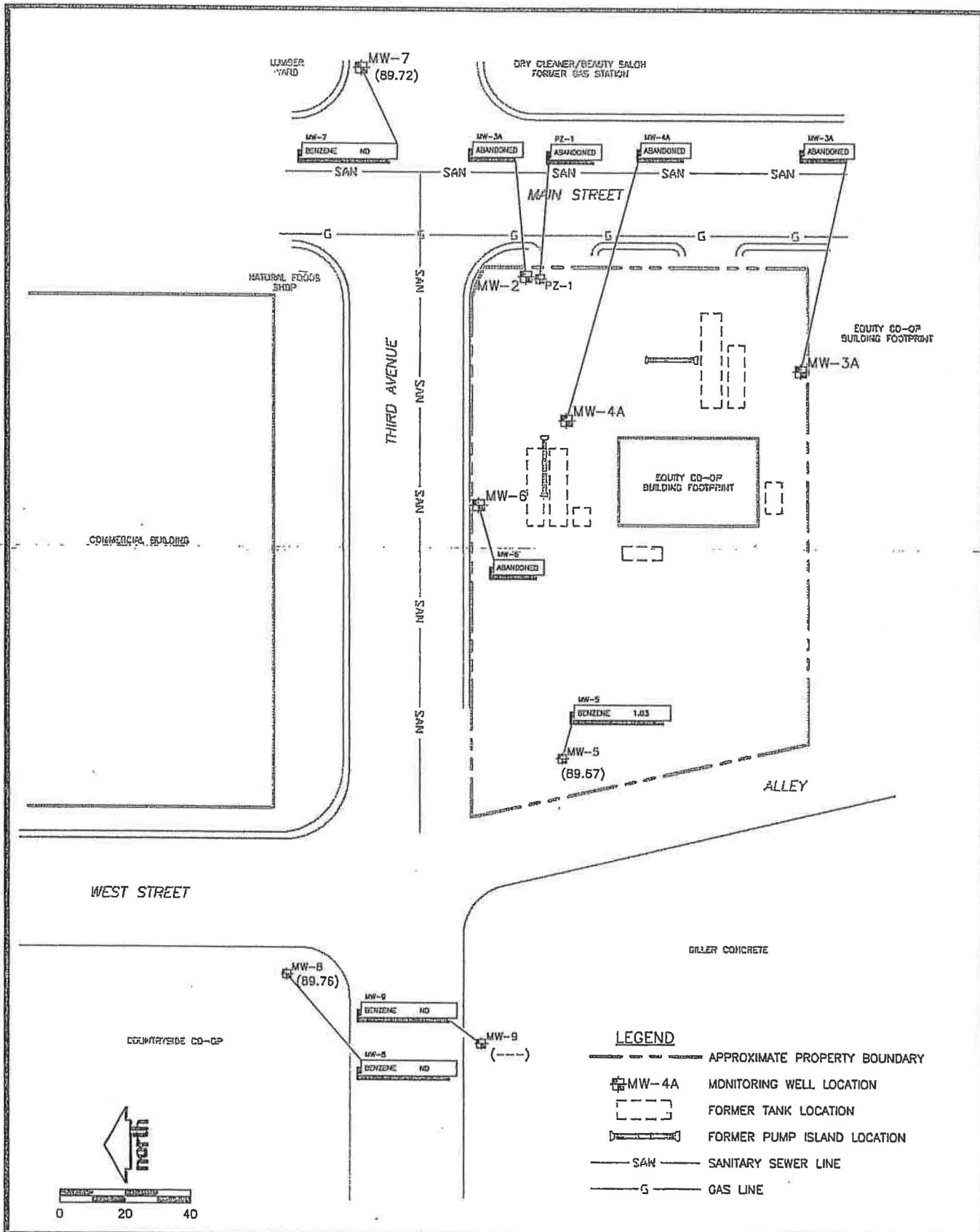
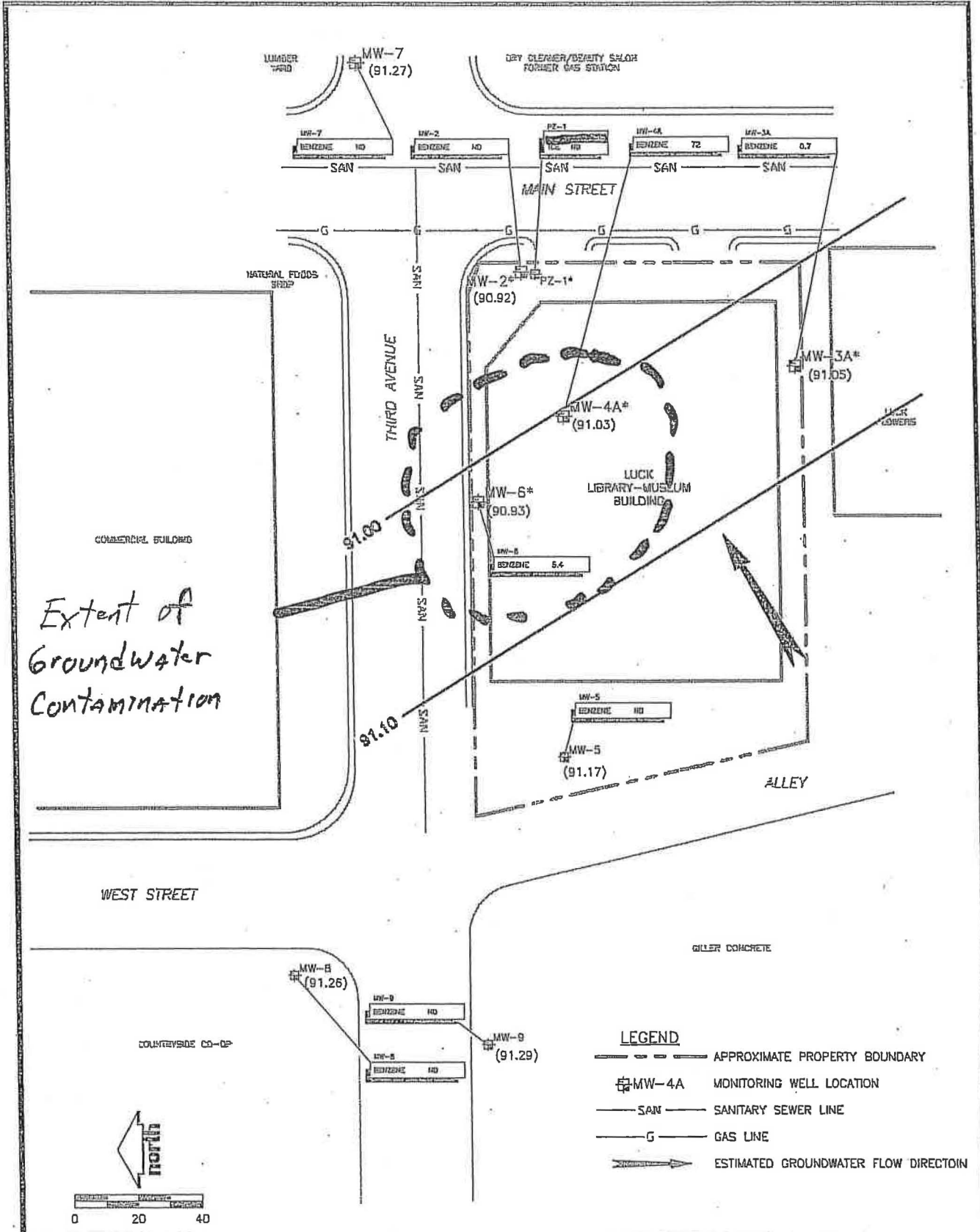


FIGURE 3
GROUNDWATER DATA
APRIL 2008
LUCK AUTO
LUCK, WISCONSIN

PROJECT# 0609022-438
DATE: 7/8/08
REV. BY: MN
SCALE: 1" = 40'



Extent of
Groundwater
Contamination

- LEGEND**
- APPROXIMATE PROPERTY BOUNDARY
 - ⊕ MW-4A MONITORING WELL LOCATION
 - SAN — SANITARY SEWER LINE
 - G — GAS LINE
 - ➔ ESTIMATED GROUNDWATER FLOW DIRECTION



FIGURE 2
GROUNDWATER DATA
OCTOBER 2007
LUK AUTO
LUK, WISCONSIN

PROJECT 52003-143
DATE 2/20/08
REV. BY: LCN
SCALE: 1" = 40'

Lumber Yard

Dry Cleaner/Beauty Salon
Former Gas Station

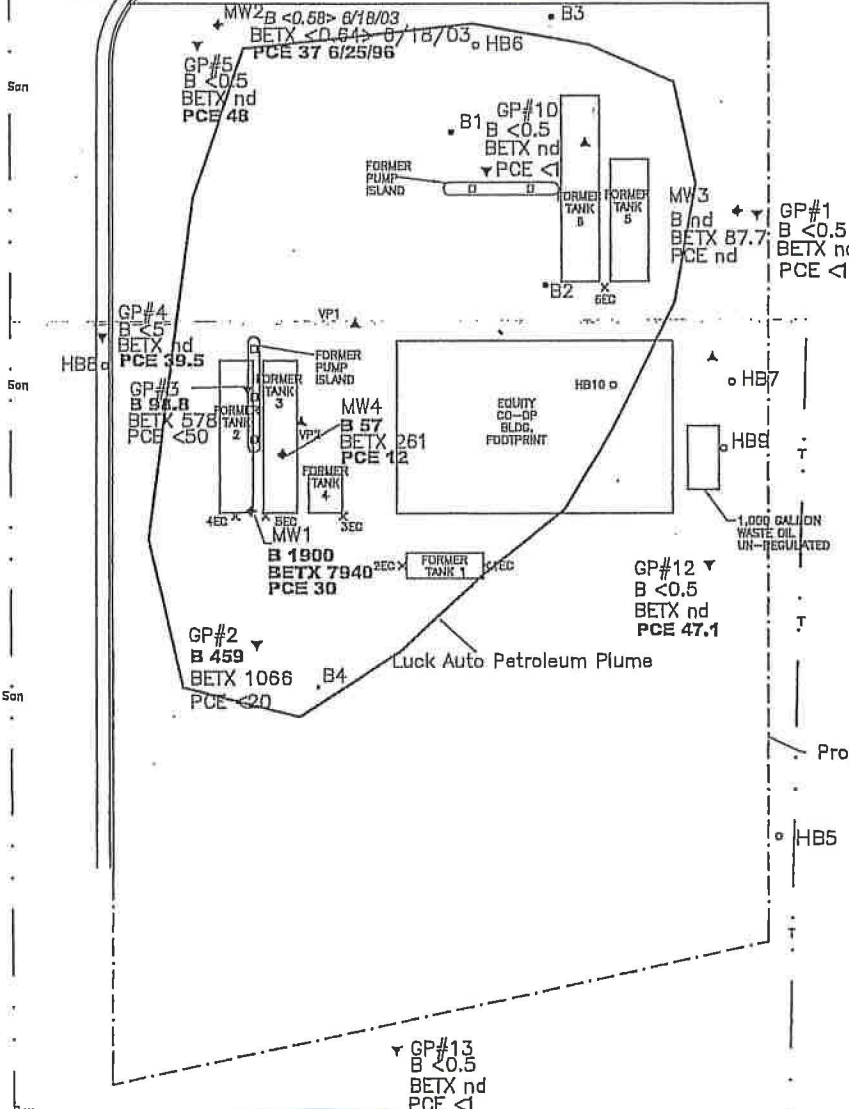
Natural Foods Shop

Saddle Shop

THIRD AVENUE

MAIN STREET

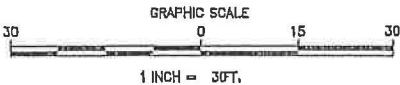
SIDEWALK



LEGEND

- BORINGS
- ◆ MONITORING WELLS
- ▲ VAPOR POINT
- HAND BORING
- ▼ GEOPROBE BORING
- SAMPLE POINT

Italic results = NR140 PAL exceedance
 bold results = NR140 ES exceedance
 monitoring wells sampled 6/25/06 unless otherwise noted
 Geoprobe sampled June 1997 - 10'
 Hand borings (HB) sampled June 1984 - 8'



Groundwater

Equity Co-op - Luck Auto
Contaminant Concentrations

SHEET DESCRIPTION
Figure F-3

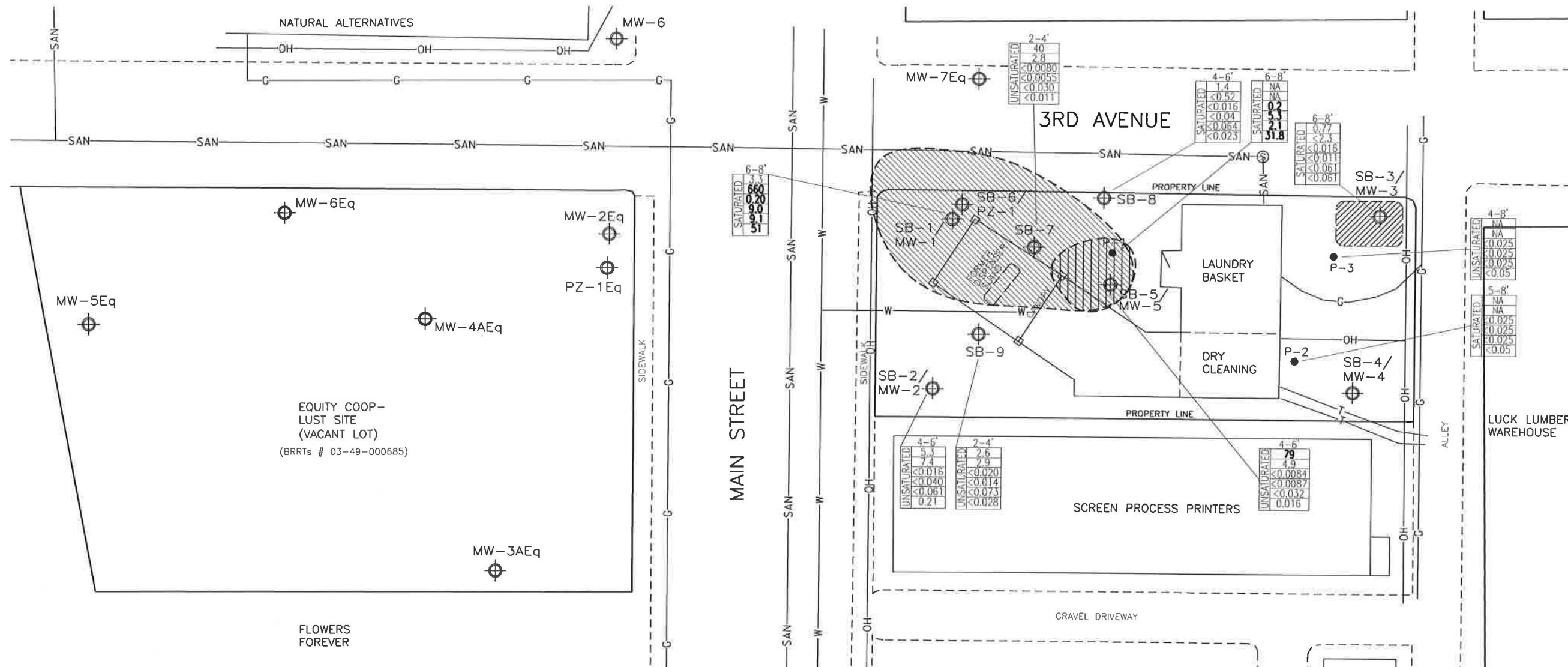
PROJECT Equity Co-op - Luck Auto
CHECKER
APPROVED



310 WEST SOUTH STREET, P.O. BOX 230
RICE LAKE, WISCONSIN 54088-0230
TELEPHONE (715) 234-7008
FAX (715) 234-1025

DATE 5/14/04	DRAWN BY K.R.	
SCALE 1" = 30"	PROJECT NO. ESB3302	SHEET NO. 1

**The Laundry Basket
300 S. Main Street**



LEGEND

- P-1 KONICEK ENVIRONMENTAL CONSULTING SOIL BORING
- MW-5Eq MONITORING WELL ASSOCIATED WITH EQUITY CO-OP SITE
- SB-1/MW-1 MONITORING WELL AND OR SOIL BORING COMPLETED BY MSA
- W— WATERMAIN
- OH— OVERHEAD ELECTRIC
- G— UNDERGROUND GAS LINE
- T— UNDERGROUND TELEPHONE
- SAN— SANITARY SEWER MANHOLE AND UNDERGROUND LINE
- [Hatched Box] SUSPECTED LOCATION OF FORMER UST BASIN

4-6'	SAMPLE INTERVAL (FEET)
5.3	LEAD (mg/kg)
7.4	GRO (mg/kg)
<0.016	BENZENE (mg/kg)
<0.040	ETHYLBENZENE (mg/kg)
<0.061	TOLUENE (mg/kg)
0.21	XYLENES (mg/kg)

<0.016 LESS THAN INDICATED DETECTION LIMIT

660 RESULTS IN BOLD EQUAL OR EXCEED THE NR 720.09 OR NR 720.11 WIS. ADM. CODE RESIDUAL CONTAMINANT LEVEL (RCL)

NA NOT ANALYZED FOR THIS PARAMETER

[Dotted Area] APPROXIMATE EXTENT OF UNSATURATED PETROLEUM SOIL CONTAMINATION GREATER THAN RCLs

[Hatched Area] APPROXIMATE EXTENT OF SATURATED PETROLEUM SOIL CONTAMINATION (DEEPER THAN 6.0' BGS) GREATER THAN RCLs (EXTENT BASED ON EQUITY CO-OP SOIL & GROUNDWATER DATA)

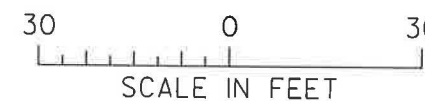


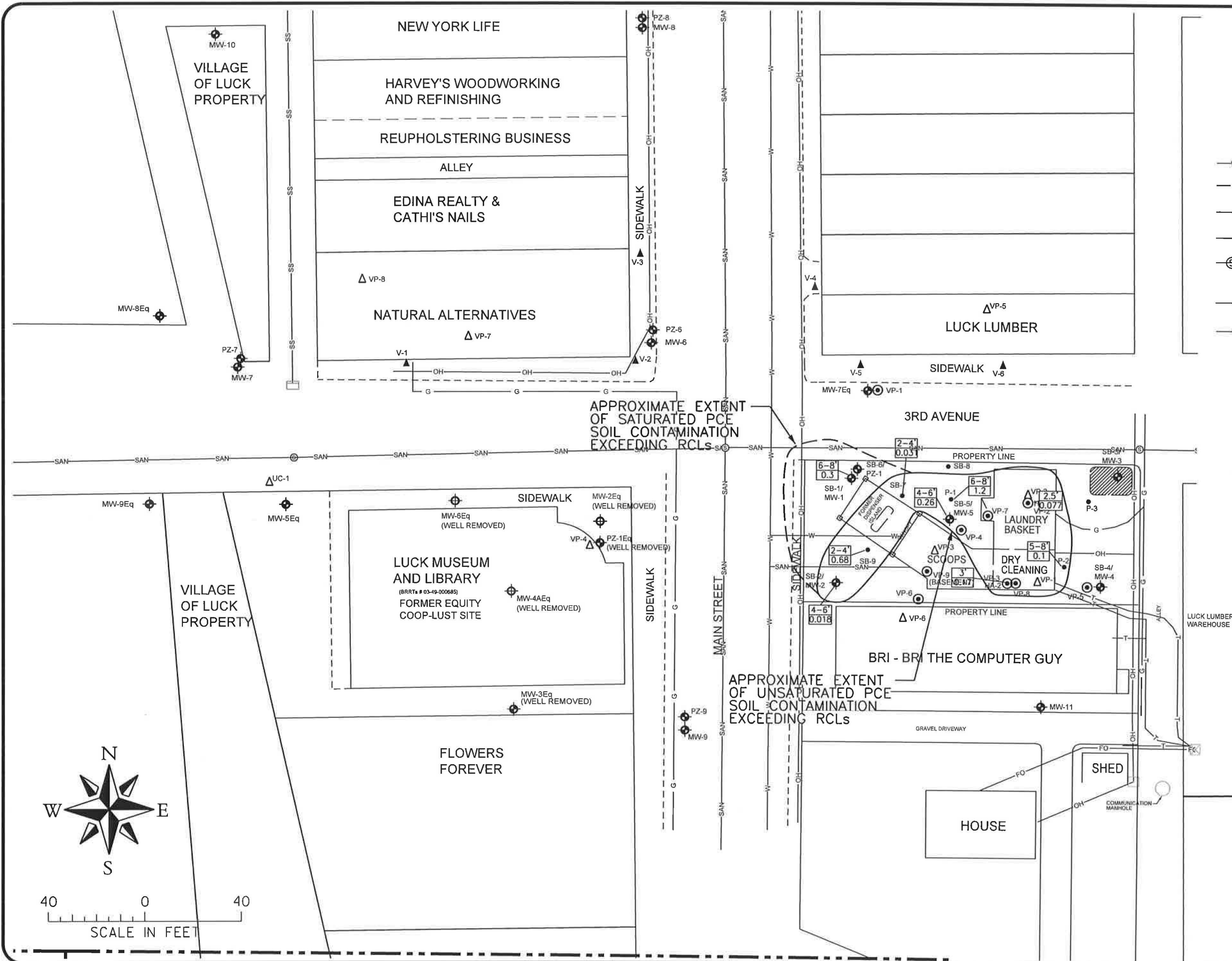
FIGURE 6

PETROLEUM SOIL CONTAMINANT CONCENTRATIONS
LAUNDRY BASKET
LUCK, WISCONSIN

MSA
PROFESSIONAL SERVICES

TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1825 N. Sherman St. Milwaukee, WI 53201
715-362-3244 1-800-844-7854 Fax: 715-362-4116
© USA PROFESSIONAL SERVICES

DRAWN BY CAR	DATE 7/07	SHEET - of -
CHECKED BY DA	SCALE AS SHOWN	FILE NO. 6080602F6



- LEGEND**
- P-1 KONICEK ENVIRONMENTAL CONSULTING SOIL BORING
 - MW-5Eq MONITORING WELL ASSOCIATED WITH EQUITY CO-OP SITE
 - SB-1/ MW-1 MONITORING WELL AND OR SOIL BORING COMPLETED BY MSA
 - W WATERMAIN
 - OH OVERHEAD ELECTRIC
 - G UNDERGROUND GAS LINE
 - T UNDERGROUND TELEPHONE
 - SAN SANITARY SEWER MANHOLE AND UNDERGROUND LINE
 - FO FIBER OPTIC
 - SS STORM SEWER
 - [Hatched Box] SUSPECTED LOCATION OF FORMER UST
 - HA-1 VP-2 VAPOR/SOIL SAMPLE WITH LABEL
 - SB-8 MSA SOIL BORING
 - PROPERTY LINE
 - [Box with X] FIBER OPTIC BOX/ COMMUNICATION BOX
 - ◆ PIEZOMETER WELL
 - ◆ WATER TABLE MONITORING WELL
 - [Square with X] STORM SEWER GRATE
 - ▲ VAPOR PROBE, APRIL 2013
 - △ VAPOR PROBE, MARCH 2017
 - [Box with 6-8' 1.2] DEPTH (FEET) PCE SOIL CONCENTRATION (mg/kg)

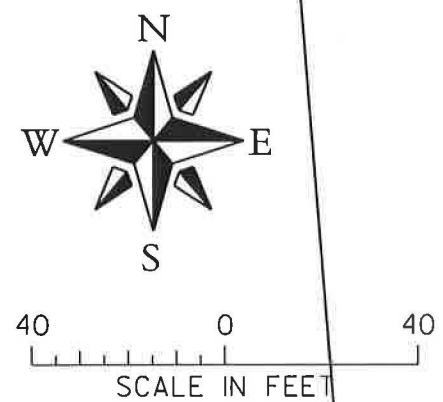
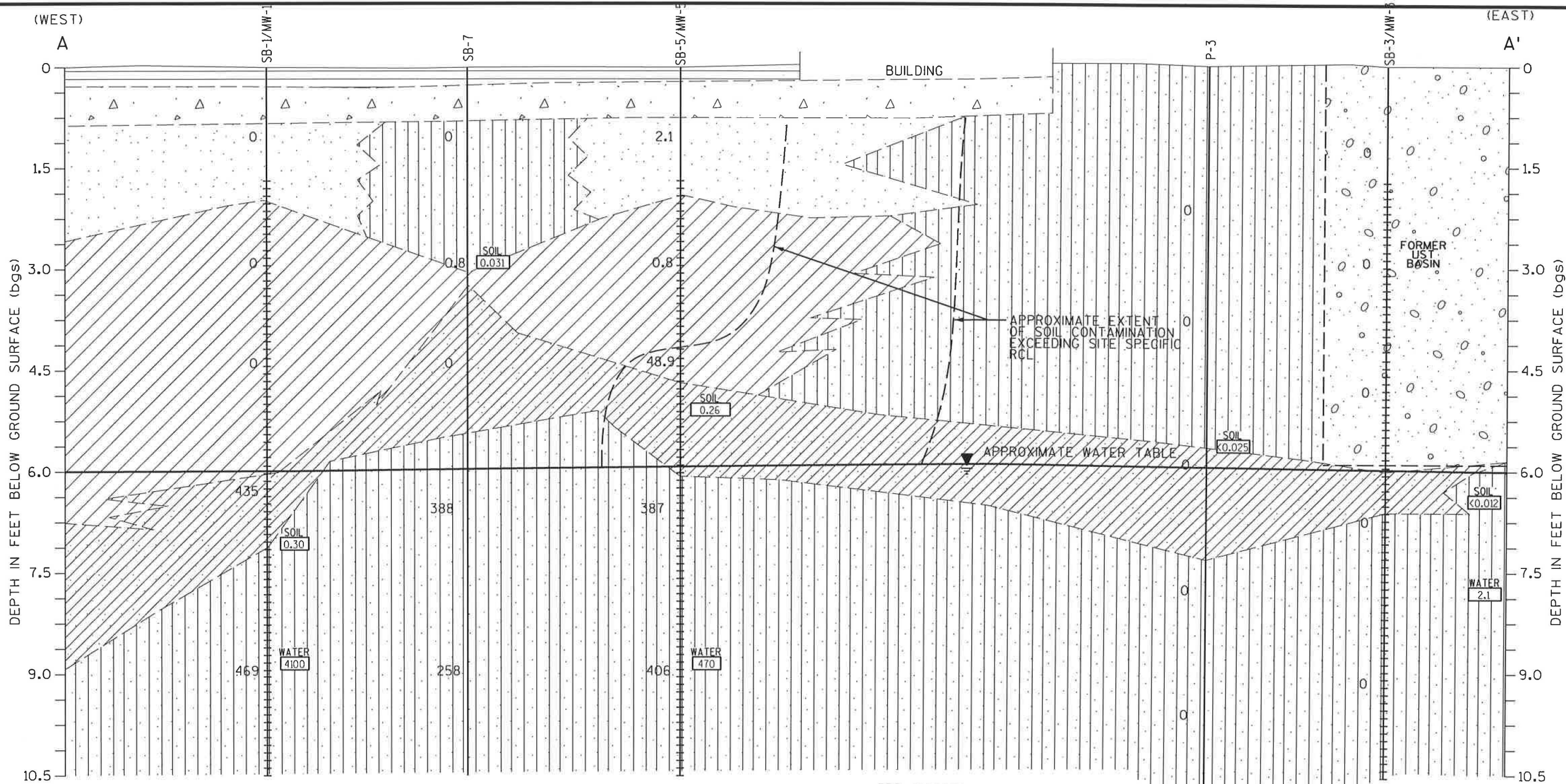


FIGURE B.2.a

**SOIL CONTAMINATION
LAUNDRY BASKET
LUCK, WISCONSIN**

MSA
PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
855 N. Wisconsin St. Brookfield, WI 53005
761-362-3344 | 1-800-844-7854 Fax: 761-362-4106
© USA PROFESSIONAL SERVICES

DRAWN BY CAR DATE 4/2017 SHEET - of -
CHECKED BY DA SCALE AS SHOWN FIGURE B2a



- | | | | | |
|--|------------|--|------------------|-----------------------------|
| | CLAY | | SANDY CLAY | SOIL [0.30] PCE (mg/kg) |
| | SILTY SAND | | CEMENT | WATER [4100] PCE (ug/L) |
| | SILT | | ASPHALT | PCE SAMPLES TAKEN JULY 2009 |
| | SAND | | SAND WITH GRAVEL | |

- INFERRED GEOLOGICAL CONTACT
- ACTUAL GEOLOGY UNKNOWN
- APPROXIMATE WATER TABLE
- SCREENED INTERVAL
- PID READING IN PPM AS ISOBUTYLENE EQUIVALENTS

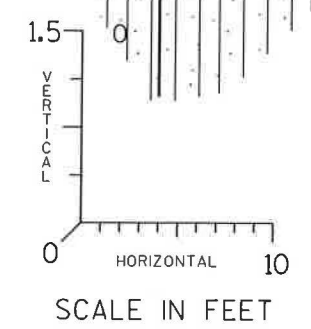
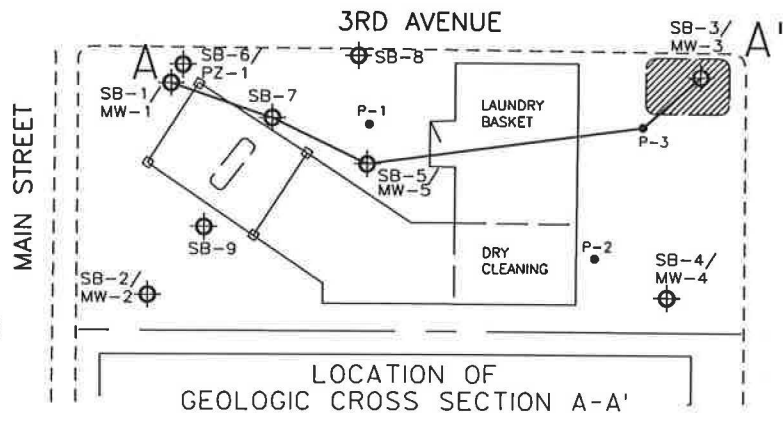
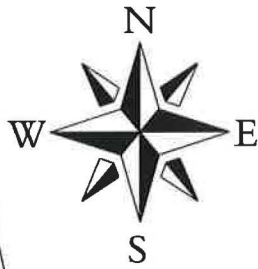


FIGURE B.3.a
GEOLOGIC CROSS SECTION A-A'
LAUNDRY BASKET
LUCK, WISCONSIN

MSA
 TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
 933 N. Stearns St., Brookfield, WI 53005
 TEL: 262-224-1000 FAX: 262-224-1001
 © MSA PROFESSIONAL SERVICES

DRAWN BY: CAR DATE: 4/2017 SHEET: - of -
 CHECKED BY: DA SCALE: AS SHOWN FILE NO.: FIGURE B.3.a



LEGEND

- P-1 KONICEK ENVIRONMENTAL CONSULTING SOIL BORING
- MW-5Eq MONITORING WELL ASSOCIATED WITH EQUITY CO-OP SITE
- SB-1/MW-1 MONITORING WELL AND OR SOIL BORING COMPLETED BY MSA
- W WATERMAIN
- OH OVERHEAD ELECTRIC
- G UNDERGROUND GAS LINE
- T UNDERGROUND TELEPHONE
- SAN SANITARY SEWER MANHOLE AND UNDERGROUND LINE
- FO FIBER OPTIC
- SS STORM SEWER
- [Hatched Box] SUSPECTED LOCATION OF FORMER UST
- HA-1 VP-2 VAPOR/SOIL SAMPLE WITH LABEL
- SB-8 MSA SOIL BORING
- PROPERTY LINE
- [Box with X] FIBER OPTIC BOX/COMMUNICATION BOX
- [Circle with dot] PIEZOMETER WELL
- [Circle with cross] WATER TABLE MONITORING WELL
- [Square with cross] STORM SEWER GRATE
- [Triangle with dot] VAPOR PROBE, APRIL 2013
- [Red Dashed Circle] ESTIMATED EXTENT OF GROUNDWATER PLUME EXCEEDING DNR ENFORCEMENT STANDARDS
- [Red Dotted Circle] ESTIMATED EXTENT OF GROUNDWATER PLUME EXCEEDING DNR PREVENTATIVE ACTION LIMITS

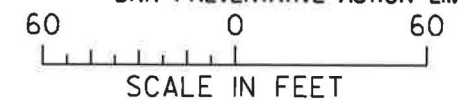


FIGURE B.3.b.2
**MARCH 2017
 GROUNDWATER ISOCONCENTRATION
 LAUNDRY BASKET
 LUCK, WISCONSIN**

MSA TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
PROFESSIONAL SERVICES
 801 N. Stevens St. Milwaukee, WI 53208
 75-362-3244 (F) 75-362-7054 (F) 75-362-4866
 © MSA PROFESSIONAL SERVICES

DRAWN BY CAR DATE 5/17 SHEET - of -
 CHECKED BY PK SCALE AS SHOWN FILE NO. 6080801site

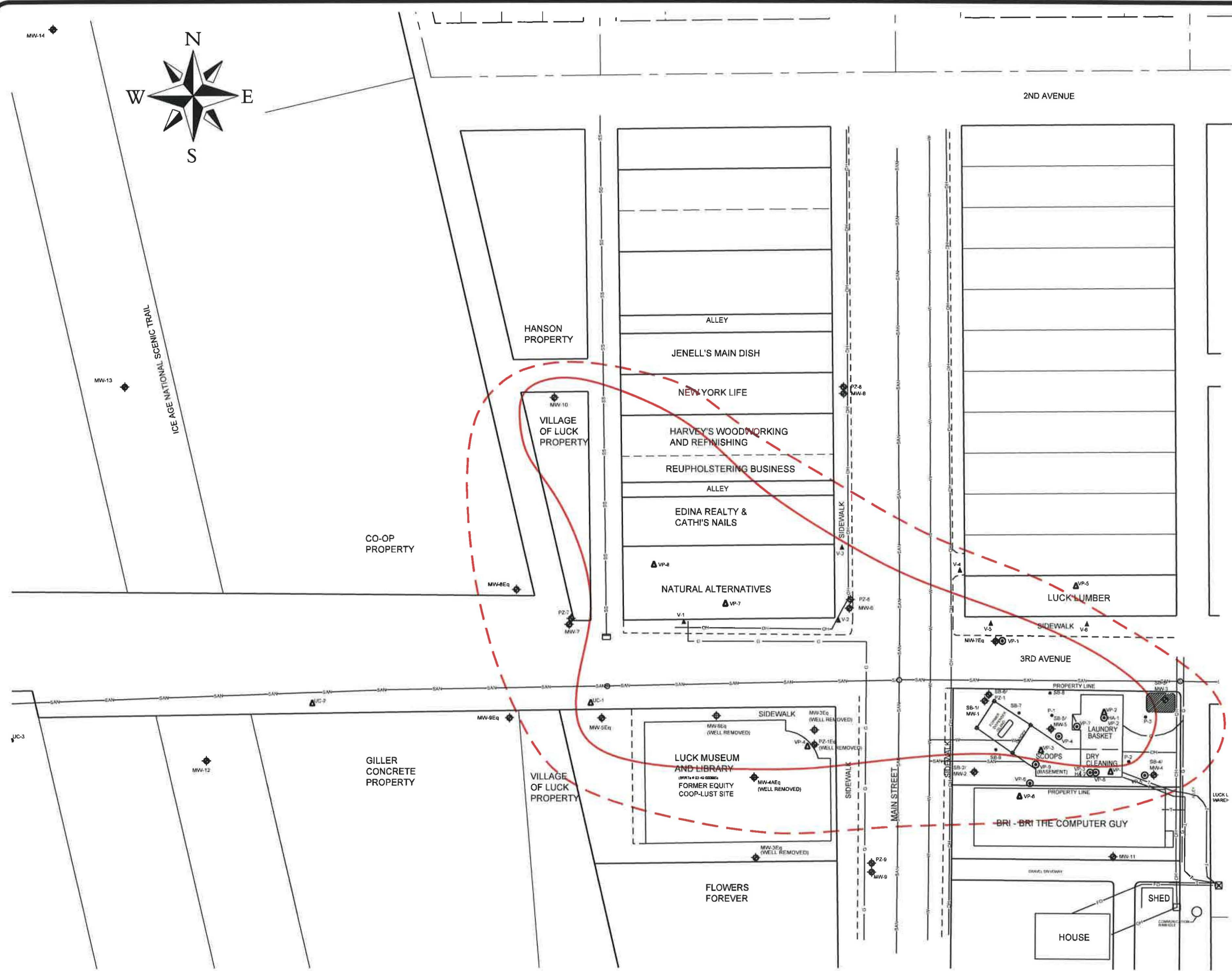


TABLE 3
SOIL RESULTS SUMMARY

Organics and Metals
Laundry Basket
Luck, Wisconsin

SAMPLE DESCRIPTIONS				mg/kg		VOCs (mg/kg)							
Sample Location	Sample Date	Depth (ft. bgs)	Qualifiers	GRO	Lead	Benzene	Ethylbenzene	Toluene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Total Xylenes	n-Butylbenzene	sec-Butylbenzene
NR 720 RCLs				100	50	0.0055	2.9	1.5	--	--	4.1	--	--
NR 746.06 Table 1 (free product)				--	--	8.5	4.6	38	11	83	42	--	--
NR 746.06 Table 2 (direct contact)				--	--	1.1	--	--	--	--	--	--	--
P-1	12/5/2005	6-8		na	na	0.2	5.3	2.1	7.3	26	31.8	<0.2	1.7
P-2	12/5/2005	5-8		na	na	<0.025	<0.025	<0.025	<0.025	<0.025	<0.05	<0.025	<0.025
P-3	12/5/2005	4-8		na	na	<0.025	<0.025	<0.025	<0.025	0.039	<0.05	0.11	0.029
SB-1	4/10/06	6-8	Q	660	3.3	0.20	9.0	9.1	11	33	51	2.1	1.1
SB-2	4/10/06	4-6	Q	7.4	5.3	<0.016	0.040	<0.061	0.039	0.13	0.21	<0.012	<0.010
SB-3	4/10/06	6-8	Q	<2.3	0.77	<0.016	<0.011	<0.061	<0.011	0.023	0.061	<0.012	<0.010
SB-5	4/11/06	4-6	Q	4.9	79	<0.0084	<0.0087	<0.032	<0.0056	0.0060	0.016	<0.0062	<0.0052
SB-7	4/11/06	2-4	Q	2.8	40	<0.0080	<0.0055	<0.030	<0.0053	<0.0042	<0.011	<0.0059	<0.0049
SB-8	4/11/06	4-6	Q	<0.52	1.4	<0.016	<0.011	<0.061	0.015	0.014	<0.023	<0.012	<0.010
SB-9	4/11/06	2-4	Q	2.9	2.6	<0.020	<0.014	<0.073	<0.013	<0.010	<0.028	<0.014	<0.012
MeOH field blank		--	Q	na	na	<0.0081	<0.0056	<0.030	<0.0054	<0.0042	<0.012	<0.0060	<0.0050

Explanation:

All results are reported in mg/kg milligrams per kilogram

Results in bold equal or exceed the NR 720 RCL or NR 746 soil standard

<1.5 = not detected above the indicated detection limit

-- =no standard established

na = not analyzed for this parameter

Table only includes those VOC compounds for which there were detections

Q = a parameter was qualified by the laboratory

TABLE 3
SOIL RESULTS SUMMARY

Organics and Metals
Laundry Basket
Luck, Wisconsin

SAMPLE DESCRIPTIONS				VOCs (mg/kg) - Continued										
Sample Location	Sample Date	Depth (ft. bgs)	Qualifiers	tert-Butylbenzene	Chlorodibromomethane	1,1-Dichloroethane	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Tetrachloroethene	1,2,3-Trimethylbenzene
NR 720 RCLs				--	--	--	--	--	--	--	--	--	--	--
NR 746.06 Table 1 (free product)				--	--	--	--	--	--	--	2.7	--	--	--
NR 746.06 Table 2 (direct contact)				--	--	--	--	--	--	--	--	--	--	--
P-1	12/5/2005	6-8		<0.2	<0.2	<0.2	2.5	4	na	<0.2	5.7	4.3	1.2	na
P-2	12/5/2005	5-8		<0.025	<0.025	<0.025	<0.025	<0.025	na	<0.025	<0.025	<0.025	0.100	na
P-3	12/5/2005	4-8		<0.025	<0.025	<0.025	0.034	0.047	na	<0.025	<0.025	0.140	<0.025	na
SB-1	4/10/06	6-8	Q	0.034	0.017	0.016	2.0	1.5	0.33	<0.030	6.8	5.6	0.30	9.1
SB-2	4/10/06	4-6	Q	0.018	<0.012	<0.013	<0.010	<0.0087	0.30	0.042	0.31	0.027	0.018	0.036
SB-3	4/10/06	6-8	Q	<0.0093	<0.012	<0.013	<0.010	<0.0087	0.28	0.038	0.028	<0.010	<0.012	<0.010
SB-5	4/11/06	4-6	Q	<0.0048	<0.0060	<0.0067	<0.0055	<0.0045	0.21	<0.016	0.080	<0.0052	0.26	<0.0052
SB-7	4/11/06	2-4	Q	<0.0046	<0.0056	<0.0063	<0.0052	<0.0043	0.19	<0.015	<0.0097	<0.0049	0.031	<0.0049
SB-8	4/11/06	4-6	Q	<0.0093	<0.012	<0.013	<0.010	<0.0087	0.36	0.040	<0.020	<0.010	<0.012	<0.010
SB-9	4/11/06	2-4	Q	<0.011	<0.014	<0.016	<0.013	<0.010	<0.16	<0.036	<0.024	<0.012	0.68	<0.012
MeOH field blank		--	Q	<0.0046	<0.0058	<0.018	<0.0053	<0.0044	<0.067	<0.015	<0.0099	<0.0050	<0.0058	<0.0050

Explanation:

All results are reported in mg/kg milligrams per kilo;
Results in bold equal or exceed the NR 720 RCL or
<1.5 = not detected above the indicated detection li
-- =no standard established
na = not analyzed for this parameter
Table only includes those VOC compounds for whic
Q = a parameter was qualified by the laboratory

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride
ES	--	--	--		5	700	1000	60	480	10000	--	--		5	7	70	100	--	--	460	5	100	--	100	5	5	0.2
PAL	--	--	--		0.5	140	200	12	96	1000	--	--		0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02
MW-1																											
13-Apr-06	Q	PECFA	13000		260	500	2000	<3.2	1060	2400	<2.4	10		8.3	<4.4	91	<0.32	49	14	<27		220	91	<2.7	250	23	<3.1
17-Aug-06	Q	PECFA	3700		41	100	150	<1.6	188	280	21	<1.4		<1.7	<2.2	74	<1.6	12	8.8	26		49	22	<1.3	570	30	<1.5
13-Dec-06	*	PECFA	NA		20	22	<50	<10	13	20	<10	<10		<10	<10	220	<10	<10	<10	NA		<50	<10	<10	1400	100	<10
2-May-07	Q	PECFA	NA		44	89	140	<3.2	108	200	<2.4	<2.8		<3.4	<4.4	120	<3.3	8.3	<2.9	<27		46	12	<2.7	1400	52	<3.1
28-Jan-08		PECFA	1500		36	42	38	16	46	61												26					
23-Apr-08		PECFA	2000		52	39	61	27	55	107												32					
14-May-08	Q	DERF	NA		54	57	130	<1.9	80	160	<2.3	<2.2		<2.7	<5.0	260	<3.0	5.4	4.1	<45	<3.0	25	6	<3.8	3500	<3.7	<2.7
27-Aug-08	Q	DERF	NA		49	64	100	<0.19	63	110	1.8	1.1		<0.27	<0.50	360	1.7	7.4	3.4	<4.5	<0.30	35	7.6	1.2	4800	130	<0.27
24-Nov-08	Q	DERF	NA		40	42	86	<19	43	100	<23	<22		<27	<0.50	250	<30	<19	<21	<450	44	36	<22	<38	2900	140	<27
14-Jul-09		DERF	NA		110	200	230	<19	211	380	<23	<22	<20	<27	<50	390	<30	19	<21	<450	<30	220	26	<38	4100	140	<27
02-Jun-11	J	DERF	NA	NA	29	33	57	<20	23	73	<8.0	<10	<8.0	<20	<20	150	<20	<8.0	<8.0		<40	15	<20	<20	1700	28	<8.0
18-Nov-11	J B	DERF	NA	NA	59	35	86	<10	28	85	<4.0	<5.0	<4.0	<10	<10	520	<10	12	<4.0		<20	22	<10	<10	8400	340	<4.0
13-Feb-12	J	DERF	NA	NA	200	150	470	<10	79	260	4.5	<5.0	<4.0	<10	<10	400	<10	25	<4.0		<20	89	22	<10	4000	180	<4.0
15-May-12		DERF	NA	NA	151	75.2	177	<20.0	45.6	154	<20.0	<20.0	<20.0	<20.0	<20.0	259	<20.0	<20.0	<20.0	<80.0	<80.0	<80.0	<20.0	<20.0	1800	129	<8.0
29-Aug-12		DERF	NA	NA	120	176	180	<20.0	169.8	334	<20.0	<20.0	<20.0	<20.0	<20.0	380	<20.0	21.3	<20.0	<80.0	<80.0	98.4	24.0	<20.0	2660	108	<8.0
07-Jan-13		DERF	NA	NA	60	94.5	83.2	<20.0	75.6	196	<20.0	<20.0	<20.0	<20.0	<20.0	394	<20.0	<20.0	<20.0	<80.0	<80.0	<80.0	<20.0	<20.0	2200	122	<8.0
31-Jul-13		DERF	NA	NA	120	120	253	<20.0	167.8	475	<20.0	<20.0	<20.0	<20.0	<20.0	777	<20.0	<20.0	<20.0	<100	<80.0	<80.0	<20.0	<20.0	4810	305	<8.0
27-Oct-13		DERF	NA	NA	136	62.7	113	<20.0	92.5	175	<20.0	<20.0	<20.0	<20.0	<20.0	759	<20.0	<20.0	<20.0	<100	<80.0	<80.0	<20.0	<20.0	2210	216	<8.0
26-Feb-14		DERF	NA	NA	146	148	576	<5.0	475	1360	<5.0	<5.0	<5.0	<5.0	<5.0	358	<5.0	14.8	7.2	<25.0	<20.0	26.8	17.9	<5.0	422	39.0	<2.0
27-May-14	***	DERF	NA	NA	110	68.3	226	<5.0	158	456	<2.0	2.2	<2.0	<2.0	<2.0	171	<2.0	7.6	3.3	<10.0	<8.0	36.1	7.1	<2.0	141	10.0	<2.0
11-Aug-14		DERF	NA	NA	151	72.4	155	<2.0	121	287	4.3	2.4	<2.0	<2.0	<2.0	256	<2.0	<2.0	<2.0	<10.0	<8.0	54.9	10.1	<2.0	168	15.5	<2.0
16-Jul-15		DERF	NA	NA	125	117	145	<0.20	192	433	3.1	2.5	<0.18	<0.17	1.9	540	1.0	10.6	4.9	<2.5	<0.56	45.8	15.6	1.7	282	69.0	<0.15
22-Oct-15	J	DERF	NA	NA	62.1	52.6	32.9	<0.87	129	199	3.8	<10.9	<0.90	<0.84	<2.1	247	<1.3	4.6	<2.5	<14.9	<1.2	30.1	6.4	<2.5	134	21.5	<0.88
28-Jun-16		DERF	NA	NA	173	89.7	47.5	<0.047	151.4	219	3.1	2.5	<0.051	<0.072	<0.055	459	2.0	13.4	4.1	<1.1	<0.097	51	13.6	1.8	289	78.4	<0.084
13-Sep-16	J	DERF	NA	NA	56.8	57.3	28	<0.15	58.1	106	1.6	1.4	<0.22	<0.17	1.4	461	3.0	6.5	1.7	<1.1	<0.29	16.70	8.7	1.2	831	174	0.24
13-Dec-16	J	DERF	NA	NA	71	77	57.7	<0.74	102.7	214	1.8	1.4	<1.1	<0.85	<1.4	349	1.4	7.6	2.6	<5.5	3.3	33.1	9.8	1.8	1940	201	<0.34
15-Mar-17	J	DERF	NA	NA	85.6	62.7	49.5	<0.74	97.2	186	2.2	2	1.1	<0.85	<1.4	340	<0.81	10.1	2.9	<5.5	<1.5	36.1	8.9	1.9	727	101	<0.34

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride
ES	--				5	700	1000	60	480	10000	--	--		5	7	70	100	--	--	460	5	100	--	100	5	5	0.2
PAL	--				0.5	140	200	12	96	1000	--	--		0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02
MW-2																											
13-Apr-06	Q	PECFA	620		1.0	3.2	0.90	<0.32	7.9	15	<0.24	0.99		<0.34	<0.44	1.5	<0.33	7.2	0.51	<2.7		15	2.6	<0.27	39	2.4	<0.31
17-Aug-06	Q	PECFA	1200		<0.31	1.8	7.1	<0.32	28.2	40	2.2	1.4		<0.34	<0.44	0.84	<10	13	1.1	<2.7		42	3.2	<0.27	32	2.7	<0.32
13-Dec-06	*	PECFA	NA		1.8	<1.0	8.6	<1.0	10.1	16	2.2	1.9		<1.0	<1.0	2.7	<0.33	12	<1.0	NA		22	<1.0	<1.0	51	6.4	<1.0
2-May-07	Q	PECFA	NA		<3.1	10	6.0	<3.2	14.5	34	1.3	1.5		<3.2	<0.44	<0.44	<0.33	11	1.6	<2.7		26	6.0	1.3	51	6.6	<0.31
28-Jan-08		PECFA	<100		1.9	<0.5	<5.0	2.1	<2.0	0.51												<5.0					
23-Apr-08	*	PECFA	260		7.2	<0.16	2.2	9.6	0.44	1.16												2.1					
14-May-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.5	<0.38	<0.30	0.31	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	8.9	0.38	<0.27
27-Aug-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.5	0.46	<0.30	<0.19	<0.21	<4.5	0.33	1.3	<0.22	<0.38	0.97	0.43	<0.27
24-Nov-08	Q	DERF	NA		<0.29	0.9	17	<0.19	21	45	1.2	0.99		<0.27	<0.5	0.38	<0.30	8.8	3.4	<4.5	<0.30	26	2.2	<0.38	2.1	<0.37	
14-Jul-09		DERF	NA		<0.29	7.1	2.5	<0.19	9.0	10		1.4	<0.20	<0.27	<0.50	<0.38	<0.30	12	2.5	<4.5	<0.30	19	6.3	<0.38	11	<0.37	<0.27
02-Jun-11	J	DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	2.1	0.21	<0.20
18-Nov-11	J	DERF	NA	NA	0.27	<0.50	<0.05	<0.05	1.8	2.7	0.49	0.55	<0.20	<0.50	<0.50	<0.50	<0.50	3.1	<0.20		<1.0	9.0	<0.50	<0.50	3.8	0.70	<0.20
13-Feb-12	J	DERF	NA	NA	0.66	1.1	<0.05	<0.05	0.47	0.95	0.58	0.68	<0.20	<0.50	<0.50	1.5	<0.50	4.2	<0.20		<1.0	0.62	1.2	<0.50	8.3	3.1	<0.20
15-May-12		DERF	NA	NA	<1.0	13.5	2.2	<1.0	<1.0	3.6	<1.0	1.1	<1.0	<1.0	<1.0	1.7	<1.0	7.7	<1.0	<4.0	<4.0	15.5	3.4	<1.0	21.2	3.8	<0.40
28-Aug-12		DERF	NA	NA	<1.0	7.5	<1.0	<1.0	<1.0	5.0	1.1	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	7.3	<1.0	<4.0	<4.0	<4.0	1.5	<1.0	16.7	3.5	<0.40
07-Jan-13		DERF	NA	NA	<1.0	<1.0	1.5	<1.0	10.4	12.1	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	7.0	<1.0	<4.0	<4.0	29.7	<1.0	<1.0	1.8	<1.0	<0.40
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	7.7	1.0	<0.40
28-Oct-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	6.7	0.94	<0.40
26-Feb-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	6.6	0.91	<0.40
11-Aug-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	4.2	0.43	<0.40
16-Jul-15	J	DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	1.1	<0.21	0.18	<0.16	<2.5	<0.56	<0.14	<0.21	<0.11	2.9	0.77	<0.15
22-Oct-15	J	DERF	NA	NA	<0.50	<0.50	<0.50	<0.17	<0.50	<0.50	<0.50	<2.2	<0.18	<0.17	<0.41	0.32	<0.26	<0.14	<0.50	<3.0	<0.23	<2.5	<0.50	<0.50	0.79	<0.33	<0.18
28-Jun-16		DERF	NA	NA	<0.042	<0.075	<0.059	<0.047	<0.11	<0.15	<0.16	<0.094	<0.051	<0.072	<0.069	<0.12	<0.15	<0.064	<0.064	<1.1	<0.097	<0.064	<0.049	<0.056	2.8	<0.051	<0.084
13-Sep-16	J	DERF	NA	NA	<0.16	<0.15	0.33	<0.15	0.52	1.2	<0.16	<0.19	<0.22	<0.17	<0.28	<0.12	<0.16	0.49	<0.19	<1.1	<0.29	0.45	<0.23	<0.29	0.73	<0.20	<0.15
13-Dec-16	J	DERF	NA	NA	0.27	<0.15	0.3	<0.15	5.0	1.4	1.3	1.1	<0.22	<0.17	<0.28	3.8	<0.16	5.2	0.23	<1.1	<0.29	10.8	<0.23	<0.29	6.2	2.0	<0.069
15-Mar-17	J	DERF	NA	NA	<0.16	<0.15	0.39	<0.15	<0.45	<0.32	0.31	0.34	<0.22	<0.17	<0.28	3.4	<0.16	1.1	<0.19	<1.1	<0.29	0.55	<0.23	<0.29	3.4	1.1	<0.069

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride
ES	--		--		5	700	1000	60	480	10000	--	--		5	7	70	100	--	--	460	5	100	--	100	5	5	0.2
PAL	--		--		0.5	140	200	12	96	1000	--	--		0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02
MW-6																											
28-Jan-08	Q	PECFA	NA		5.6	<0.22	<0.27	<0.19	<0.62	1.6	0.67	1.2		<0.27	<0.5	350	<0.3	4.9	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	1200	160	<0.27
23-Apr-08		PECFA	310		2.2	<0.16	<1.6	5.7	<0.66	<0.49												<1.6					
14-May-08	Q	DERF	NA		4.6	<2.2	<2.7	<1.9	<0.62	<8.6	<2.3	<2.2		<2.7	<5.0	600	<3.0	<1.9	<2.1	<45	5.9	<0.17	<2.2	<3.8	1300	200	<0.27
27-Aug-08	Q	DERF	NA		3.0	<0.22	<0.27	<0.19	<0.62	<0.86	0.45	0.78		<0.27	<0.50	520	0.62	2.9	0.38	<4.5	<0.30	0.37	<0.22	<0.38	1400	280	<0.27
24-Nov-08	Q	DERF	NA		<5.8	<4.4	<5.4	<3.9	<12.3	<17	<4.5	<4.4	<3.9	<5.5	<9.9	520	<6.0	<3.8	<4.3	<91	40	4	<4.4	<7.6	1200	250	<5.5
23-Apr-09		DERF	NA		<1.4	<1.1	<1.3	<0.96	<3.07	<4.3	<1.1	<1.1	<0.98	<1.4	<2.5	290	<1.5	<0.94	<1.1	<23	<1.5	<0.84	<1.1	<1.9	660	110	<1.4
14-Jul-09		DERF	NA		<1.4	<1.1	<1.3	<0.96	1.2	<4.3	<1.1	<1.1	<0.98	<1.4	<2.5	130	<1.5	<0.94	<1.1	<23	<1.5	12	<1.1	<1.9	230	50	<1.4
02-Jun-11		DERF	NA	NA	<2.0	<5.0	<5.0	<5.0	<0.20	<5.0	<2.0	<2.5	<2.0	<5.0	<5.0	190	<5.0	<2.0	<2.0		<10	<2.5	<5.0	<5.0	830	98	<2.0
18-Nov-11	J	DERF	NA	NA	2.5	<5.0	<5.0	<5.0	<0.20	<5.0	<2.0	<2.5	<2.0	<5.0	<5.0	310	<5.0	<2.0	<2.0		<10	<2.5	<5.0	<5.0	1100	210	<2.0
13-Feb-12		DERF	NA	NA	<4.0	<10	<10	<10	<4.0	<10	<4.0	<5.0	<4.0	<10	<10	420	<10	<4.0	<4.0		<20	<5.0	<10	<10	2000	220	<4.0
15-May-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	307	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	1530	249	<0.40
29-Aug-12		DERF	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	141	<2.0	<2.0	<2.0	<8.0	<8.0	<2.0	<2.0	<2.0	628	105	<0.80
07-Jan-13		DERF	NA	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	155	<5.0	<5.0	<5.0	<20.0	<20.0	<5.0	<5.0	<5.0	424	154	<2.0
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	141	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	211	90.4	<0.40
27-Oct-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	137	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	196	83.7	<0.40
26-Feb-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	186	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	174	69.4	<0.40
27-May-14		DERF	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<6.0	<2.0	<2.0	<2.0	<2.0	<2.0	188	<2.0	<2.0	<2.0	<10.0	<8.0	<8.0	<2.0	<2.0	489	90.5	<0.80
11-Aug-14		DERF	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<6.0	<2.0	<2.0	<2.0	<2.0	<2.0	156	<2.0	<2.0	<2.0	<10.0	<8.0	<8.0	<2.0	<2.0	309	98.6	<0.80
16-Jul-15	J	DERF	NA	NA	0.88	<0.23	<0.13	<0.20	0.18	<0.60	0.47	0.81	<0.18	<0.17	<0.22	120	0.41	0.36	<0.16	<2.5	<0.56	1.6	<0.21	<0.11	193	89.1	<0.15
22-Oct-15	J	DERF	NA	NA	<0.50	<0.50	<0.50	<0.17	<0.50	<0.50	<0.50	<2.2	<0.18	<0.17	<0.41	129	0.53	0.68	<0.50	<3.0	<0.23	<2.5	<0.50	<0.50	138	69.7	<0.18
28-Jun-16	B	DERF	NA	NA	<0.042	<0.075	<0.059	<0.047	<0.11	<0.15	<0.16	<0.094	<0.051	<0.072	<0.069	156	<0.15	1.1	<0.064	<1.1	<0.097	<0.064	<0.049	<0.056	124	51.7	<0.084
13-Sep-16	J	DERF	NA	NA	0.90	<0.15	<0.14	<0.15	0.22	<0.32	0.63	0.93	<0.22	<0.17	<0.28	118	0.40	1.0	<0.19	<1.1	<0.29	1.0	<0.23	<0.29	121	39.4	<0.15
12-Dec-16	J	DERF	NA	NA	0.29	<0.15	<0.14	<0.15	<0.45	<0.32	0.66	0.98	<0.22	<0.17	<0.28	106	0.35	0.84	<0.19	<1.1	<0.29	<0.20	<0.23	<0.29	161	88	<0.069
15-Mar-17		DERF	NA	NA	<0.16	<0.15	<0.14	<0.15	<0.45	<0.32	<0.16	<0.19	<0.22	<0.17	<0.28	50.1	<0.16	<0.25	<0.19	<1.1	<0.29	<0.20	<0.23	<0.29	54	17	<0.069

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride
ES	--		--		5	700	1000	60	480	10000	--	--		5	7	70	100	--	--	460	5	100	--	100	5	5	0.2
PAL	--		--		0.5	140	200	12	96	1000	--	--		0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02
MW-8																											
15-May-08		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
27-Aug-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	0.47	<0.37	<0.27
24-Nov-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	1.8	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	0.34	<0.22	<0.38	<0.29	<0.37	<0.27
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
16-Jul-15		DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	<0.25	<0.21	<0.17	<0.16	<2.5	<0.56	<0.14	<0.21	<0.11	<0.19	<0.14	<0.15
28-Jun-16	B	DERF	NA	NA	<0.042	<0.075	<0.059	<0.047	<0.11	<0.15	<0.16	<0.094	<0.051	<0.072	<0.069	<0.12	<0.15	<0.064	<0.064	<1.1	<0.097	<0.064	<0.049	<0.056	<0.13	<0.051	<0.084
MW-9																											
23-Apr-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
16-Jul-15		DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	<0.25	<0.21	<0.17	<0.16	<2.5	<0.56	<0.14	<0.21	<0.11	<0.19	<0.14	<0.15
MW-10																											
23-Apr-09		DERF	NA		0.48	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	0.32	<0.20	<0.27	<0.50	3.9	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	6.9	1.5	<0.27
14-Jul-09		DERF	NA		0.32	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	0.52	<0.20	<0.27	<0.50	1.7	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	3.8	0.87	<0.27
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	20.4	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	85.9	20.6	<0.40
27-Oct-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.4	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	39.1	8.8	<3.0
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<3.0
16-Jul-15		DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	0.43	<0.21	<0.17	<0.16	<2.5	<0.56	<0.14	<0.21	<0.11	2.6	0.52	<0.15
22-Oct-15		DERF	NA	NA	<0.50	<0.50	<0.50	<0.17	<0.50	<0.50	<0.50	<2.2	<0.18	<0.17	<0.41	6.1	<0.26	<0.14	<0.50	<3.0	<0.23	<2.5	<0.50	<0.50	20	6.0	<0.18
28-Jun-16	B	DERF	NA	NA	<0.042	<0.075	<0.059	<0.047	<0.11	<0.15	<0.16	<0.094	<0.051	<0.072	<0.069	1.5	<0.15	<0.064	<0.064	<1.1	<0.097	<0.064	<0.049	<0.056	3.7	1.3	<0.084
13-Sep-16	J	DERF	NA	NA	<0.16	<0.15	<0.14	<0.15	<0.45	<0.32	<0.16	<0.19	<0.22	<0.17	<0.28	<0.12	<0.16	<0.25	<0.19	<1.1	<0.29	<0.20	<0.23	<0.29	0.98	<0.20	<0.15
12-Dec-16	J	DERF	NA	NA	<0.16	<0.15	<0.14	<0.15	<0.45	<0.32	<0.16	<0.19	<0.22	<0.17	<0.28	0.73	<0.16	<0.25	<0.19	<1.1	<0.29	<0.20	<0.23	<0.29	1.9	0.50	<0.069
15-Mar-17		DERF	NA	NA	<0.16	<0.15	<0.14	<0.15	<0.45	<0.32	<0.16	<0.19	<0.22	<0.17	<0.28	18	<0.16	<0.25	<0.19	<1.1	<0.29	<0.20	<0.23	<0.29	39.3	11.40	<0.069

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride
ES	--		--		5	700	1000	60	480	10000	--	--		5	7	70	100	--	--	460	5	100	--	100	5	5	0.2
PAL	--		--		0.5	140	200	12	96	1000	--	--		0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02
PZ-1																											
13-Apr-06	Q	PECFA	330		<0.31	1.6	<3.2	<0.32	10.0	3.4	0.52	<0.28		<0.34	<0.44	0.96	<0.33	0.74	0.79	<2.7		18	1.1	<0.27	3.3	<0.26	<0.31
17-Aug-06	Q	PECFA	NA		<0.31	<0.26	<0.32	<0.32	<0.51	<0.73	<0.24	<0.28		<0.34	<0.44	<0.44	<10	<0.31	<0.29	<2.7		<0.27	<0.31	<0.27	<0.43	<0.26	<0.32
13-Dec-06	*	PECFA	NA		<1.0	<1.0	<5.0	<1.0	<2.0	<3.0	<1.0	<1.0		<1.0	<1.0	<1.0	<0.33	<1.0	<1.0	NA		<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-May-07	Q	PECFA	NA		<0.31	<0.26	<0.32	<0.32	<0.51	<0.73	<0.24	<0.28		<0.34	<0.44	<0.44	<0.33	<0.31	<0.29	<2.7		<0.27	<0.31	<0.27	<0.43	<0.26	<0.31
28-Jan-08		PECFA	<100		<0.5	<0.5	<5.0	<1.0	<2.0	<1.5												<5.0					
23-Apr-08		PECFA	<33		<0.16	<0.16	<1.6	<0.33	<0.66	<0.49												<1.6					
14-May-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	2.3	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
27-Aug-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	0.32	<0.37	<0.27
24-Nov-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.2	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	0.4	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
18-Nov-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
13-Feb-12		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
15-May-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
28-Aug-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
07-Jan-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
16-Jul-15	J	DERF	NA	NA	<0.21	0.52	0.63	<0.20	3.3	2.4	0.12	<0.16	<0.18	<0.17	<0.22	<0.25	<0.21	<0.17	<0.16	<2.5	<0.56	0.24	<0.21	<0.11	<0.19	<0.14	<0.15
28-Jun-16	B	DERF	NA	NA	<0.042	<0.075	<0.059	<0.047	1.3	<0.15	<0.16	<0.094	<0.051	<0.072	<0.069	<0.12	<0.15	<0.064	<0.064	<1.1	<0.097	<0.064	<0.049	<0.056	<0.13	<0.051	<0.084
Dups																											
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	0.27

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride
ES	±		±		5	700	1000	60	480	10000	±	±		5	7	70	100	±	±	460	5	100	±	100	5	5	0.2
PAL	±		±		0.5	140	200	12	96	1000	±	±		0.5	0.7	7	20	±	±	90	0.5	10	±	10	0.5	0.5	0.02
PZ-6																											
15-May-08	Q	DERF	NA		<0.29	<0.22	<0.27	0.44	<0.62	<0.86	<0.23	<0.22		<0.27	<0.5	<0.38	<0.30	<0.19	<0.21	<4.5	2.4	<0.17	<0.22	<0.38	0.59	<0.37	<0.27
27-Aug-08		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.5	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
24-Nov-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.5	<0.38	<0.30	<0.19	<0.21	<4.5	0.42	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
15-May-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
28-Aug-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
07-Jan-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
16-Jul-15		DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	<0.25	<0.21	<0.17	<0.16	<2.5	<0.56	<0.14	<0.21	<0.11	<0.19	<0.14	<0.15
28-Jun-16	B	DERF	NA	NA	<0.042	<0.075	<0.059	<0.047	<0.11	<0.15	<0.16	<0.094	<0.051	<0.072	<0.069	<0.12	<0.15	<0.064	<0.064	<1.1	<0.097	<0.064	<0.049	<0.056	<0.13	<0.051	<0.084
PZ-7																											
15-May-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.31	<0.31	<0.38	<0.30	<0.19	<0.21	<4.5	2.3	<0.17	<0.22	<0.38	1.4	<0.37	<0.27
27-Aug-08		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	2.2	<0.37	<0.27
24-Nov-08	Q	DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	0.51	<0.17	<0.22	<0.38	2.2	<0.37	<0.27
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	1.8	<0.37	<0.27
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20
18-Nov-11	J	DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	0.71	<0.20	<0.20
13-Feb-12	J	DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.20	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	0.71	<0.20	<0.20
15-May-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
28-Aug-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
07-Jan-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.40
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40
16-Jul-15	J	DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	0.26	<0.21	<0.17	<0.16	12.4	<0.56	<0.14	<0.21	<0.11	0.38	<0.14	<0.15

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride	
ES	--		--		5	700	1000	60	480	10000	--	--		5	7	70	100	--	--	460	5	100	--	100	5	5	0.2	
PAL	--		--		0.5	140	200	12	96	1000	--	--		0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02	
PZ-8																												
15-May-08	Q	DERF			<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.31	<0.38	<0.30	<0.19	<0.21	<4.5	2.3	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27	
27-Aug-08		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22		<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27	
24-Nov-08		DERF			<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.2	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	0.5	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27	
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27	
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20	
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40	
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40	
16-Jul-15		DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	<0.25	<0.21	<0.17	<0.16	<2.5	23.3	<0.14	<0.21	<0.11	<0.19	<0.14	<0.15	
PZ-9																												
23-Apr-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	0.28	<0.22	<0.38	<0.29	<0.37	<0.27	
14-Jul-09		DERF	NA		<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.20	<0.27	<0.50	<0.38	<0.30	<0.19	<0.21	<4.5	<0.30	<0.17	<0.22	<0.38	<0.29	<0.37	<0.27	
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.20	<0.20	
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40	
27-May-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	<1.0	<0.40	<0.40	
16-Jul-15		DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	<0.25	<0.21	<0.17	<0.16	<2.5	<0.56	<0.14	<0.21	<0.11	<0.19	<0.14	<0.15	
MW-2 Equity																												
<i>Cooper / Tetra Tech Sampling Dates</i>																												
May-05	NP				ND	ND	ND	ND	ND	ND	NP	NP		NP	NP	25	2.17	NP	NP	NP		NP	NP	NP	156	12.2	NP	
Aug-05	NP				<0.3	<0.5	<0.3	<0.3	<0.3	<0.3	NP	NP		NP	NP	NA	NA	NP	NP	NP		NP	NP	NP	NA	NA	NP	
Nov-05	NP				<0.3	<0.5	<0.3	<0.3	<0.3	<0.3	NP	NP		NP	NP	4.88	<0.4	NP	NP	NP		NP	NP	NP	107	4.79	NP	
Feb-06	NP				<0.3	<0.5	<0.3	<0.3	<0.3	<0.3	NP	NP		NP	NP	7.03	<0.3	NP	NP	NP		NP	NP	NP	76.7	5.86	NP	
May-06	NP				<0.3	<0.5	<0.3	<0.3	<0.3	<0.3	NP	NP		NP	NP	2.53	<0.3	NP	NP	NP		NP	NP	NP	38.4	2.64	NP	
<i>MSA Sampling Dates</i>																												
13-Apr-06					NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
17-Aug-06					NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA
13-Dec-06	*	PECFA			<1.0	<1.0	<5.0	<1.0	<2.0	<3.0	<1.0	<1.0		<1.0	<1.0	7.5	<1.0	<1.0	<1.0	NA		<5.0	<1.0	<1.0	63	7.7	<1.0	
2-May-07	Q	PECFA			<0.31	<0.26	<0.32	<0.32	<0.51	<0.73	<0.24	<0.28		<0.34	<0.44	<0.44	<0.33	<0.31	<0.29	<2.7		<0.27	<0.31	<0.27	20	1.8	<0.31	
Well Abandoned																												

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

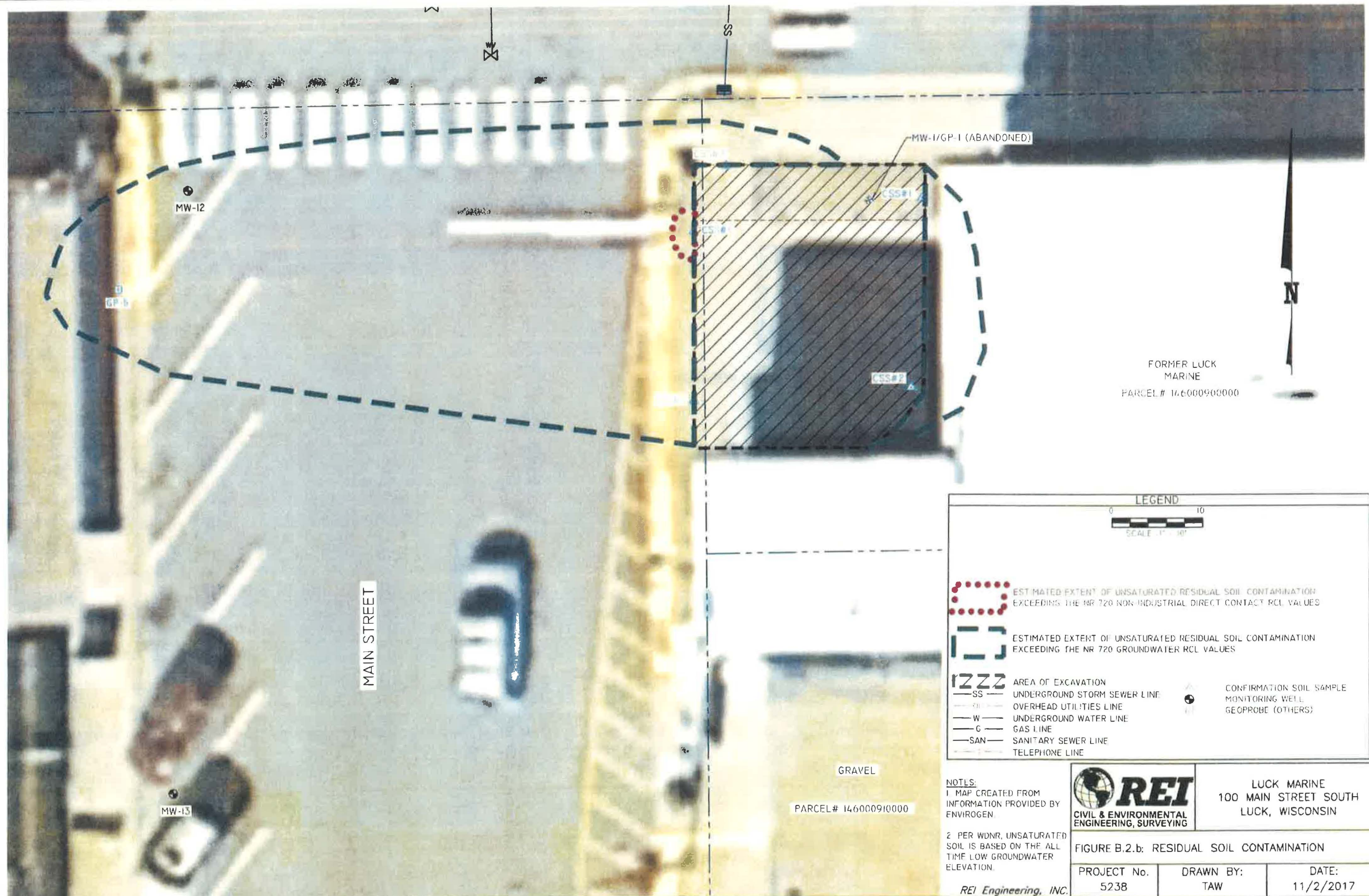
	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride		
ES	--	--	--	--	5	700	1000	60	480	10000	--	--	--	5	7	70	100	--	--	460	5	100	--	100	5	5	0.2		
PAL	--	--	--	--	0.5	140	200	12	96	1000	--	--	--	0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02		
MW-3A Equity																													
<i>Cooper / Tetra Tech Sampling Dates</i>																													
May-05	NP				12	31.6	ND	ND	623	133.01	ND	26		NP	NP	NP	NP	NP	NP	NP	NP	56.8	89.3	NP	NP	NP	NP	NP	
Aug-05	NP				0.687	7.04	1.7	<0.3	88.6	27.94	NA	NA		NP	NP	NP	NP	NP	NP	NP	NP	NA	NA	NP	NP	NP	NP	NP	
Nov-05	NP				<0.3	5.59	<0.3	<0.3	46.7	24.32	23.5	3.65		NP	NP	NP	NP	NP	NP	NP	NP	6.57	17.5	NP	NP	NP	NP	NP	
Feb-06	NP				3.1	6.61	<0.3	<0.3	53.6	26.72	16.2	7.04		NP	NP	NP	NP	NP	NP	NP	NP	6.99	19.66	NP	NP	NP	NP	NP	
May-06	NP				1.47	4.06	<0.3	<0.3	29.31	16.72	6.64	3.56		NP	NP	NP	NP	NP	NP	NP	NP	5.92	12.2	NP	NP	NP	NP	NP	
<i>MSA Sampling Dates</i>																													
13-Apr-06					NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
17-Aug-06					NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13-Dec-06	*				<1.0	4.4	<5.0	<1/0	58	18.3	4.2	2.1		<1.0	<1.0	<1.0	<1:0	5.5	1.2	<1.0	8.4	17	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
2-May-07	Q				<0.31	2.3	<0.32	<0.32	65	11	3.4	<0.28		<0.34	<0.44	<0.44	<0.33	3.6	<0.29	<2.7	5.6	14	<0.27	<0.43	<0.26	<0.31	<0.31	<0.31	
Well Abandoned																													
MW-4A Equity																													
<i>Cooper / Tetra Tech Sampling Dates</i>																													
May-05	NP				2.4	0.762	0.461	NA	5.59	1.98	4.9	3.4		NP	NP	9.14	NP	NP	NP	NP	NP	1.26	1.37	NP	90.9	6.98	NP	NP	
Aug-05	NP				7.02	15.2	1.99	<0.3	17.84	12.81	NA	NA		NP	NP	NA	NP	NP	NP	NP	NP	NA	NA	NP	NA	NA	NA	NP	
Nov-05	NP				23	43.1	1.85	<0.3	24.74	13.43	19.3	3.45		NP	NP	1.11	NP	NP	NP	NP	NP	10.6	23.4	NP	35.4	5.18	NP	NP	
Feb-06	NP				NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
May-06	NP				<0.3	2.81	<0.3	<0.3	<0.4	2.25	<0.3	<0.4		NP	NP	<0.4	NP	NP	NP	NP	NP	<0.8	<0.3	NP	<0.5	1.61	NP	NP	
<i>MSA Sampling Dates</i>																													
13-Apr-06					NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
17-Aug-06					NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13-Dec-06	*	PECFA			24	47	<5.0	<1.0	5.2	9.1	7.7	4.4		<1.0	<1.0	<1.0	<1.0	22	1.4	NA	12	39	<1.0	13	6.9	<1.0	<1.0		
2-May-07	Q	PECFA			3.6	36.0	2.1	<0.32	45.8	38	6.8	1.0		<0.34	<0.44	<0.44	<0.33	5.6	0.81	<2.7	8.3	18	<0.27	<0.43	<0.26	<0.31	<0.31	<0.31	
Well Abandoned																													

Attachment A.1
GROUNDWATER RESULTS SUMMARY
VOLATILE ORGANIC COMPOUNDS
 Laundry Basket
 Luck, Wisconsin

	Qualifiers	State Program	GRO	DRO	Benzene	Ethylbenzene	Toluene	MTBE	TMBs	Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-butylbenzene	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Isopropylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	(PCE) Tetrachloroethene	(TCE) Trichloroethene	Vinyl Chloride					
ES	--	--	--	--	5	700	1000	60	480	10000	--	--	--	5	7	70	100	--	--	460	5	100	--	100	5	5	0.2					
PAL	--	--	--	--	0.5	140	200	12	96	1000	--	--	--	0.5	0.7	7	20	--	--	90	0.5	10	--	10	0.5	0.5	0.02					
MW-7 Equity																																
<i>Cooper / Tetra Tech Sampling Dates</i>																																
May-05	NP	NA	NA	NA	ND	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP			
Aug-05	NP	NA	NA	NA	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP			
Nov-05	NP	NA	NA	NA	0.89	<0.5	<0.3	<0.3	<0.4	<0.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP			
Feb-06	NP	NA	NA	NA	<3.1	<5	<3	<3	<4	<6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP			
May-06	NP	NA	NA	NA	<15	<25	<15	<15	<20	<31	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP			
<i>MSA Sampling Dates</i>																																
13-Apr-06		PECFA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
17-Aug-06		PECFA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
13-Dec-06	*	PECFA	NA	NA	<10	<10	<50	<10	<20	<30	<10	<10	<10	<10	<10	750	<10	<10	<10	NA	<50	<10	<10	<10	740	290	<10	<10	<10	<10	<10	
2-May-07	Q	PECFA	NA	NA	<0.31	<0.26	<0.32	<0.32	<0.51	<0.73	<0.24	<0.28	<0.34	4.9	810	2.2	<0.31	<0.29	<2.7		<0.27	<0.31	<0.27	980	300	1.0	<0.27	<0.27	<0.27	<0.27	<0.27	
14-May-08	Q	DERF	NA	NA	<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.23	<0.27	1.8	500	1.3	<0.19	<0.21	<4.5	2.2	<0.17	<0.22	<0.38	390	87	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	
27-Aug-08	Q	DERF	NA	NA	<0.29	<0.22	<0.27	<0.19	<0.62	<0.86	<0.23	<0.22	<0.27	<0.50	110	<0.30	<0.19	<0.21	<4.5	0.39	<0.17	<0.22	<0.38	100	21	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	
24-Nov-08	Q	DERF	NA	NA	<0.29	<1.1	<1.3	<0.96	1.0	<4.3	<1.1	<1.1	<0.98	<1.4	2.5	500	<1.5	<0.94	<1.1	<23	3.2	0.99	<1.1	<1.9	300	72	<4.3	<4.3	<4.3	<4.3	<4.3	
23-Apr-09		DERF	NA	NA	<2.9	<2.2	<2.7	<1.9	<0.62	<8.6	<2.3	<2.2	<2.0	<2.7	9.0	1400	<3.0	<1.9	<2.1	<45	<3.0	<1.7	<2.2	<3.8	760	310	<2.7	<2.7	<2.7	<2.7	<2.7	
14-Jul-09		DERF	NA	NA	<2.9	<2.2	<2.7	<1.9	<6.2	<8.6	<2.3	<2.2	<2.0	<2.7	<5.0	780	<3.0	<1.9	<2.1	<45	<3.0	<1.7	<2.2	<3.8	660	180	<2.7	<2.7	<2.7	<2.7	<2.7	
02-Jun-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	<0.50	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
18-Nov-11		DERF	NA	NA	<0.20	<0.50	<0.50	<0.50	<0.02	<0.50	<0.20	<0.25	<0.20	<0.50	6.1	830	3.0	<0.20	<0.20		<1.0	<0.25	<0.50	<0.50	160	92	2.0	<2.0	<2.0	<2.0	<2.0	<2.0
13-Feb-12		DERF	NA	NA	<1.6	<4.0	<4.0	<4.0	<1.6	<4.0	<1.6	<2.0	<1.6	<4.0	<4.0	670	<4.0	<1.6	<1.6		<8.0	<2.0	<4.0	<4.0	480	290	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
15-May-12		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	353	2.0	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<1.0	422	212	0.45	<0.45	<0.45	<0.45	<0.45	<0.45
29-Aug-12		DERF	NA	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	220	<2.0	<2.0	<2.0	<8.0	<8.0	<2.0	<2.0	<2.0	242	73.6	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
07-Jan-13		DERF	NA	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	250	<5.0	<5.0	<5.0	<20.0	<20.0	<5.0	<5.0	<5.0	402	232	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
31-Jul-13		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	182	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	165	62.3	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
27-Oct-13		DERF	NA	NA	<2.0	<2.0	<2.0	<2.0	<4.0	<6.0	<2.0	<2.0	<2.0	<2.0	<2.0	298	<2.0	<2.0	<2.0	<10.0	<8.0	<8.0	<2.0	<2.0	116	61.2	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
26-Feb-14		DERF	NA	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	42.9	<1.0	<1.0	<1.0	<5.0	<4.0	<4.0	<1.0	<1.0	63.3	22.6	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
27-May-14		DERF	NA	NA	<2.0	<2.0	<2.0	<2.0	<4.0	<6.0	<2.0	<2.0	<2.0	<2.0	<2.0	113	<2.0	<2.0	<2.0	<10.0	<8.0	<8.0	<2.0	<2.0	128	37.1	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
11-Aug-14		DERF	NA	NA	<2.0	<2.0	<2.0	<2.0	<4.0	<6.0	<2.0	<2.0	<2.0	<2.0	<2.0	254	<2.0	<2.0	<2.0	<10.0	<8.0	<8.0	<2.0	<2.0	147	49.6	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
16-Jul-15		DERF	NA	NA	<0.21	<0.23	<0.13	<0.20	<0.16	<0.60	<0.083	<0.16	<0.18	<0.17	<0.22	45.9	<0.21	0.24	<0.16	<2.5	<0.56	0.34	<0.21	<0.11	20.3	10.6	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
22-Oct-15	J	DERF	NA	NA	<0.50	<0.50	<0.50	<0.17	<0.50	<0.50	<0.50	<2.2	<0.18	<0.17	<0.41	137	0.38	<0.14	<0.50	<3.0	<0.23	<2.5	<0.50	<0.50	29.0	21.9	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
28-Jun-16		DERF	NA	NA	<0.042	<0.075	<0.059	<0.047	<0.11	<0.15	<0.16	<0.094	<0.051	<0.072	<0.069	2.8	<0.15	<0.064	<0.064	<1.1	<0.097	<0.064	<0.049	<0.056	6.1	2.2	<0.084	<0.084	<0.084	<0.084	<0.084	<0.084
13-Sep-16		DERF	NA	NA	<0.16	<0.15	<0.14	<0.15	<0.45	<0.32	<0.16	<0.19	<0.22	<0.17	<0.28	2.0	<0.16	<0.25	<0.19	<1.1	<0.29	<0.20	<0.23	<0.29	3.9	0.91	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
12-Dec-16		DERF	NA	NA	<0.16	<0.15	<0.14	<0.15	<0.45	<0.32	<0.16	<0.19	<0.22	<0.17	0.44	94.5	0.64	<0.25	<0.19	<1.1	<0.29	<0.20	<0.23	<0.29	40.8	28.4	0.13	<0.13	<0.13	<0.13	<0.13	<0.13
15-Mar-17	J	DERF	NA	NA	<0.16	<0.15	<0.14	<0.15	<0.45	<0.32	<0.16	0.67	<0.22	<0.17	0.44	8	<0.16	<0.25	<0.19	<1.1	<0.29	0.34	<0.23	<0.29	7.7	4.6	<0.069	<0.069	<0.069	<0.069	<0.069	<0.069

Luck Marine
100 S. Main Street

DRAWING FILE: P:\5200-5299\5238-LUCK\DWG\5238-SOIL CONTAM-RESIDUAL.DWG LAYOUT SC-R PLOTTED: NOV 13 2017 - 7:37PM PLOTTED BY: TOSDW



FORMER LUCK
MARINE
PARCEL # 14600090000



LEGEND

0 10
SCALE: 1" = 40'

- ESTIMATED EXTENT OF UNSATURATED RESIDUAL SOIL CONTAMINATION EXCEEDING THE NR 720 NON-INDUSTRIAL DIRECT CONTACT RCL VALUES
- ESTIMATED EXTENT OF UNSATURATED RESIDUAL SOIL CONTAMINATION EXCEEDING THE NR 720 GROUNDWATER RCL VALUES
- AREA OF EXCAVATION
- UNDERGROUND STORM SEWER LINE
- OVERHEAD UTILITIES LINE
- UNDERGROUND WATER LINE
- GAS LINE
- SANITARY SEWER LINE
- TELEPHONE LINE
- CONFIRMATION SOIL SAMPLE MONITORING WELL
- GEOPROBE (OTHERS)

GRAVEL
PARCEL# 146000910000

NOTES:
1. MAP CREATED FROM INFORMATION PROVIDED BY ENVIROGEN.
2. PER WDNR, UNSATURATED SOIL IS BASED ON THE ALL TIME LOW GROUNDWATER ELEVATION.



LUCK MARINE
100 MAIN STREET SOUTH
LUCK, WISCONSIN

FIGURE B.2.b: RESIDUAL SOIL CONTAMINATION

PROJECT No. 5238	DRAWN BY: TAW	DATE: 11/2/2017
---------------------	------------------	--------------------

REI Engineering, INC.

**Table 1
Depth to Water and Water Level Elevations
Former Luck Marine
100 Main Street South
Luck, WI**

Depth to Water (feet) below Reference Elevation

Date	MW1	MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW8	MW9	MW10	MW11	MW12	MW13	PZ1
11-Apr-00	9.94		9.63	9.27	9.63	9.35									
26-Apr-00	9.60		9.26	8.98	9.36	8.99									
7-Jun-00	9.71		9.37	9.12	9.40	9.09	9.17	7.69							
21-Jun-00	9.71		9.35	9.13	9.44	9.01	9.09	7.61	7.61						
19-Jul-00	9.69		9.35	9.14	9.42	9.11	9.13	7.65	7.65						
30-Nov-00	10.23		9.78	9.68	10.01	9.62	9.54	7.98	8.44	6.95					7.71
23-May-01	8.59		8.36	7.90	8.22	7.76	8.16	6.54	6.93	5.55	4.86	5.76			6.25
13-Aug-01	9.44		9.25	8.58	8.93	8.86	9.29	7.70	7.81	6.85	6.31	6.95			7.42
21-Dec-01	9.43		9.14	8.66	9.07	8.88	9.09	7.46	7.72	6.53	5.98	6.77			7.18
4-Mar-02	10.09		9.80	9.26	9.69	9.46	9.79	8.09	8.37	7.32	6.60	7.40			7.81
13-Oct-09	11.52		11.03	10.71*	11.21*	10.65*	10.57	-	9.46*	8.13	7.38	8.63			8.66
24-Aug-10	9.24		9.14	8.47	8.99	8.61	8.74	7.19	7.48	6.24	5.52	6.40			6.94
8-Nov-10	9.73		9.60	8.66	9.12	9.06	9.23	7.73	7.88	6.79	6.17	6.92			7.42
26-Jul-13	Abandoned		10.29	9.51	9.89		9.92	8.46	8.46			7.73			8.18
19-Aug-13		10.42				9.94				7.87	7.21		10.26	9.87	
13-Nov-13		10.36	10.44	9.96	10.35	9.90	9.87	8.38	8.75	7.46	6.79	7.84	10.20	9.75	8.08
9-Dec-14		9.90	10.06	9.21	9.71	9.47	9.81	8.33	8.33	7.64	6.67	7.62	9.87	9.49	9.97
21-Jul-15		9.45	9.43	8.84	9.21	9.02	9.16	7.65	7.90	6.18	6.13	7.18	9.46	9.05	7.48
27-Jun-16		9.32	9.29					7.54	7.81	6.84	6.13	7.14	9.38		
20-Sep-16		9.71	8.74					6.80	7.35	6.04	5.44	6.65	8.83		
23-May-17		8.09	8.15	7.45		7.45	7.28	5.95	6.69	5.24	4.43	5.59	8.14	7.58	5.81

Measuring Point Elevations (top of well casing)

Elevations referenced to a U.S.G.S. Benchmark (feet MSL) - unless provided by others

Initial Survey	96.90		95.63	98.04	97.87	96.25	94.68	93.33	94.62	92.02	90.85	92.48			93.01
Resurvey (9-30-2010)	96.99		95.84	97.92	97.88	96.24	94.50	93.29	94.59	92.10	91.44	93.17			93.01
Survey (8-19-13)		96.74											95.78	95.18	
Resurvey (7-21-2015)		1,229.24	1,228.16	1,230.44	1,230.38	1,228.74	1,226.78	1,225.67	1,227.11	1,224.62	1,223.93	1,225.86	1,228.35	1,227.73	1,225.56

Ground Surface Elevation

Initial Survey	-		-	-	-	-	-	-	-	-	-	-			-
Resurvey (9-30-2010)	97.08		96.62	98.16	98.14	96.44	94.69	93.52	95.35	92.33	91.88	93.62			93.52
Survey (8-19-13)		97.30											96.29	95.74	
Resurvey (7-21-2015)		1,229.80	1,228.94	1,230.68	1,230.64	1,228.94	1,226.97	1,225.90	1,227.87	1,224.85	1,224.37	1,226.31	1,228.86	1,228.29	1,226.07

Depth to Water (feet) below Ground Surface

Average	9.76	9.61	9.47	8.93	9.40	9.03	9.24	7.57	7.82	6.88	6.12	7.04	9.45	9.15	7.61
Maximum	8.59	8.09	8.15	7.45	8.22	7.45	7.28	5.95	6.69	5.24	4.43	5.59	8.14	7.58	5.81
Minimum	11.52	10.42	11.03	9.96	10.35	9.94	10.57	8.46	8.75	8.13	7.38	8.63	10.26	9.87	9.97
Range	2.93	2.33	2.88	2.51	2.13	2.49	3.29	2.51	2.06	2.89	2.95	3.04	2.12	2.29	4.16

Water Level Elevation (feet MSL)

Date	MW1	MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW8	MW9	MW10	MW11	MW12	MW13	PZ1
11-Apr-00	86.96		86.00	88.77	88.24	86.90									
26-Apr-00	87.30		86.37	89.06	88.51	87.26									
7-Jun-00	87.19		86.26	88.92	88.47	87.16	85.51	85.64							
21-Jun-00	87.19		86.28	88.91	88.43	87.24	85.59	85.72	87.01	84.41					
19-Jul-00	87.21		86.28	88.90	88.45	87.14	85.55	85.68	86.97	84.37					
30-Nov-00	86.67		85.85	88.36	87.86	86.63	85.14	85.35	86.18	85.07					85.30
23-May-01	88.31		87.27	90.14	89.65	88.49	86.52	86.79	87.69	86.47	85.99	86.72			86.76
13-Aug-01	87.46		86.38	89.46	88.94	87.39	85.39	85.63	86.81	85.17	84.54	85.53			85.59
21-Dec-01	87.47		86.49	89.38	88.80	87.37	85.59	85.87	86.90	85.49	84.87	85.71			85.83
4-Mar-02	86.81		85.83	88.78	88.18	86.79	84.89	85.24	86.25	84.70	84.25	85.08			85.20
13-Oct-09	85.38		84.60			84.11			83.89	83.47	83.85				84.35
24-Aug-10	87.66		86.49	89.57	88.88	87.64	85.94	86.14	87.14	85.78	85.33	86.08			86.07
8-Nov-10	87.26		86.24	89.26	88.76	87.18	85.27	85.56	86.71	85.31	85.27	86.25			85.59
26-Jul-13	Abandoned		85.55	88.41	87.99		84.58	84.83	86.13			85.44			84.83
19-Aug-13		86.32				86.30				84.23	84.23	93.17	85.52	85.31	
13-Nov-13		86.38	85.40	87.96	87.53	86.34	84.63	84.91	85.84	84.64	84.65	85.33	85.58	85.43	84.93
9-Dec-14		86.84	85.78	88.71	88.17	86.77	84.69	84.96	86.26	84.46	84.77	85.55	85.91	85.69	83.04
21-Jul-15		1,219.79	1,218.73	1,221.60	1,221.17	1,219.72	1,217.62	1,218.02	1,219.21	1,218.44	1,217.80	1,218.68	1,218.89	1,218.68	1,218.08
27-Jun-16		1,219.92	1,218.87					1,218.13	1,219.30	1,217.78	1,217.80	1,218.72	1,218.97		
20-Sep-16		1,219.53	1,219.42					1,218.87	1,219.76	1,218.58	1,218.49	1,219.21	1,219.52		
23-May-17		1,221.15	1,220.01	1,222.99		1,221.29	1,219.50	1,219.72	1,220.42	1,219.38	1,219.50	1,220.27	1,220.21	1,220.15	1,219.75

Initial survey elevation data provided by Envirogen

* = Bailers left in well, data not accurate

Table 2a
Summary of Groundwater Analytical Results
MW1/ MW1R
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	MW1										
				2/14/2000	6/21/2000	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010	11/8/2010
Lead	15	1.5	µg/l	15.3	57	NA	16	<i>11</i>	17	18		NA	NA	NA
VOC Parameters												Project		
Benzene	5	0.5	µg/l	374	1,830	1,770	1,400	1,400	6,900	3,000		196	292	2,150
Ethylbenzene	700	140	µg/l	<i>47.1</i>	<i>398</i>	745	<i>490</i>	<i>570</i>	2,100	1,000		<i>411</i>	<i>241</i>	1,290
Toluene	800	160	µg/l	895	5,540	4,760	5,100	4,300	16,000	10,000		1,200	1,130	7,670
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 5.0	5.95	63.5	< 9.2	< 4.6	< 9.2	< 100		< 15	< 3.8	34.9 ^J
Xylenes (mixed isomers)	2,000	400	µg/l	<i>771</i>	5,060	5,370	5,300	6,400	25,000	8,800		3,770	2,054	12,460
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<i>153</i>	757	1,358	1,210	1,170	4,700	1,960		2,329	534	2,853
Naphthalene	100	10	µg/l	< 20	161	314	230	230	1,100	410		480	135	752

Parameter	ES	PAL	Units	MW1R							
				7/10/2013	8/19/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/25/2017
Lead	15	1.5	µg/l	Completed	NA	NA	NA	NA	NA	NA	NA
VOC Parameters				Soil							
Benzene	5	0.5	µg/l	Excavation	16.9	16.6	<i>1.5</i>	9.7	<i>0.58^J</i>	<i>4.1</i>	<i>4.2</i>
Ethylbenzene	700	140	µg/l		10.6	41.7	< 0.39	1.3	< 0.39	< 0.39	< 0.39
Toluene	800	160	µg/l	MW1	19.4	10.8	< 0.39	2.9	< 0.39	< 0.39	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	Abandoned	< 0.37	< 0.37	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
Xylenes (mixed isomers)	2,000	400	µg/l	Replaced	109.2	75.6	<i>0.94^J</i>	26.1	<i>1.57^J</i>	< 0.80	<i>1.1^J</i>
Trimethylbenzenes (mixed isomers)	480	96	µg/l	with	38.9	12.3	<i>1.53^J</i>	8.4	< 0.42	< 0.42	<i>0.61^J</i>
Naphthalene	100	10	µg/l	MW1R	8.6	1.3	< 0.42	< 0.42	< 0.42	< 0.42	<i>0.47^J</i>

Notes:
ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
NS = Not Sampled
NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

<i>Italics</i>

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2b
Summary of Groundwater Analytical Results
MW2
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	2/14/2000	6/21/2000	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010
Lead	15	1.5	µg/l	< 5.0	< 5.0	NA	NA	NA	NA	NA		NA	NA
VOC Parameters											Project		
Benzene	5	0.5	µg/l	1,210	942	2,660	2,000	1,200	17	10	Stalled	1,510	959
Ethylbenzene	700	140	µg/l	<i>283</i>	<i>309</i>	860	750	<i>440</i>	5	< 0.49		760	<i>603</i>
Toluene	800	160	µg/l	1,050	<i>670</i>	1,560	2,400	<i>760</i>	13	< 0.63		<i>260</i>	122
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 25	6.14	71.7	< 4.6	< 4.6	< 0.46	< 0.49		< 6.0	11.9
Xylenes (mixed isomers)	2,000	400	µg/l	<i>1,060</i>	<i>1,190</i>	3,440	3,200	<i>1,930</i>	21	< 1.5		3,121	<i>1,932</i>
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<i>144</i>	<i>162</i>	844	740	<i>400</i>	5	< 0.46		722	585
Naphthalene	100	10	µg/l	< 100	33	172	140	60	1	< 1.4		123	103

Parameter	ES	PAL	Units	11/8/2010	7/10/2013	7/26/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/22/2017
Lead	15	1.5	µg/l	NA		NA	NA	NA	NA	NA	NA	NA
VOC Parameters					Completed							
Benzene	5	0.5	µg/l	843	Soil	691	1,280	695	1,030	4,470	1,010	320
Ethylbenzene	700	140	µg/l	<i>511</i>	Excavation	393	752	<i>440</i>	<i>593</i>	<i>666</i>	<i>624</i>	<i>198</i>
Toluene	800	160	µg/l	<i>534</i>		<i>95.4</i>	<i>197</i>	53.8	<i>221</i>	2,750	104	51
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	<i>33.4^J</i>		<i>3.9^J</i>	<i>5.6^J</i>	< 0.48	< 4.8	< 12.1	<i>3.8^J</i>	< 2.4
Xylenes (mixed isomers)	2,000	400	µg/l	<i>1,467</i>		<i>1,275</i>	3,060	<i>1,418</i>	<i>1,892</i>	2,679	<i>1,814</i>	<i>498</i>
Trimethylbenzenes (mixed isomers)	480	96	µg/l	489		<i>268.8</i>	703	<i>371</i>	544	516	<i>402.5</i>	<i>67.7</i>
Naphthalene	100	10	µg/l	167		<i>66.5</i>	128	<i>72.9</i>	<i>92.4</i>	121	119	<i>39.7</i>

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
NS = Not Sampled
NA = Not Analyzed

Enforcement Standard exceeded **BOLD**
Preventive Action Limit exceeded *Italics*

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2c
Summary of Groundwater Analytical Results
MW3
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	2/14/2000	6/21/2000	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010
Lead	15	1.5	µg/l	< 5.0	< 5.0	NS	NS	NS	NS	NA		NA	NA
VOC Parameters											Project		
Benzene	5	0.5	µg/l	< 0.5	< 0.5	NS	NS	NS	NS	< 0.43	Stalled	< 0.31	< 0.39
Ethylbenzene	700	140	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 0.49		< 0.50	< 0.41
Toluene	800	160	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 0.63		< 0.37	< 0.42
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.5	< 0.5	NS	NS	NS	NS	< 0.49		< 0.30	< 0.38
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 1.5		< 0.62	< 0.87
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 2.0	< 10	NS	NS	NS	NS	< 1.14		< 0.44	< 0.43
Naphthalene	100	10	µg/l	< 2.0	< 8.0	NS	NS	NS	NS	< 1.4		< 0.80	< 0.40

Parameter	ES	PAL	Units	11/8/2010	7/10/2013	7/26/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/22/2017
Lead	15	1.5	µg/l	NA		NA	NS	NS	NA	NS	NS	NA
VOC Parameters					Completed							
Benzene	5	0.5	µg/l	< 0.39	Soil	< 0.34	NS	NS	< 0.40	NS	NS	< 0.40
Ethylbenzene	700	140	µg/l	< 0.41	Excavation	< 0.34	NS	NS	< 0.39	NS	NS	< 0.39
Toluene	800	160	µg/l	< 0.42		< 0.34	NS	NS	< 0.39	NS	NS	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38		< 0.37	NS	NS	< 0.48	NS	NS	< 0.48
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.87		< 0.71	NS	NS	< 0.80	NS	NS	< 0.80
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.43		< 0.36	NS	NS	< 0.42	NS	NS	< 0.42
Naphthalene	100	10	µg/l	< 0.40		< 0.37	NS	NS	< 0.42	NS	NS	< 0.42

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

¹ = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2d
Summary of Groundwater Analytical Results
MW4
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	2/14/2000	6/21/2000	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010
Lead	15	1.5	µg/l	< 5.0	< 5.0	NS	NS	NS	NS	NA		NA	NA
VOC Parameters											Project		
Benzene	5	0.5	µg/l	< 0.5	< 0.5	NS	NS	NS	NS	< 0.43	Stalled	< 0.31	< 0.39
Ethylbenzene	700	140	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 0.49		< 0.50	< 0.41
Toluene	800	160	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 0.63		< 0.37	< 0.42
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.5	< 0.5	NS	NS	NS	NS	< 0.49		< 0.30	< 0.38
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.5	13.4	NS	NS	NS	NS	< 1.5		< 0.62	< 0.87
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 2.0	24.9	NS	NS	NS	NS	< 1.14		< 0.44	< 0.43
Naphthalene	100	10	µg/l	< 2.0	< 8.0	NS	NS	NS	NS	< 1.4		< 0.80	< 0.40

Parameter	ES	PAL	Units	11/8/2010	7/10/2013	7/26/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/22/2017
Lead	15	1.5	µg/l	NA		NA	NS	NS	NA	NS	NS	NS
VOC Parameters					Completed							
Benzene	5	0.5	µg/l	< 0.39	Soil	< 0.34	NS	NS	< 0.40	NS	NS	NS
Ethylbenzene	700	140	µg/l	< 0.41	Excavation	< 0.34	NS	NS	< 0.39	NS	NS	NS
Toluene	800	160	µg/l	< 0.42		< 0.34	NS	NS	< 0.39	NS	NS	NS
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38		< 0.37	NS	NS	< 0.48	NS	NS	NS
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.87		< 0.71	NS	NS	< 0.80	NS	NS	NS
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.43		< 0.36	NS	NS	< 0.42	NS	NS	NS
Naphthalene	100	10	µg/l	< 0.40		< 0.37	NS	NS	< 0.42	NS	NS	NS

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

<i>Italics</i>

¹ = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 5e
Summary of Groundwater Analytical Results
MW5
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	2/14/2000	6/21/2000	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010
Lead	15	1.5	µg/l	< 5.0	< 5.0	NS	NS	NS	NS	NA		NA	NA
VOC Parameters											Project		
Benzene	5	0.5	µg/l	< 0.5	< 0.5	NS	NS	NS	NS	< 0.43	Stalled	< 0.31	< 0.39
Ethylbenzene	700	140	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 0.49		< 0.50	< 0.41
Toluene	800	160	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 0.63		< 0.37	< 0.42
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.5	< 0.5	NS	NS	NS	NS	< 0.49		< 0.30	< 0.38
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.5	< 5.0	NS	NS	NS	NS	< 1.5		< 0.62	< 0.87
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 2.0	< 10	NS	NS	NS	NS	< 1.14		< 0.44	< 0.43
Naphthalene	100	10	µg/l	< 2.0	< 8.0	NS	NS	NS	NS	< 1.4		< 0.80	< 0.40

Parameter	ES	PAL	Units	11/8/2010	7/10/2013	8/19/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/22/2017
Lead	15	1.5	µg/l	NA		NA	NS	NS	NA	NS	NS	NA
VOC Parameters					Completed							
Benzene	5	0.5	µg/l	< 0.39	Soil	< 0.34	NS	NS	< 0.40	NS	NS	< 0.40
Ethylbenzene	700	140	µg/l	< 0.41	Excavation	< 0.34	NS	NS	< 0.39	NS	NS	< 0.39
Toluene	800	160	µg/l	< 0.42		< 0.34	NS	NS	< 0.39	NS	NS	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38		< 0.37	NS	NS	< 0.48	NS	NS	< 0.48
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.87		< 0.71	NS	NS	< 0.80	NS	NS	< 0.80
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.43		< 0.36	NS	NS	< 0.42	NS	NS	< 0.42
Naphthalene	100	10	µg/l	< 0.40		< 0.37	NS	NS	< 0.42	NS	NS	< 0.42

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2f
Summary of Groundwater Analytical Results
MW6
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	6/21/2000	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010
Lead	15	1.5	µg/l	< 5.0	NA	NS	NA	NS	NA		NA	NA
VOC Parameters										Project		
Benzene	5	0.5	µg/l	< 0.5	< 0.5	NS	< 0.21	NS	< 0.43	Stalled	< 0.31	< 0.39
Ethylbenzene	700	140	µg/l	< 5.0	< 5.0	NS	< 0.22	NS	< 0.49		< 0.50	< 0.41
Toluene	800	160	µg/l	< 5.0	< 5.0	NS	< 0.69	NS	< 0.63		< 0.37	< 0.42
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.5	< 0.5	NS	< 0.46	NS	< 0.49		< 0.30	< 0.38
Xylenes (mixed isomers)	2,000	400	µg/l	< 5.0	< 5.0	NS	< 0.69	NS	< 1.5		< 0.62	< 0.87
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 10	< 10	NS	< 0.60	NS	0.49		< 0.44	< 0.43
Naphthalene	100	10	µg/l	< 8.0	< 8.0	NS	< 0.69	NS	< 1.4		< 0.80	< 0.40

Parameter	ES	PAL	Units	11/8/2010	7/10/2013	7/26/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	9/20/2016
Lead	15	1.5	µg/l	NA		NA	NS	NS	NA	NS	NS	NA
VOC Parameters					Completed							
Benzene	5	0.5	µg/l	< 0.39	Soil	< 0.34	NS	NS	< 0.40	NS	NS	< 0.40
Ethylbenzene	700	140	µg/l	< 0.41	Excavation	< 0.34	NS	NS	< 0.39	NS	NS	< 0.39
Toluene	800	160	µg/l	< 0.42		< 0.34	NS	NS	< 0.39	NS	NS	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.38		< 0.37	NS	NS	< 0.48	NS	NS	< 0.48
Xylenes (mixed isomers)	2,000	400	µg/l	< 0.87		< 0.71	NS	NS	< 0.80	NS	NS	< 0.80
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.43		< 0.36	NS	NS	< 0.42	NS	NS	< 0.42
Naphthalene	100	10	µg/l	< 0.40		< 0.37	NS	NS	< 0.42	NS	NS	< 0.42

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2g
Summary of Groundwater Analytical Results
MW7
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	6/21/2000	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010
Lead	15	1.5	µg/l	< 5.0	NA	NA	NA	NA	NA		NS	NA
VOC Parameters										Project		
Benzene	5	0.5	µg/l	1,260	809	890	590	1,200	1,000	Stalled	NS	393
Ethylbenzene	700	140	µg/l	< 500	<i>429</i>	<i>340</i>	<i>170</i>	<i>370</i>	<i>390</i>		NS	90.7
Toluene	800	160	µg/l	< 500	116	120	46	66	100		NS	43.3
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 50	<i>30.6</i>	< 9.2	< 9.2	< 0.46	< 10		NS	2.3
Xylenes (mixed isomers)	2,000	400	µg/l	< 500	838	920	241	690	940		NS	167.7
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 1,000	<i>380.5</i>	<i>258</i>	<i>133</i>	<i>324</i>	<i>333</i>		NS	61.3
Naphthalene	100	10	µg/l	< 800	< 80	<i>15</i>	<i>18</i>	<i>32</i>	<i>91</i>		NS	6.0

Parameter	ES	PAL	Units	11/8/2010	7/10/2013	7/26/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/23/2017
Lead	15	1.5	µg/l	NA		NA	NA	NA	NA	NA	NA	NA
VOC Parameters					Completed							
Benzene	5	0.5	µg/l	159	Soil	454	288	112	70	261	186	317
Ethylbenzene	700	140	µg/l	26.1	Excavation	144	113	26.1	8.4	46.5	48.6	317
Toluene	800	160	µg/l	5.32		52.6	22.4	4.6	1.9	27	9.4	25.6
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	3.05		1.4	1.2 ^J	< 0.97	< 0.48	< 0.48	0.58 ^J	5.5
Xylenes (mixed isomers)	2,000	400	µg/l	25.18		173.9	81.7	23.9	2.8	50.6	56.9	246.2
Trimethylbenzenes (mixed isomers)	480	96	µg/l	23.553		87.6	27.1	4.3	4.1	6.3	14.1	117.9
Naphthalene	100	10	µg/l	3.03		7.9	12.7	3.2	< 0.42	2.4	2.3	48.3

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2h
Summary of Groundwater Analytical Results
MW8
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010	11/8/2010
Lead	15	1.5	µg/l	< 5.0	NA	NA	NA	NA		NA	NA	NA
VOC Parameters									Project			
Benzene	5	0.5	µg/l	11.3	64	45	6.2	<i>0.6</i>	Stalled	< 0.31	10.1	1.57^J
Ethylbenzene	700	140	µg/l	62.5	75	120	1.9	< 0.49		1.19 ^J	1.7	0.565 ^J
Toluene	800	160	µg/l	< 50	29	4.9	1.0	< 0.63		< 0.37	0.72 ^J	0.753 ^J
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 5.0	< 0.46	< 0.46	< 0.46	< 0.49		4.39	< 0.38	< 0.30
Xylenes (mixed isomers)	2,000	400	µg/l	211	220	424	8.9	< 1.5		< 0.62	2.4	0.96 ^J
Trimethylbenzenes (mixed isomers)	480	96	µg/l	379	108	78	7.0	0.5		33.5	2.3	1.8 ^J
Naphthalene	100	10	µg/l	< 80	11	14	< 0.69	< 1.4		0.839 ^J	0.59 ^J	2.21 ^J

Parameter	ES	PAL	Units	7/10/2013	7/26/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/24/2017
Lead	15	1.5	µg/l		NA	NA	NA	NA	NA	NA	NA
VOC Parameters				Completed							
Benzene	5	0.5	µg/l	Soil	0.66 ^J	0.57 ^J	2.3	< 0.40	0.78 ^J	< 0.40	23.1
Ethylbenzene	700	140	µg/l	Excavation	1.7	< 0.34	0.88 ^J	< 0.39	< 0.39	< 0.39	41.6
Toluene	800	160	µg/l		< 0.34	< 0.34	< 0.39	< 0.39	< 0.39	< 0.39	9.5
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		0.37 ^J	< 0.37	< 0.48	< 0.48	< 0.48	< 0.48	2.3
Xylenes (mixed isomers)	2,000	400	µg/l		2.46 ^J	< 0.71	1.3 ^J	< 0.80	< 0.80	< 0.80	100.4
Trimethylbenzenes (mixed isomers)	480	96	µg/l		11.7	0.51 ^J	4.5	0.49 ^J	0.46 ^J	< 0.42	127.9
Naphthalene	100	10	µg/l		0.40 ^J	< 0.37	< 0.42	< 0.42	< 0.42	< 0.42	5.3

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2i
Summary of Groundwater Analytical Results
MW9
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	11/30/2000	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010	11/8/2010
Lead	15	1.5	µg/l	< 5.0	NA	NA	NA	NA		NA	NA	NA
VOC Parameters									Project			
									Stalled			
Benzene	5	0.5	µg/l	103	160	140	230	200		45.3	331	350
Ethylbenzene	700	140	µg/l	105	<i>310</i>	<i>270</i>	<i>270</i>	100		56.2	729	716
Toluene	800	160	µg/l	105	<i>260</i>	<i>160</i>	<i>160</i>	51		13.2	<i>249</i>	<i>256</i>
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	2.57	< 0.46	< 0.46	< 0.46	< 4.9		8.36	4.9 ^J	<i>50.50</i>
Xylenes (mixed isomers)	2,000	400	µg/l	<i>455</i>	<i>1,200</i>	<i>800</i>	<i>620</i>	190		38.34	<i>1,551</i>	<i>1,622</i>
Trimethylbenzenes (mixed isomers)	480	96	µg/l	<i>134.2</i>	<i>410</i>	<i>258</i>	<i>340</i>	66		18.22	930	1,089
Naphthalene	100	10	µg/l	<i>12.4</i>	<i>43</i>	<i>41</i>	<i>37</i>	< 14		2.62	101	127

Parameter	ES	PAL	Units	7/10/2013	8/19/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/23/2017
Lead	15	1.5	µg/l		NA	NA	NA	NA	NA	NA	NA
VOC Parameters				Completed							
				Soil							
Benzene	5	0.5	µg/l		45.6	278	29.7	347	117	7.6	177
Ethylbenzene	700	140	µg/l	Excavation	63.8	<i>583</i>	49.5	712	<i>291</i>	20.8	497
Toluene	800	160	µg/l		16.3	<i>215</i>	11.1	<i>251</i>	82.8	4.0	167
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		1.2	6.80	0.98 ^J	< 4.8	3.3 ^J	< 0.48	6.8 ^J
Xylenes (mixed isomers)	2,000	400	µg/l		47.3	<i>1,002</i>	48.1	<i>1,345</i>	<i>441.4</i>	19.7	<i>941</i>
Trimethylbenzenes (mixed isomers)	480	96	µg/l		39	582	46	825	<i>255.4</i>	17.7	563
Naphthalene	100	10	µg/l		1.2	<i>85.8</i>	1.4	<i>84.7</i>	<i>36.9</i>	0.86 ^J	<i>62.7</i>

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2j
Summary of Groundwater Analytical Results
MW10
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010	11/8/2010
Lead	15	1.5	µg/l	NA	NA	NA	NA		NA	NA	NA
VOC Parameters								Project			
Benzene	5	0.5	µg/l	310	< 0.21	< 0.21	1,800	Stalled	3,670	7.8	65
Ethylbenzene	700	140	µg/l	27	< 0.22	< 0.22	8.7		372	2.2	6.46 ^J
Toluene	800	160	µg/l	< 8.2	< 0.41	< 0.41	27		59.4	< 0.42	< 1.85
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 9.2	< 0.46	< 0.46	< 4.9		26.9	< 0.38	< 1.50
Xylenes (mixed isomers)	2,000	400	µg/l	33	< 0.69	< 0.69	100		347	1.6 ^J	8.72 ^J
Trimethylbenzenes (mixed isomers)	480	96	µg/l	8.7	< 0.60	< 0.60	21.2		163.9	0.69 ^J	5.17 ^J
Naphthalene	100	10	µg/l	< 14	< 0.69	< 0.69	< 14		23.8	< 0.40	< 10.0

Parameter	ES	PAL	Units	7/10/2013	8/19/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/23/2017
Lead	15	1.5	µg/l		NA	NA	NA	NA	NA	NS	NA
VOC Parameters				Completed							
Benzene	5	0.5	µg/l	Soil	77.6	829	126	7.3	3.0	NS	< 0.40
Ethylbenzene	700	140	µg/l	Excavation	< 0.34	18.9	1.7	< 0.39	< 0.39	NS	< 0.39
Toluene	800	160	µg/l		< 0.34	< 3.4	< 0.39	< 0.39	< 0.39	NS	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 0.37	< 3.7	< 0.48	< 0.48	< 0.48	NS	< 0.48
Xylenes (mixed isomers)	2,000	400	µg/l		< 0.71	8.5 ^J	1.2 ^J	< 0.80	< 0.80	NS	< 0.80
Trimethylbenzenes (mixed isomers)	480	96	µg/l		< 0.36	< 3.6	0.53 ^J	< 0.42	< 0.42	NS	< 0.42
Naphthalene	100	10	µg/l		< 0.37	4.8 ^J	< 0.42	< 0.42	< 0.42	NS	< 0.42

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

Italics

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2k
Summary of Groundwater Analytical Results
MW11
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	5/23/2001	8/14/2001	12/21/2001	3/4/2002		10/13/2009	8/24/2010	11/8/2010
Lead	15	1.5	µg/l	NA	NA	NA	NA		NA	NA	NA
VOC Parameters								Project			
Benzene	5	0.5	µg/l	51	4,400	760	3,400	Stalled	1,530	< 0.39	< 0.39
Ethylbenzene	700	140	µg/l	10	3,100	<i>330</i>	3,100		3,790	< 0.41	< 0.41
Toluene	800	160	µg/l	74	21,000	6,700	21,000		19,400	< 0.42	< 0.42
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.46	< 23	< 9.2	< 25		< 60	< 0.38	< 0.38
Xylenes (mixed isomers)	2,000	400	µg/l	42	12,800	4,200	12,000		13,670	< 0.87	< 0.87
Trimethylbenzenes (mixed isomers)	480	96	µg/l	8.5	1,770	720	2,020		2,416	< 0.43	< 0.43
Naphthalene	100	10	µg/l	1.2	250	100	320		460*	< 0.40	< 0.40

Parameter	ES	PAL	Units	7/10/2013	7/26/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/23/2017
Lead	15	1.5	µg/l		NA	NA	NA	NA	NA	NA	NA
VOC Parameters				Completed							
Benzene	5	0.5	µg/l	Soil	17.1	959	598	3.7	93.2	244	< 0.40
Ethylbenzene	700	140	µg/l	Excavation	44.6	3,160	2,130	1.3	<i>156</i>	908	< 0.39
Toluene	800	160	µg/l		<i>172</i>	15,300	11,800	3.7	932	112	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l		< 3.7	< 46.4	< 60.6	< 0.48	< 4.8	< 24.2	< 0.48
Xylenes (mixed isomers)	2,000	400	µg/l		96.6	11,060	7,260	2.32 ^J	534	3,145	< 0.80
Trimethylbenzenes (mixed isomers)	480	96	µg/l		10.5	1,949	1,279	< 0.42	70.3	545	< 0.42
Naphthalene	100	10	µg/l		5.8	430	277	< 0.42	<i>15.6</i>	112	< 0.42

Notes:

ES = NR140.10 Enforcement Standards
PAL = NR140.10 Preventive Action Limits
NS = Not Sampled
NA = Not Analyzed

Enforcement Standard exceeded

BOLD

Preventive Action Limit exceeded

<i>Italics</i>

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 21
Summary of Groundwater Analytical Results
MW12
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	8/19/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/22/2017
Lead	15	1.5	µg/l	NA	NA	NA	NA	NA	NA	NA
VOC Parameters										
Benzene	5	0.5	µg/l	2,020	1,500	1,820	1,450	1,780	1,030	624
Ethylbenzene	700	140	µg/l	1,700	1,300	1,550	1,370	1,650	1,010	738
Toluene	800	160	µg/l	6,640	4,740	6,140	5,010	5,810	3,120	2,140
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 37.1	< 18.6	< 19.4	< 48.5	< 19.4	< 12.1	< 9.7
Xylenes (mixed isomers)	2,000	400	µg/l	7,010	5,280	6,400	5,290	6,720	3,970	2,357
Trimethylbenzenes (mixed isomers)	480	96	µg/l	1,548	1,253	1,414	1,261	1,534	1,012	569
Naphthalene	100	10	µg/l	300	239	264	246	239	186	116

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

Enforcement Standard exceeded

BOLD
<i>Italics</i>

Preventive Action Limit exceeded

^J = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

Table 2m
Summary of Groundwater Analytical Results
MW13
Former Luck Marine
100 Main Street South
Luck, WI

Parameter	ES	PAL	Units	8/19/2013	11/13/2013	12/9/2014	7/21/2015	6/27/2016	9/20/2016	5/23/2017
Lead	15	1.5	µg/l	NA	NA	NS	NA	NS	NS	NA
VOC Parameters										
Benzene	5	0.5	µg/l	< 0.34	< 0.34	NS	< 0.40	NS	NS	< 0.40
Ethylbenzene	700	140	µg/l	< 0.34	< 0.34	NS	< 0.39	NS	NS	< 0.39
Toluene	1,000	200	µg/l	< 0.34	< 0.34	NS	< 0.39	NS	NS	< 0.39
Methyl tert-Butyl Ether (MTBE)	60	12	µg/l	< 0.37	< 0.37	NS	< 0.48	NS	NS	< 0.48
Xylenes (mixed isomers)	10,000	1,000	µg/l	< 0.71	< 0.71	NS	< 0.80	NS	NS	< 0.80
Trimethylbenzenes (mixed isomers)	480	96	µg/l	< 0.36	< 0.36	NS	< 0.42	NS	NS	< 0.42
Naphthalene	100	10	µg/l	< 0.37	< 0.37	NS	< 0.42	NS	NS	< 0.42

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR140.10 Preventive Action Limits

NS = Not Sampled

NA = Not Analyzed

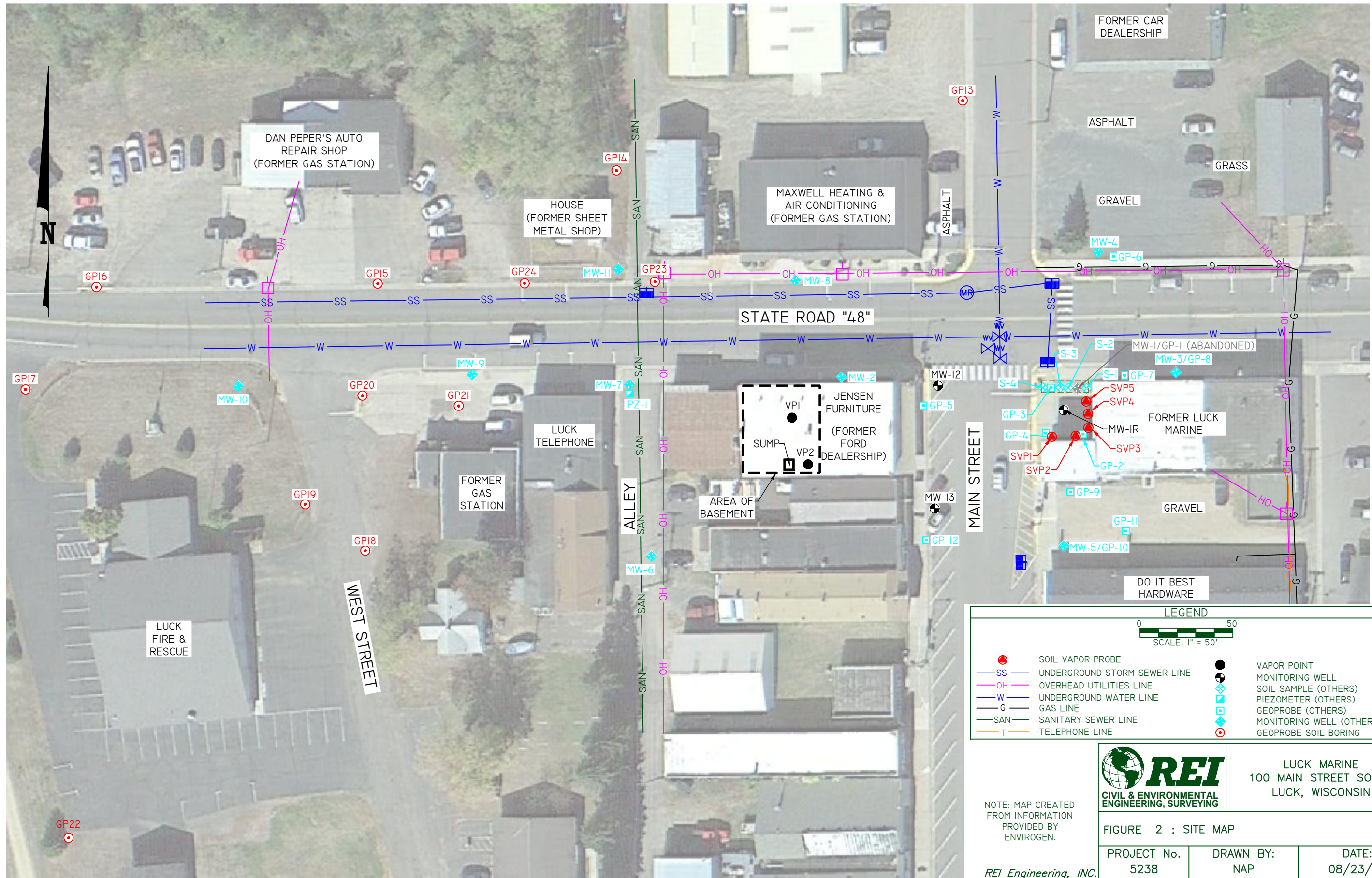
Enforcement Standard exceeded

BOLD
<i>Italics</i>

Preventive Action Limit exceeded

¹ = Estimated value, concentration between the Limit of Detection and the Limit of Quantitation

DRAWING FILE: P:\5200-5299\5238-Luck\dwg\5238-SITE.DWG LAYOUT: SITE PLOTTED: Aug 23, 2017 - 5:07PM PLOTTED BY: NATHANP



LEGEND

0 50
SCALE: 1" = 50'

	SOIL VAPOR PROBE		VAPOR POINT
	UNDERGROUND STORM SEWER LINE		MONITORING WELL
	OVERHEAD UTILITIES LINE		SOIL SAMPLE (OTHERS)
	UNDERGROUND WATER LINE		PIEZOMETER (OTHERS)
	GAS LINE		GEOPROBE (OTHERS)
	SANITARY SEWER LINE		MONITORING WELL (OTHERS)
	TELEPHONE LINE		GEOPROBE SOIL BORING

NOTE: MAP CREATED FROM INFORMATION PROVIDED BY ENVIROGEN.

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

LUCK MARINE
100 MAIN STREET SOUTH
LUCK, WISCONSIN

FIGURE 2 : SITE MAP

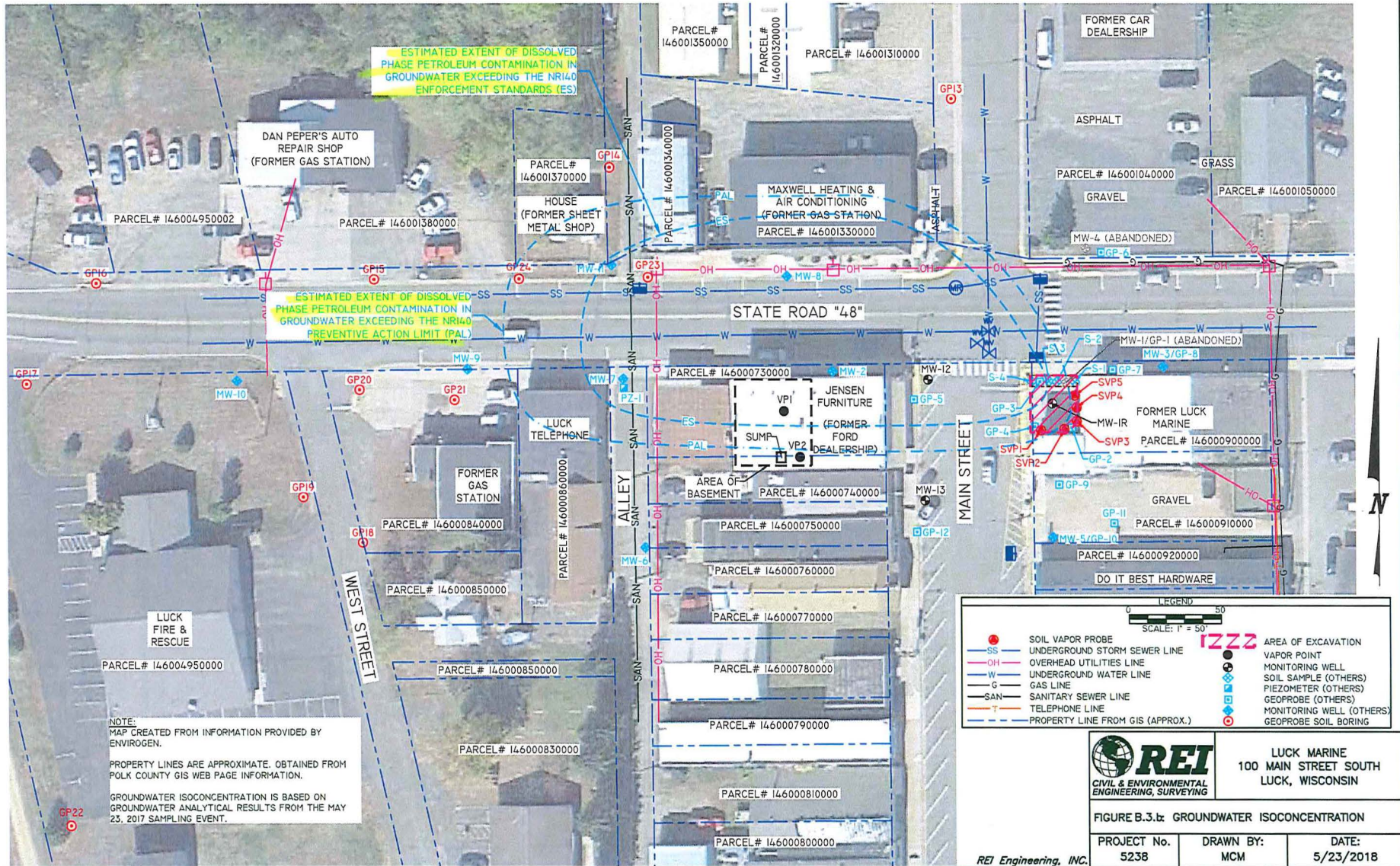
PROJECT No. 5238	DRAWN BY: NAP	DATE: 08/23/17
---------------------	------------------	-------------------

REI Engineering, INC.

luck marine

Remaining ground water contamination

DRAWING FILE: P:\5200-5299\5238-LUCK\DWG\5238-GW-ISO.DWG LAYOUT: GW-ISO_PLOTTED: MAY 23, 2018 - 9:32AM PLOTTED BY: MATTH



NOTE:
MAP CREATED FROM INFORMATION PROVIDED BY ENVIROGEN.
PROPERTY LINES ARE APPROXIMATE. OBTAINED FROM POLK COUNTY GIS WEB PAGE INFORMATION.
GROUNDWATER ISOCONCENTRATION IS BASED ON GROUNDWATER ANALYTICAL RESULTS FROM THE MAY 23, 2017 SAMPLING EVENT.

LEGEND

● SOIL VAPOR PROBE	ZZZZ AREA OF EXCAVATION
SS UNDERGROUND STORM SEWER LINE	● VAPOR POINT
OH OVERHEAD UTILITIES LINE	○ MONITORING WELL
W UNDERGROUND WATER LINE	○ SOIL SAMPLE (OTHERS)
G GAS LINE	○ PIEZOMETER (OTHERS)
SAN SANITARY SEWER LINE	○ GEOPROBE (OTHERS)
T TELEPHONE LINE	○ MONITORING WELL (OTHERS)
--- PROPERTY LINE FROM GIS (APPROX.)	○ GEOPROBE SOIL BORING

REI
CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING

LUCK MARINE
100 MAIN STREET SOUTH
LUCK, WISCONSIN

FIGURE B.3.b: GROUNDWATER ISOCONCENTRATION

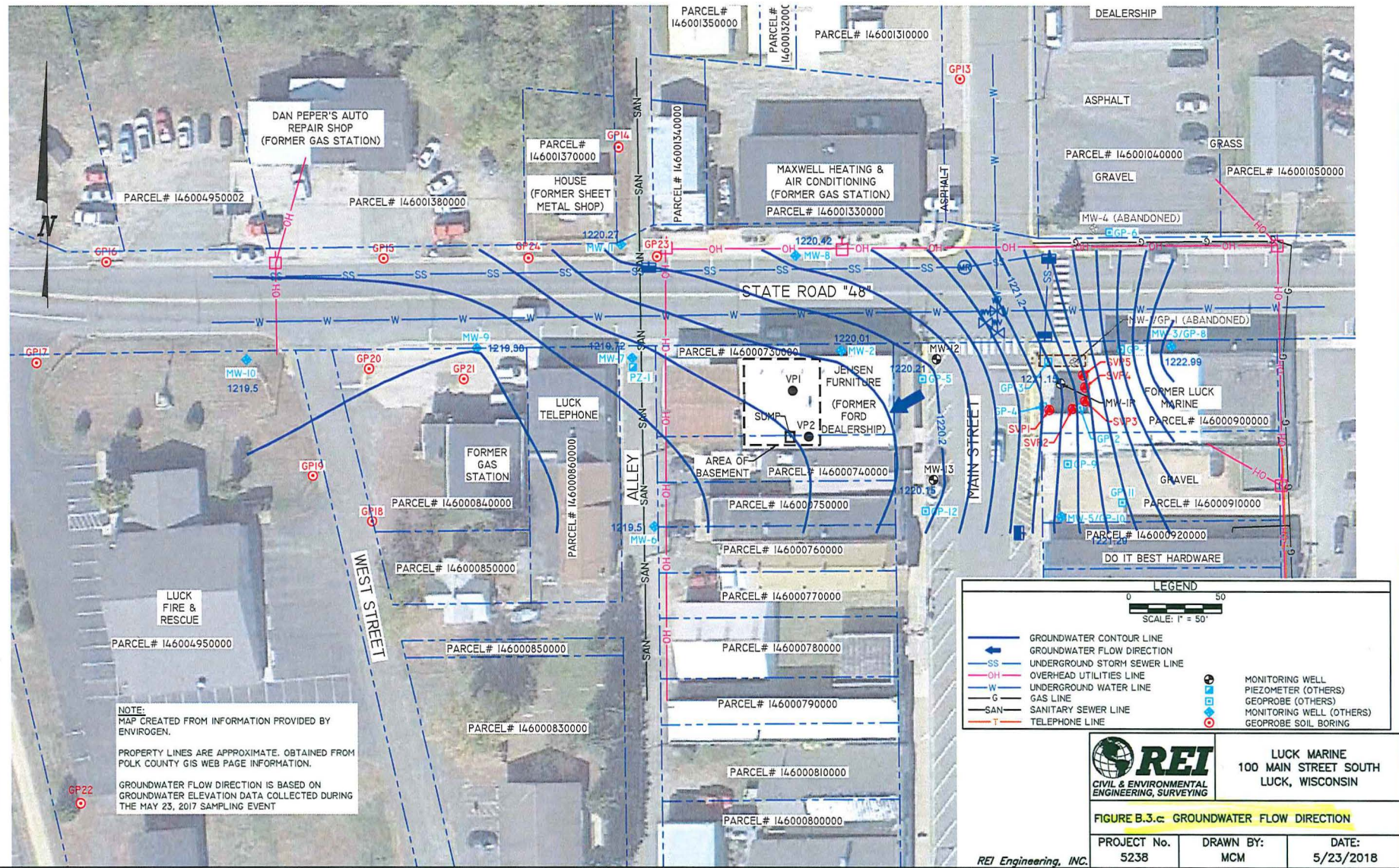
PROJECT No. 5238	DRAWN BY: MCM	DATE: 5/23/2018
---------------------	------------------	--------------------

REI Engineering, INC.

LUCK MARINE

GROUNDWATER FLOW

DRAWING FILE: P:\5200-5200\5238-LOCKMVA\5238-GW 052317.DWG LAYOUT: GW_PLOTTED: MAY 23, 2018 - 9:33AM PLOTTED BY: MATTH



NOTE:
 MAP CREATED FROM INFORMATION PROVIDED BY ENVIROGEN.
 PROPERTY LINES ARE APPROXIMATE. OBTAINED FROM POLK COUNTY GIS WEB PAGE INFORMATION.
 GROUNDWATER FLOW DIRECTION IS BASED ON GROUNDWATER ELEVATION DATA COLLECTED DURING THE MAY 23, 2017 SAMPLING EVENT

LEGEND

0 50
 SCALE: 1" = 50'

- GROUNDWATER CONTOUR LINE
- ← GROUNDWATER FLOW DIRECTION
- SS UNDERGROUND STORM SEWER LINE
- OH OVERHEAD UTILITIES LINE
- W UNDERGROUND WATER LINE
- G GAS LINE
- SAN SANITARY SEWER LINE
- T TELEPHONE LINE
- ⊕ MONITORING WELL
 ○ PIEZOMETER (OTHERS)
 □ GEOPROBE (OTHERS)
 ○ MONITORING WELL (OTHERS)
 ○ GEOPROBE SOIL BORING



LUCK MARINE
 100 MAIN STREET SOUTH
 LUCK, WISCONSIN

FIGURE B.3.c: GROUNDWATER FLOW DIRECTION

PROJECT No. 5238	DRAWN BY: MCM	DATE: 5/23/2018
---------------------	------------------	--------------------

REI Engineering, INC.