THE CITY OF MARQUETTE
LAKESHORE BOULEVARD RELOCATION-PHASE 1

MARQUETTE PROJ. NO. MQ13-500

STANDARDS:

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2012 VERSION, AND THE 2005 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

DESIGN STANDARD

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES 2004 EDITION

MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED OUT ON THE PLANS, THEY ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

R-83-B	UTILITY TRENCHES
R-96-D	SOIL EROSION & SEDIMENTATION CONTROL MEASURES
R-28-H	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
R-30-G	CONCRETE CURB AND CONCRETE CURB & GUTTER
R-86-D	PRECAST CONCRETE END SECTION FOR PIPE CULVERT
R-39-i	TRANSVERSE PAVEMENT JOINTS
R-40-H	LOAD TRANSFER ASSEMBLIES FOR TRANSVERSE JOINTS
R-41-G	LONGITUDINAL PAVEMENT JOINTS

TRAFFIC AND SAFETY STANDARDS PLANS

* WZD-100-A GROUND DRIVEN SIGN SUPPORTS FOR TEMPORARY SIGNS
* WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES

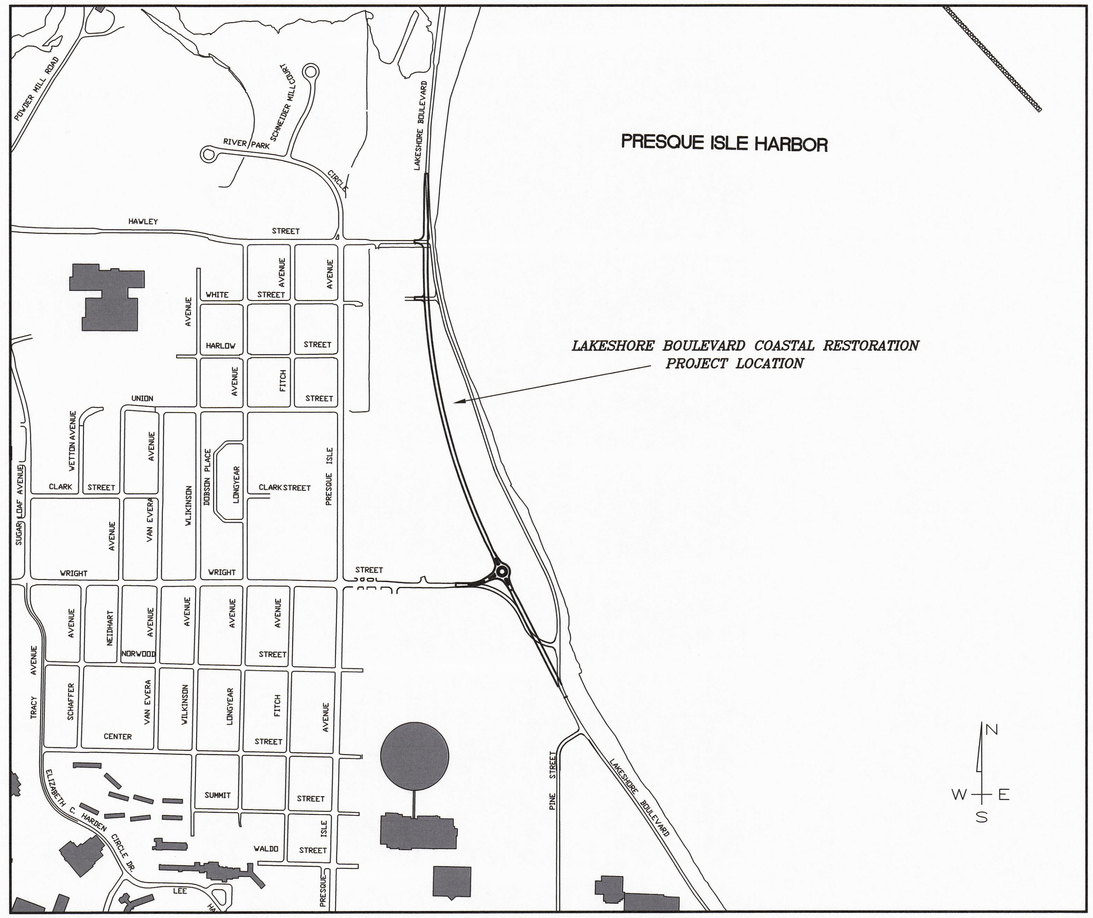
UTILITIES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL CALL MISS DIG AT 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED.

THE FOLLOWING UTILITIES ARE LOCATED IN OR NEAR THE RIGHT-OF-WAY FOR THIS PROJECT:

SANITARY SEWER MAIN
WATERMAIN
GAS MAIN
UNDERGROUND TELEPHONE
OVERHEAD ELECTRICAL AND CABLE
UNDERGROUND ELECTRICAL
UNDERGROUND FIBER OPTICS

LOCATION MAP



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LEGEND

- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING GAS MAIN/SERVICE
- EXISTING TELECOMMUNICATION CABLE
- EXISTING ELECTRIC CABLE
- EXISTING LIGHT POLE
- EXISTING SANITARY/STORM SEWER MANHOLE
- EXISTING POWER POLE
- GUY ANCHOR
- EXISTING CATCH BASIN
- EXISTING TRAFFIC SIGN
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- SOIL BORING LOCATION AND NUMBER
- EXISTING WATER SHUT OFF - RECORD LOCATION
- PROPOSED SANITARY SEWER
- PROPOSED WATER MAIN
- PROPOSED STORM SEWER
- RIGHT OF WAY
- PROPERTY LINE, APPROXIMATE
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED 6" SIDEWALK
- PROPOSED 4" SIDEWALK
- PROPOSED ADA RAMP (6")
- HMA, 13A

PUBLIC UTILITIES

MARQUETTE BOARD OF LIGHT AND POWER
2200 WRIGHT STREET
MARQUETTE, MICHIGAN 49855
PH. (906) 228-0300

CHARTER COMMUNICATIONS
359 US-41 EAST
NEGAUNEE, MICHIGAN 49866
PH. (906) 228-2900

MARQUETTE WATER AND SEWER DEPARTMENT
850 WEST BARAGA AVENUE
MARQUETTE, MICHIGAN 49855
PH. (906) 228-0444

AT&T
3255 US-41 WEST
MARQUETTE, MICHIGAN 49855
PH. (906) 221-2121

SEMCO ENERGY
34 US-41 EAST
NEGAUNEE, MICHIGAN 49866
PH. (906) 475-9901

STATE OF MICHIGAN
JAMES R. COMPTON
ENGINEER
No. 42583
LICENSED PROFESSIONAL ENGINEER

8/29/19
For Joint Permit

CONTRACT FOR LAKESHORE BOULEVARD RELOCATION-PHASE 1

MUNICIPAL APPROVAL:

L. MICHAEL ANGELI — DATE

KEITH WHITTINGTON, CITY ENGINEER — DATE

PREPARED UNDER THE SUPERVISION OF:

JAMES R. COMPTON, ENGINEER — DATE
P.E. NO. 042583

CITY OF MARQUETTE
CITY ENGINEER'S OFFICE
300 WEST BARAGA AVENUE
MARQUETTE, MICHIGAN 49855
PH. (906) 228-0440

W
S
NORTH
E

1. REMOVE AND DISPOSE OF LAKESHORE BOULEVARD PAVEMENT ON SOUTH AND NORTH END OF PROJECT AS HATCHED. ALSO REMOVE PAVEMENT FROM BIO-RESOURCE DRIVE TO EXTENT PROPOSED AS SHOWN. PAID FOR AS "PAVT, REM".
2. REMOVE AND DISPOSE OF PAVEMENT ONLY FROM STATION 3+01 TO 4+00. REMOVE AND DISPOSE OF PAVEMENT AND ROAD GRAVEL ON WRIGHT STREET FROM STATION 4+001 TO EXISTING LAKESHORE BOULEVARD AS HATCHED. GRADE AREA AS SHOWN ON PLAN. PAID FOR AS "PAVT, REM" AND "EXCAVATION, EARTH".
3. REMOVE AND DISPOSE OF PAVEMENT ON HAWLEY STREET FROM STATION 2+58.5 TO EXISTING LAKESHORE BOULEVARD. PAID FOR AS "PAVT, REM".
4. REMOVE AND DISPOSE OF BIKE PATH PAVEMENT ON THE SOUTH AND NORTH END OF PROJECT AS HATCHED. PAID FOR AS "PAVT, REM".
5. THIS MATERIAL SHALL BE REMOVED FROM THIS AREA DOWN TO ELEVATION 614 ROUGH GRADE, STOCKPILED AND USED AS CLEAN FILL AS DIRECTED BY THE ENGINEER. WORK PAID FOR AS "EXCAVATION, EARTH" AND "EMBANKMENT, CIP".
6. THIS MATERIAL SHALL BE REMOVED FROM THIS AREA DOWN TO ELEVATION 611 AND STOCKPILED. THIS MATERIAL IS PREDOMINATELY RIPRAP AND CAN BE USED ON THIS PROJECT IF SCREENED AND MEETS SPECIFICATIONS. MATERIAL FROM THIS PILE THAT MEETS CLASS II REQUIREMENTS CAN BE USED AS FILL. THIS WORK QUANTITY IS INCLUDED IN "EXCAVATION, EARTH" AND "EMBANKMENT, CIP"
7. THIS MATERIAL SHALL BE REMOVED FROM THIS AREA DOWN TO ELEVATION 615 ROUGH GRADE, STOCKPILED AND USED AS CLEAN FILL AS DIRECTED BY THE ENGINEER. WORK PAID FOR AS "EXCAVATION, EARTH" AND "EMBANKMENT, CIP".
8. BEFORE REMOVING 43X68 RCP, CONTRACTOR SHALL EXCAVATE TWO EXPLORATORY HOLES DOWN TO ELEVATION 602 AS DIRECTED BY ENGINEER IN ORDER TO DETERMINE SOIL CONDITIONS. PAID FOR AS "EXPLORATORY PIT". ONCE APPROVED BY ENGINEER, EXCAVATE POND DOWN TO ELEVATION 602 AND PLACE MATERIAL UNDER SPLAY OF ROAD. SEE CROSS SECTIONS. PAID FOR AS "EXCAVATION, EARTH AND "EMBANKMENT".
9. REMOVE TREES AND GRUB STUMPS AS NECESSARY. PAID FOR AS "CLEARING AND GRUBBING". INDIVIDUAL TREES OR GROUPS OF TREES ON SITE NOT SPECIFICALLY SHOWN WILL STILL NEED TO BE REMOVED AS PART OF THIS PROJECT. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE SITE TO QUANTIFY THESE TREES.
10. CAREFULLY REMOVE THIS 60' OF 12" RCP AND RELAY IT AT 0.5% SLOPE. CAREFULLY REMOVE CB AND REINSTALL TO NEW LOCATION TO THE SOUTHWEST. REMOVAL WORK SHALL BE INCLUDED IN THE PAY ITEM "EXCAVATION, EARTH". REUSE OF PIPE, IF APPROVED, SHALL BE PAID FOR AS "SEWER, CL III, 12 INCH, TR DET B". CB AND CASTING PAID FOR WTH PROJECT PAY ITEMS.
11. CAREFULLY REMOVE 152 FEET OF 43X68 ELLIPTICAL RCP. 60 FEET OF THIS PIPE SHALL BE REUSED. REMOVAL WORK SHALL BE INCLUDED IN THE PAY ITEM "EXCAVATION, EARTH".
12. REMOVE FENCE ALONG PROJECT FROM GATE ON WRIGHT STREET TO JUST WEST OF PROPOSED SANITARY AND WATER MAIN WORK NEAR STATION 45+26. PAID FOR AS "FENCE, REM". REUSE SOME FENCE AND ONE GATE AROUND EXISTING WET WELL AS SHOWN ON SHEET 12. PAID FOR AS "REUSE FENCE AND GATE". DISPOSAL OF THE REST OF UNUSED FENCE SHALL BE COVERED IN PAY ITEM "FENCE, REM"
13. TELEPHONE PEDESTAL, ELECTRICAL BOX AND UTILITY POLE TO BE MOVED BY OTHERS.
14. CAREFULLY REMOVE WOODEN BOLLARDS FROM STA 11+00 TO NORTH END. REINSTALL AS SHOWN ON SHEETS 18 AND 30. PAID FOR AS "REMOVE AND REINSTALL BOLLARD".
15. ABANDON MONITORING WELLS. WELLS TO BE ABANDONED ARE MW600 A,B&C, UPG 200 A,B&C AND THREE AT STA. 45+05 AND TWO AT STA 47+11. TO ABANDON REMOVE OUTSIDE CASING, FILL WELL PIPE WITH BENTONITE POWDER AND CUT PIPE JUST BELOW GROUND LEVEL. PAID FOR AS "ABANDON MONITORING WELL". SEE PLAN SHEET FOR LOCATIONS.
16. DITCH THIS AREA TO DRAIN TO PCB#7. PAID FOR AS "EXCAVATION, EARTH".

PAY ITEMS (THIS SHEET)

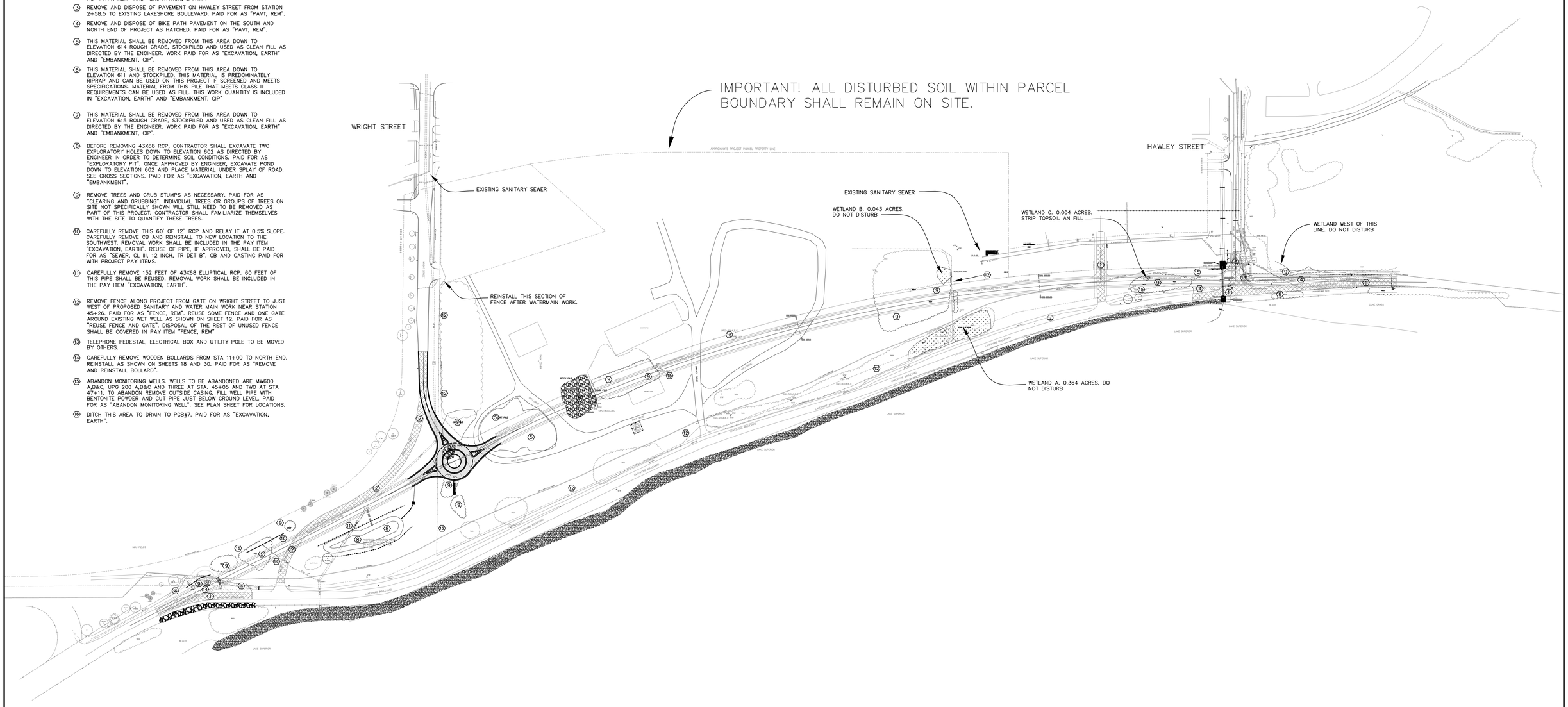
7122	SYD	– PAVT, REM
17875	CYD	– EXCAVATION, EARTH
*14855	CYD	– EMBANKMENT, CIP
1	LS	– CLEARING AND GRUBBING
3050	FT	– FENCE, REM
8	EA	– UTILITY EXPLORATION

* THIS NUMBER IS COMPACTED IN PLACE. IT DOES NOT INCLUDE TOPSOIL, ROAD PAVEMENT STRUCTURE OR BIKE PATH PAVEMENT STRUCTURE.

GENERAL PROJECT PAY ITEMS

1	LS	– MOBILIZATION, $130,000 MAX.
1	LS	– PROJECT CLEANUP
1	LS	– DEWATERING

DEWATERING WILL BE NECESSARY FOR INSTALLATION OF SANITARY SEWER AND WATERMAIN. DEWATERING WATER SHALL BE SENT INTO THE SANITARY SEWER. SENDING THE DEWATERING WATER INTO THE NEW SANITARY SEWER AS IT PROGRESSES IS ACCEPTABLE.



0 200 400 Feet

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CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

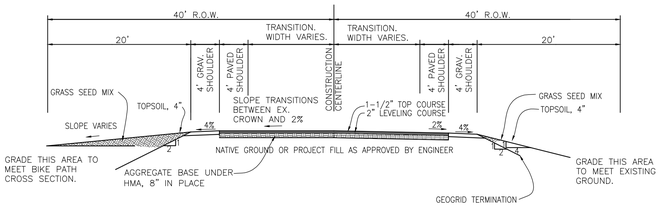
REVISIONS:
- INTERNAL REVIEW 8/18/14
- PRELIM DRAFT 8/12/19
- PERMIT 8/29/19
- REVISION FOR PERMIT 9/16/19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: ---J:/PROJECTS...MASTERBASEMAP.dwg

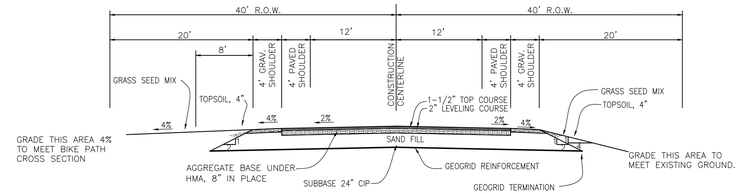
HOR. SCALE: 1" =200'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
REMOVAL AND EARTHWORK PLAN

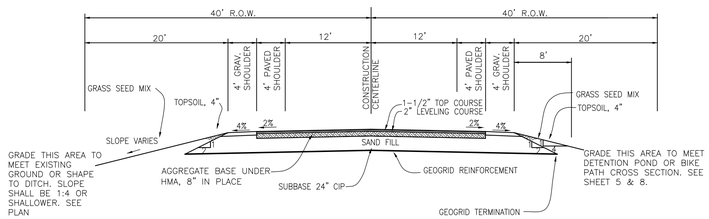
PROJECT MQ13-500
SHEET 2 OF 32



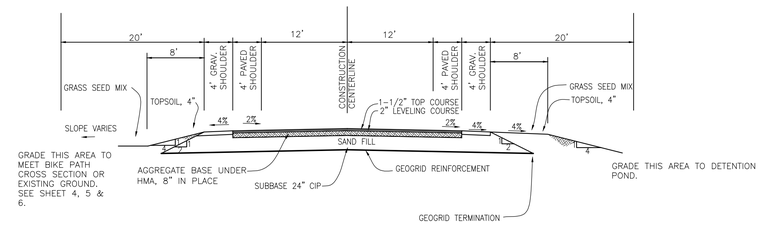
LAKESHORE BLVD. ROADWAY ALIGNMENT: STA 11+00 TO STA 12+00
TRANSITION FROM EXISTING TO PROPOSED CROSS SECTION



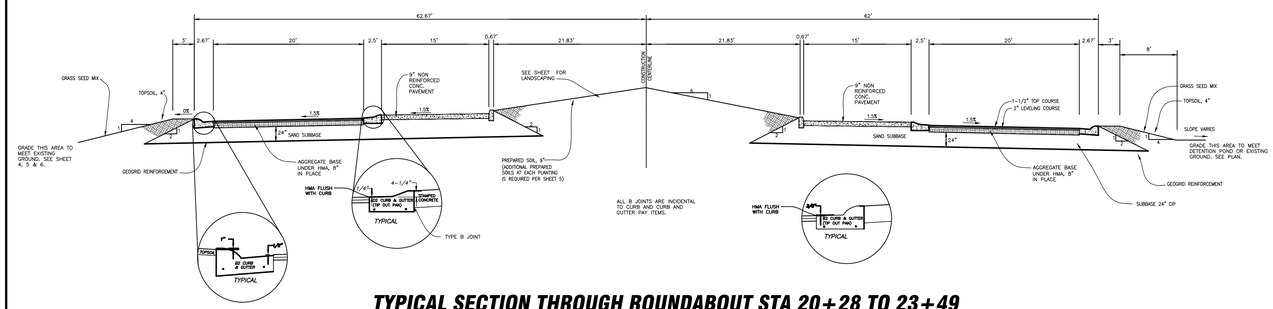
LAKESHORE BLVD. ROADWAY ALIGNMENT: STA 12+00 TO STA 13+26
TO BIKEPATH CROSSING



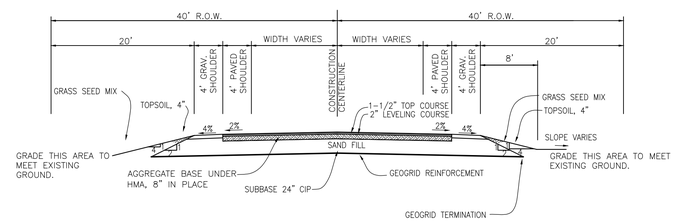
LAKESHORE BLVD. ROADWAY ALIGNMENT: STA 13+26 TO STA 16+75
BIKEPATH CROSSING TO WIDENED AREA NEXT TO POND



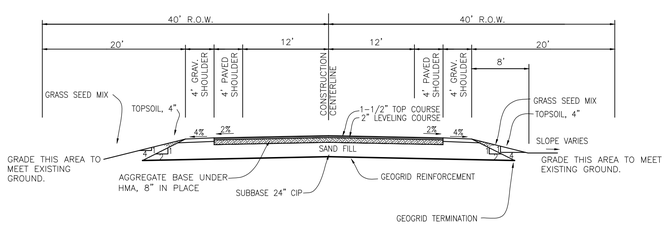
LAKESHORE BLVD. ROADWAY ALIGNMENT ALONG POND: STA 16+75 TO STA 20+28
WIDENED AREA NEXT TO POND TO ROUNDABOUT
FOR STA 20+28.78 TO 23+48.89 SEE ROUNDABOUT SECTION BELOW AND SHEET 5



TYPICAL SECTION THROUGH ROUNDABOUT STA 20+28 TO 23+49



LAKESHORE BLVD. ROADWAY ALIGNMENT: STA 23+49 TO STA 24+49
TRANSITION FROM NORTH OF ROUNDABOUT TO PROPOSED CROSS SECTION



LAKESHORE BLVD. ROADWAY ALIGNMENT: STA 24+49 TO STA 39+50

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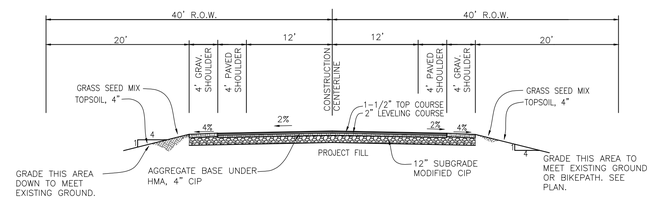
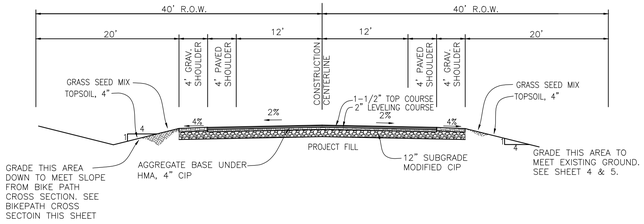
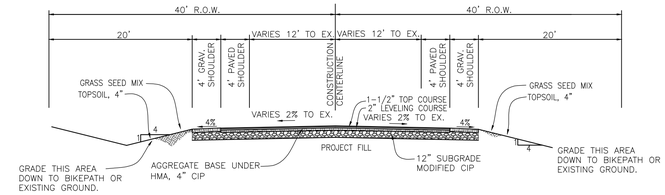


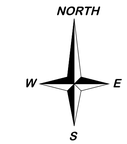
LAKESHORE BLVD. ROADWAY ALIGNMENT: STA 39+50 TO STA 47+79
FOR STATION 47+79 TO 49+02 SEE HAWLEY ST INTERSECTIN DETAIL SHEET 23

	CITY ENGINEER'S OFFICE **MARQUETTE, MICHIGAN** 300 WEST BARAGA AVE., MARQUETTE, MI 49855 PHONE (906)228-0440	**REVISIONS:** PRELIM DRAFT 8_12_19 PERMIT 8_29_19	DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER DRAWN BY: MHK DATE: FILE NAME: J:/PROJECTS...MASTERCROSSSECTIONS.dwg	HOR. SCALE: 1" = 10' VERT. SCALE: N.A.	**LAKESHORE BLVD. RELOCATION** MARQUETTE, MICHIGAN TYPICAL ROAD CROSS SECTIONS	**PROJECT MQ13-500** **SHEET 3 OF 32**

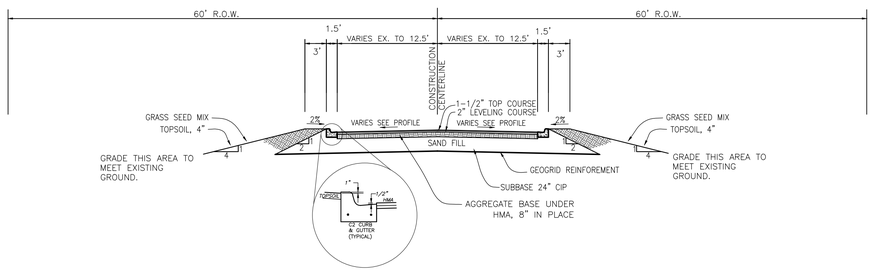


LAKESHORE BLVD. ROADWAY ALIGNMENT: STA 49+02 TO STA 52+67.05

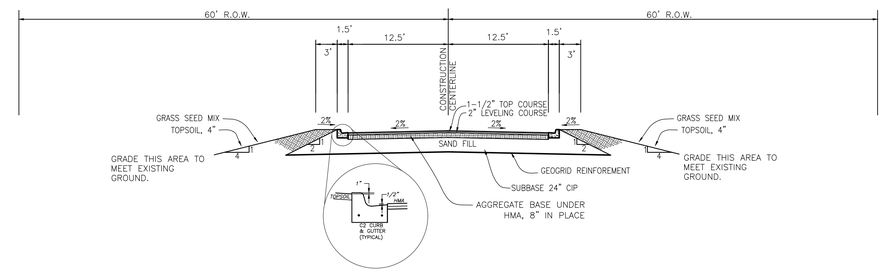




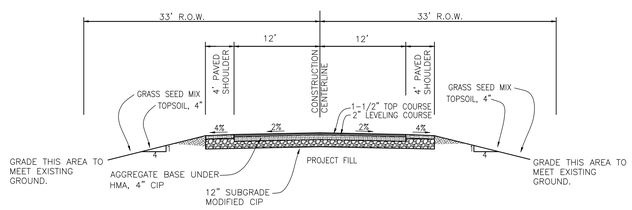
LAKESHORE BLVD ROADWAY ALIGNMENT: STA 52+67.05 TO STA 53+67.05



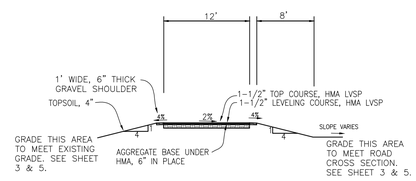
WRIGHT STREET ROADWAY ALIGNMENT: STA 3+01 TO STA 4+00



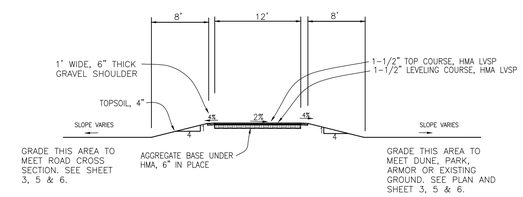
WRIGHT STREET ROADWAY ALIGNMENT: STA 4+00 TO STA 5+00



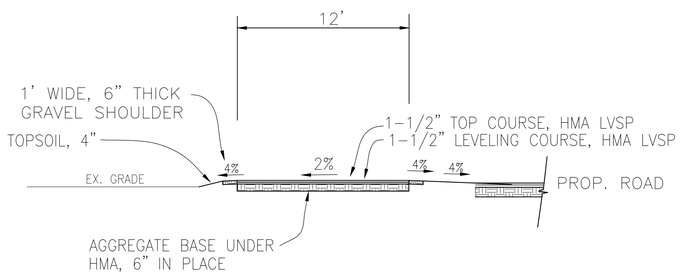
HAWLEY STREET PROFILE



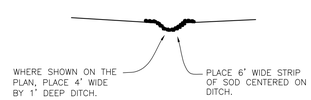
TYPICAL BIKE PATH CROSS SECTION STA 12+21 TO STA 52+03



TYPICAL BIKE PATH CROSS SECTION STA 52+03 TO STA 53+60



TYPICAL BIKE PATH CROSS SECTION STA 12+21 TO STA 52+03



TYPICAL DITCH CROSS SECTION

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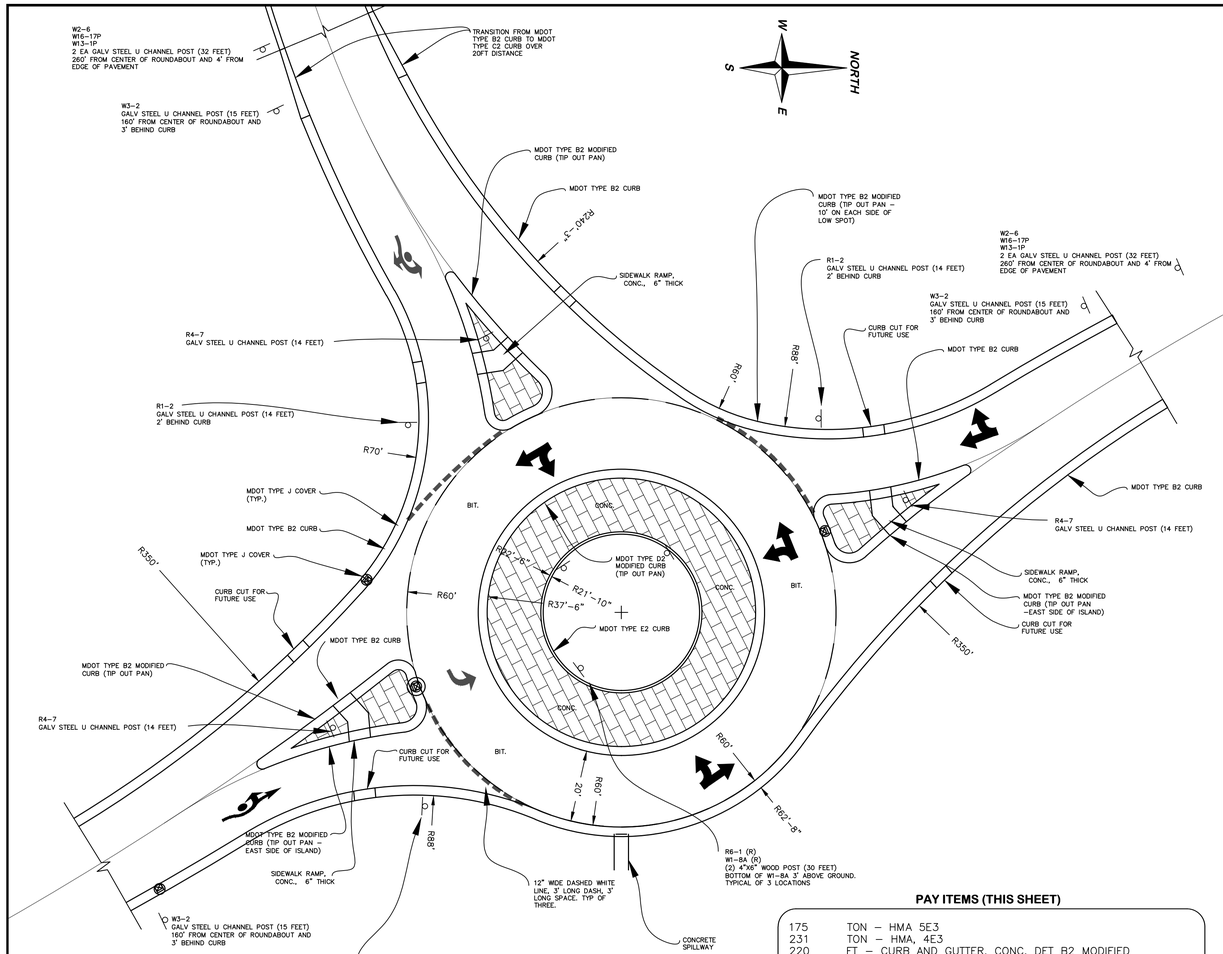
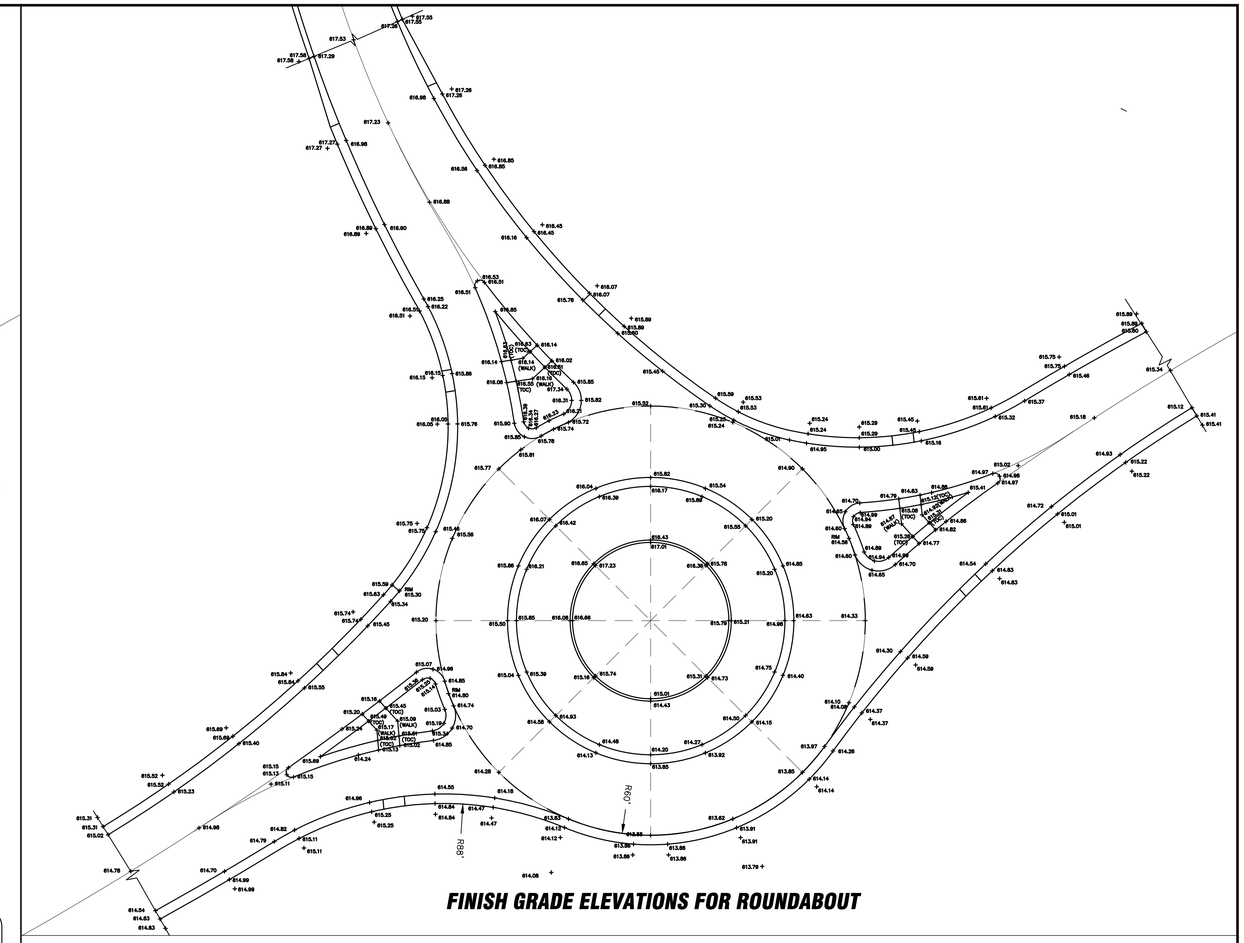
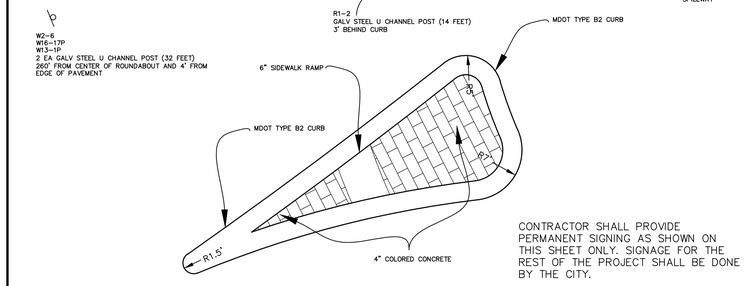
CITY ENGINEER'S OFFICE **MARQUETTE, MICHIGAN** 300 WEST BARAGA AVE., MARQUETTE, MI 49855 PHONE (906)228-0440	**REVISIONS:** INTERNAL REVIEW 6/10/14 PRELIM DRAFT 8_12_19 PERMIT 8_29_19	DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER DRAWN BY: MHK DATE: FILE NAME: J:/PROJECTS...MASTERCROSSSECTIONS.dwg	HOR. SCALE: 1" = 10' VERT. SCALE: N.A.	**LAKESHORE BLVD. RELOCATION** MARQUETTE, MICHIGAN OTHER TYPICAL SECTIONS	**PROJECT MQ13-500** **SHEET 4 OF 32**





FINISH GRADE ELEVATIONS FOR ROUNDABOUT



CONTRACTOR SHALL PROVIDE PERMANENT SIGNING AS SHOWN ON THIS SHEET ONLY. SIGNAGE FOR THE REST OF THE PROJECT SHALL BE DONE BY THE CITY.

PERMANENT SIGNING FOR ENTIRE PROJECT

SIGN	TYPE	DESCRIPTION	NO. EACH	DIMENSIONS (INCHES)	AREA (FT)
R1-2	IIIA	YIELD	3	36X36X36	12
W3-2	IIIB	YIELD AHEAD	3	36X36	27
W2-6	IIIB	ROUNDABOUT (CIRCULAR ARROWS)	3	36X36	27
W16-17P	IIIB	ROUNDABOUT	3	36x18	13.5
W13-1	IIIB	"15 MPH'	3	18x18	6.75
R6-1 (R)	IIIB	ONE WAY (TO THE RIGHT)	3	12X36	9
R6-4A	IIIA	ECHELON (TO THE RIGHT)	3	24X48	24
R4-7	IIIB	SPLITTER ISLAND SYMBOL	3	24X30	13.5

PAY ITEMS (THIS SHEET)

175	TON - HMA 5E3
231	TON - HMA, 4E3
220	FT - CURB AND GUTTER, CONC, DET B2 MODIFIED
1,010	FT - CURB AND GUTTER, CONC, DET B2
245	FT - CURB AND GUTTER, CONC, DET D2 MODIFIED
140	FT - CURB, CONC, DET E2
633	SFT - SIDEWALK, CONC, 4 INCH, DECORATIVE
314	SYD - CONC PAVT, DECORATIVE, NONREINF, 9 INCH
180	FT - JOINT, CONTRACTION, CP
60	FT - JOING, EXPANSION, E2
185	SFT - SIDEWALK, RAMP., 6 INCH
30	FT - DETECTABLE WARNING SURFACE
1,908	SYD - AGGREGATE BASE, 8 INCH
2,090	CYD - SUBBASE, 24 INCH
3,260	SYD - GEOGRID
250	SYD - TOPSOIL SURFACE, FURN, 4 INCH
64	FT - PAVT MRKG, POLYUREA, 12 INCH, WHITE
1	EA - PAVT MRKG, POLYUREA, LEFT TURN ARROW
3	EA - PAVT MRKG, POLYUREA, THRU/LEFT TURN ARROW SYM
1	EA - PAVT MRKG, POLYUREA, THRU/RIGHT TURN ARROW SYM
1	EA - PAVT MRKG, POLYUREA, THRU&LEFT TURN ROUNDBOUT ARROW SYM
1	EA - PAVT MRKG, POLYUREA, RIGHT&LEFT TURN ROUNDBOUT ARROW SYM

WHITE LINE PAVEMENT MARKING SHALL FOLLOW MDOT SPECIAL DETAIL PAVE-951-A.
PAVEMENT MARKING ARROWS SHALL FOLLOW MDOT SPECIAL DETAIL PAVE-900-E.

PERMANENT SIGNING PAY ITEMS FOR ENTIRE PROJECT

106.75	SFT - SIGN, TYPE IIIB
54	SFT - SIGN, TYPE IIIA
250	FT - POST, STEEL, 3 POUND
90	FT - POST, WOOD, 4 INCH X 6 INCH
3	EA - POST HOLE THROUGH CONC FOR STEEL POST

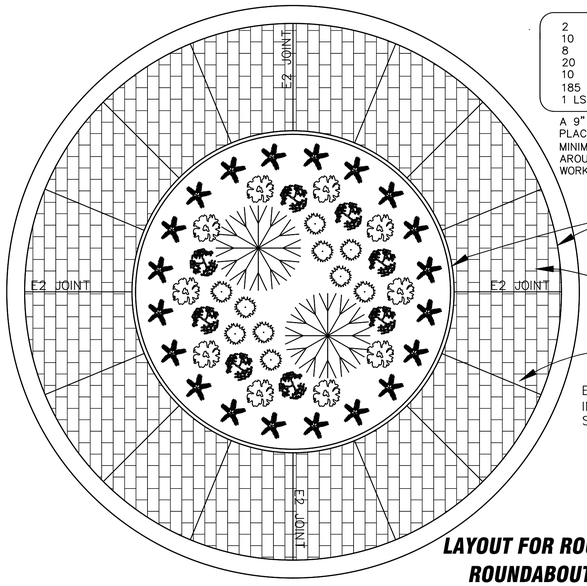
PRAIRFIRE CRABAPPLE
Malus "Prairifire 1-3/4" Cal.

BLUE MUFFIN VIBURNUM, Viburnum dentatum 'Chistom' 5 Gal.

DWARF BURNING BUSH, Euonymus alatus 'Compactus' 5 Gal.

SEA GREEN JUNIPER, Juniper chinensis 'Sea Green' 3 Gal.

ANTHONY WATERER SPIREA, Spirea bumalda 'Anthony Waterer' 3 Gal.



2	EA	PRAIRIFIRE CRABAPPLE
10	EA	BLUE MUFFIN VIBURNUM, 5 Gal.
8	EA	DWARF BURNING BUSH, 5 Gal.
20	EA	SEA GREEN JUNIPER, 3 Gal.
10	EA	ANTHONY WATERER SPIREA, 3 gal.
185	SYD	SHREDDED BARK MULCH, 3" THICK
1	LS	SITE PREPERATION

A 9" THICK DEPTH OF PREPARED SOILS SHALL BE PLACED ON THE ENTIRE ISLAND LANDSCAPE AREA. A MINIMUM OF 18" OF PREPARED SOIL WILL BE PLACED AROUND THE ROOT BALL OF EACH PLANTING. THIS WORK IS INCLUDED IN THE PAY ITEM SITE PREPERATION.

B JOINT

9" NON-REINF CONCRETE APRON, COLORED AND STAMPED

Cp JOINT TYP.

EXPANSION, CONTROL AND B JOINTS ARE INCIDENTAL TO "COLORED CONC., REINF, STAMPED, 8 INCH.

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Utility Notification Organization
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LAYOUT FOR ROUNDABOUT ROUNDABOUT ISLAND

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:

INTERNAL REVIEW	6.11.14
PLAN REVISION	1.8.19
PRELIM DRAFT	8_12_19
PERMIT	8_29_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: ---J:/PROJECTS....MASTERBASEMAP.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
ROUNDABOUT DETAIL

PROJECT MQ13-500
SHEET 5 OF 32

RESTORATION (THIS SHEET)

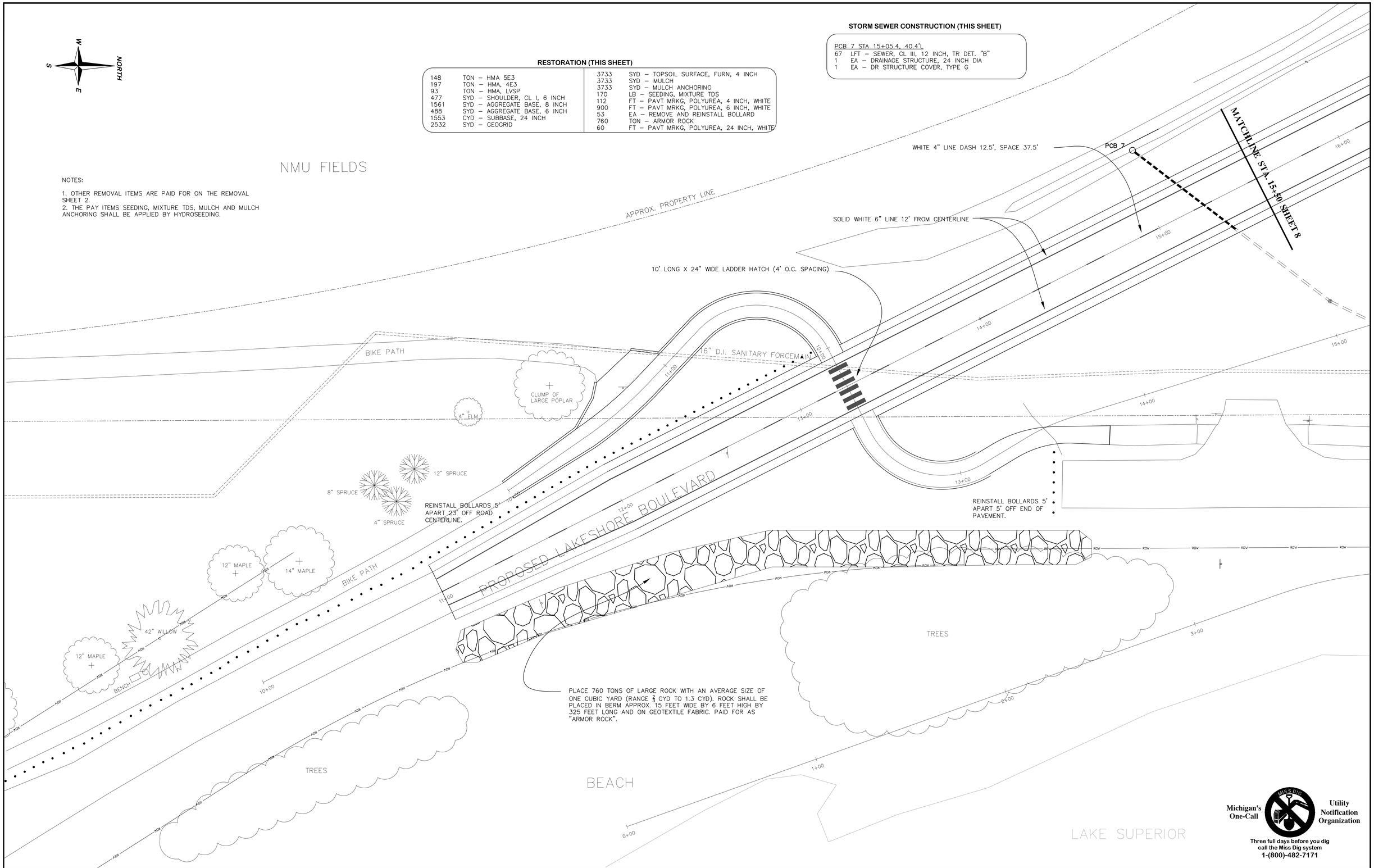
148	TON – HMA 5E3	3733	SYD – TOPSOIL SURFACE, FURN, 4 INCH
197	TON – HMA, 4E3	3733	SYD – MULCH
93	TON – HMA, LVSP	3733	SYD – MULCH ANCHORING
477	SYD – SHOULDER, CL I, 6 INCH	170	LB – SEEDING, MIXTURE TDS
1561	SYD – AGGREGATE BASE, 8 INCH	112	FT – PAVT MRKG, POLYUREA, 4 INCH, WHITE
488	SYD – AGGREGATE BASE, 6 INCH	900	FT – PAVT MRKG, POLYUREA, 6 INCH, WHITE
1553	CYD – SUBBASE, 24 INCH	53	EA – REMOVE AND REINSTALL BOLLARD
2532	SYD – GEOGRID	760	TON – ARMOR ROCK
		60	FT – PAVT MRKG, POLYUREA, 24 INCH, WHITE

STORM SEWER CONSTRUCTION (THIS SHEET)

PCB 7 STA 15+05.4, 40.4'L
67 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
1 EA – DRAINAGE STRUCTURE, 24 INCH DIA
1 EA – DR STRUCTURE COVER, TYPE G

NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
2. THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.



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PHONE (906)228-0440

REVISIONS:
INTERNAL REVIEW 6/5/14
PRELIM DRAFT 8_12_19
PERMIT 8_29_19

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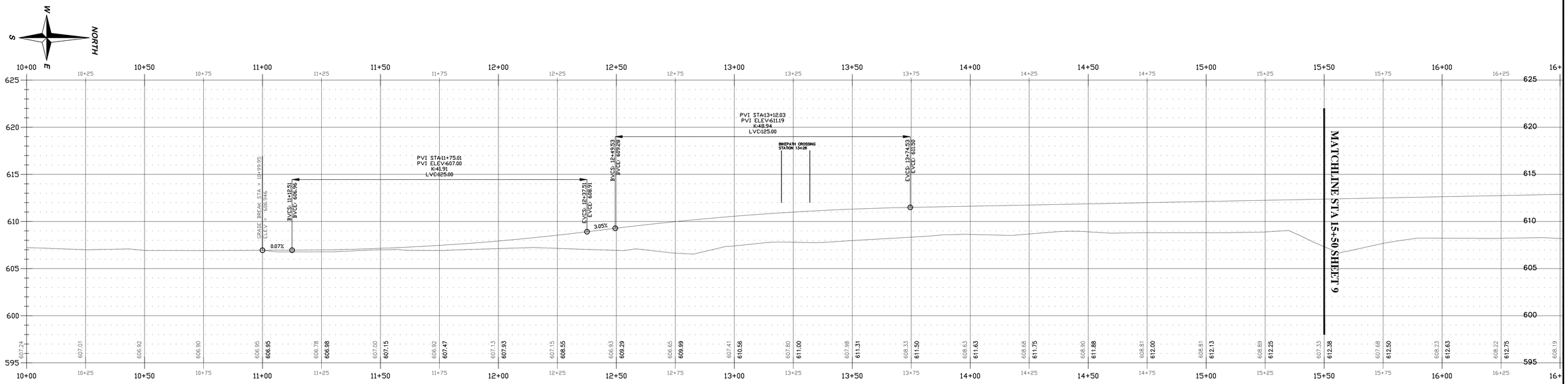
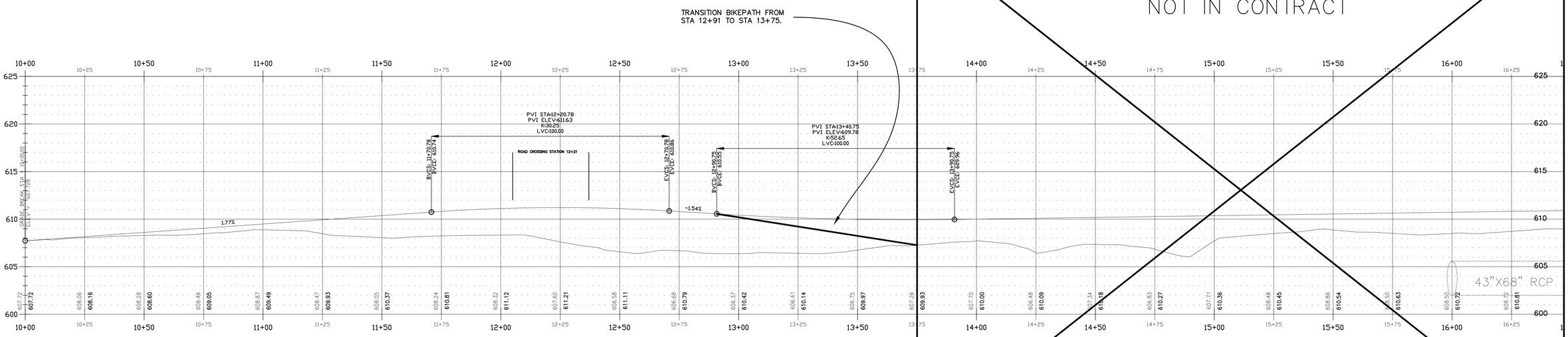
LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
PROPOSED ROAD AND BIKE PATH PLAN

PROJECT MQ13-500
SHEET 6 OF 32



ROAD PROFILE



BIKE PATH PROFILE

NOT IN CONTRACT

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REVISIONS:

INTERNAL REVIEW 6/11/14	
PRELIM DRAFT 8 12 19	
PERMIT 8 29 19	

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HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
ROAD PROFILE

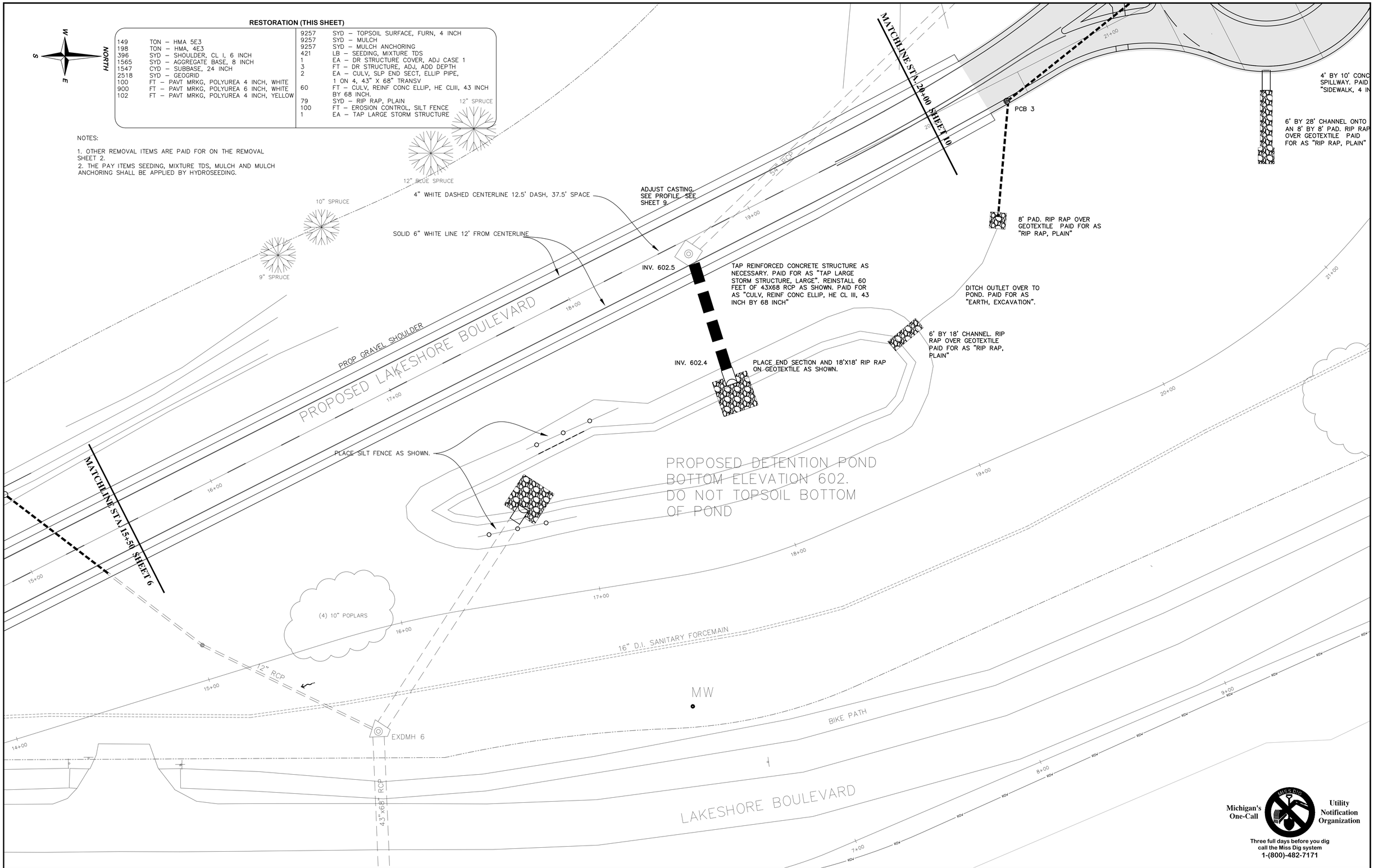
PROJECT MQ13-500
SHEET 7 OF 32

RESTORATION (THIS SHEET)

149	TON – HMA 5E3	9257	SYD – TOPSOIL SURFACE, FURN, 4 INCH
198	TON – HMA, 4E3	9257	SYD – MULCH
396	SYD – SHOULDER, CL I, 6 INCH	9257	SYD – MULCH ANCHORING
1565	SYD – AGGREGATE BASE, 8 INCH	421	LB – SEEDING, MIXTURE TDS
1547	CYD – SUBBASE, 24 INCH	1	EA – DR STRUCTURE COVER, ADJ CASE 1
2518	SYD – GEOGRID	3	FT – DR STRUCTURE, ADJ, ADD DEPTH
100	FT – PAVT MRKG, POLYUREA 4 INCH, WHITE	2	EA – CULV, SLP END SECT, ELLIP PIPE, 1 ON 4, 43" X 68" TRANSV
900	FT – PAVT MRKG, POLYUREA 6 INCH, WHITE	60	FT – CULV, REINF CONC ELLIP, HE CLIII, 43 INCH BY 68 INCH.
102	FT – PAVT MRKG, POLYUREA 4 INCH, YELLOW	79	SYD – RIP RAP, PLAIN
		100	FT – EROSION CONTROL, SILT FENCE
		1	EA – TAP LARGE STORM STRUCTURE

NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
2. THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.



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REVISIONS:
- INTERNAL REVIEW 6/5/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19

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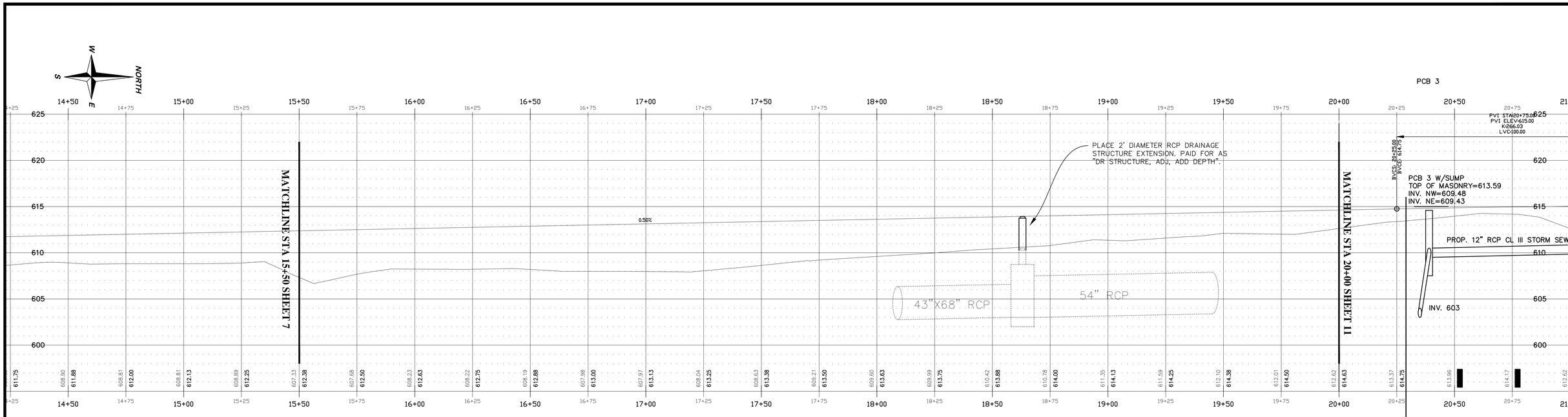
HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

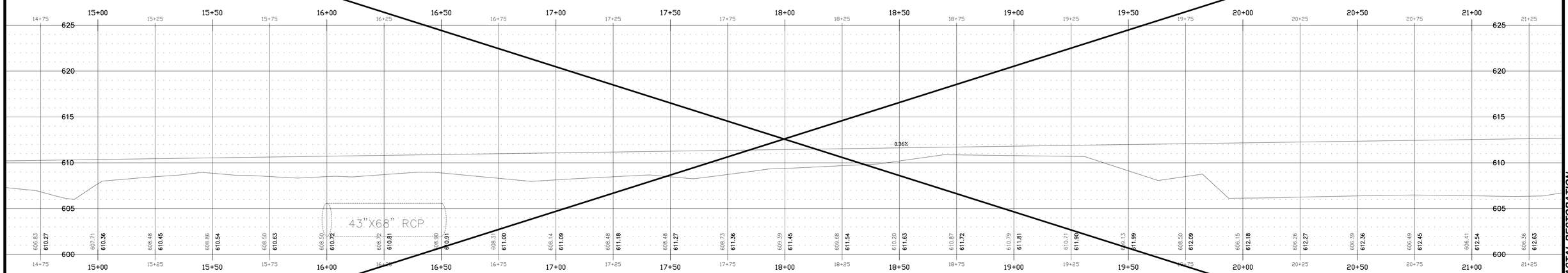
LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
PROPOSED ROAD PLAN

PROJECT MQ13-500
SHEET 8 OF 32



ROAD PROFILE

NOT IN CONTRACT



BIKE PATH PROFILE

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PROJECT NO. MQ13-500

LAKESHORE BLVD. COASTAL RESTORATION

CITY ENGINEER'S OFFICE
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300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
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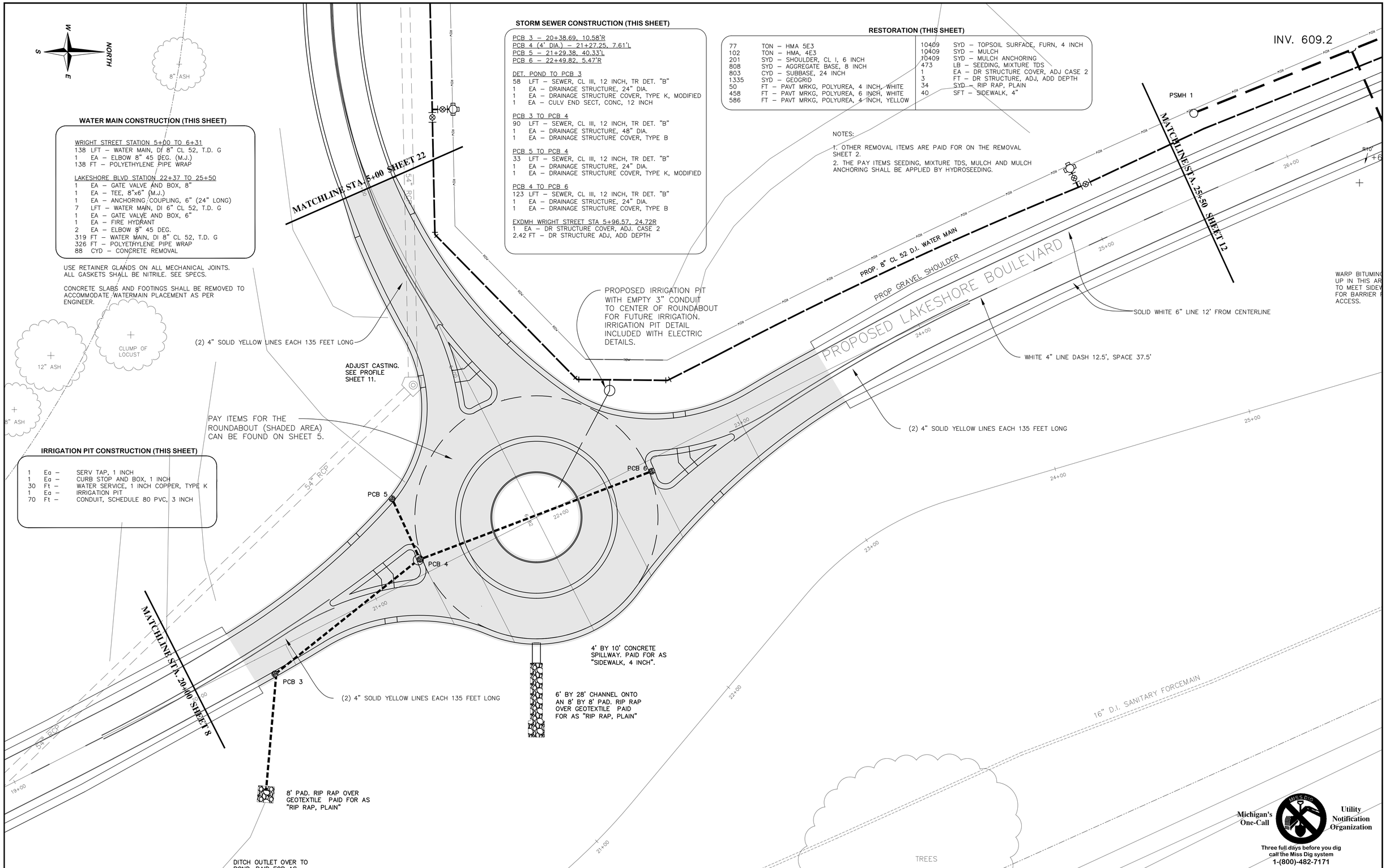
FILE NAME: ---J:/PROJECTS....MASTERBASEMAP.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: 1"=5'

LAKESHORE BLVD. RELOCATON
MARQUETTE, MICHIGAN
ROAD PROFILE

PROJECT MQ13-500
SHEET 9 OF 32



WATER MAIN CONSTRUCTION (THIS SHEET)

WRIGHT STREET STATION 5+00 TO 6+31
138 LFT – WATER MAIN, DI 8" CL 52, T.D. G
1 EA – ELBOW 8" 45 DEG. (M.J.)
138 FT – POLYETHYLENE PIPE WRAP

LAKESHORE BLVD STATION 22+37 TO 25+50
1 EA – GATE VALVE AND BOX, 8"
1 EA – TEE, 8"x6" (M.J.)
1 EA – ANCHORING COUPLING, 6" (24" LONG)
7 LFT – WATER MAIN, DI 6" CL 52, T.D. G
1 EA – GATE VALVE AND BOX, 6"
1 EA – FIRE HYDRANT
2 EA – ELBOW 8" 45 DEG.
319 FT – WATER MAIN, DI 8" CL 52, T.D. G
326 FT – POLYETHYLENE PIPE WRAP
88 CYD – CONCRETE REMOVAL

USE RETAINER GLANDS ON ALL MECHANICAL JOINTS. ALL GASKETS SHALL BE NITRILE. SEE SPECS.

CONCRETE SLABS AND FOOTINGS SHALL BE REMOVED TO ACCOMMODATE WATERMAIN PLACEMENT AS PER ENGINEER.

IRRIGATION PIT CONSTRUCTION (THIS SHEET)

1	Ea –	SERV TAP, 1 INCH
1	Ea –	CURB STOP AND BOX, 1 INCH
30	Ft –	WATER SERVICE, 1 INCH COPPER, TYPE K
1	Ea –	IRRIGATION PIT
70	Ft –	CONDUIT, SCHEDULE 80 PVC, 3 INCH

STORM SEWER CONSTRUCTION (THIS SHEET)

PCB 3 – 20+38.69, 10.58'R
PCB 4 (4' DIA.) – 21+27.25, 7.61'L
PCB 5 – 21+29.38, 40.33'L
PCB 6 – 22+49.82, 5.47'R

DET. POND TO PCB 3
58 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
1 EA – DRAINAGE STRUCTURE, 24" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE K, MODIFIED
1 EA – CULV END SECT, CONC, 12 INCH

PCB 3 TO PCB 4
90 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
1 EA – DRAINAGE STRUCTURE, 48" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE B

PCB 5 TO PCB 4
33 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
1 EA – DRAINAGE STRUCTURE, 24" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE K, MODIFIED

PCB 4 TO PCB 6
123 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
1 EA – DRAINAGE STRUCTURE, 24" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE B

EXDMH WRIGHT STREET STA 5+96.57, 24.72R
1 EA – DR STRUCTURE COVER, ADJ. CASE 2
2.42 FT – DR STRUCTURE ADJ, ADD DEPTH

RESTORATION (THIS SHEET)

77	TON – HMA 5E3	10409	SYD – TOPSOIL SURFACE, FURN, 4 INCH
102	TON – HMA, 4E3	10409	SYD – MULCH
201	SYD – SHOULDER, CL I, 6 INCH	10409	SYD – MULCH ANCHORING
808	SYD – AGGREGATE BASE, 8 INCH	473	LB – SEEDING, MIXTURE TDS
803	CYD – SUBBASE, 24 INCH	1	EA – DR STRUCTURE COVER, ADJ CASE 2
1335	SYD – GEOGRID	3	FT – DR STRUCTURE, ADJ, ADD DEPTH
50	FT – PAVT MRKG, POLYUREA, 4 INCH, WHITE	34	SYD – RIP RAP, PLAIN
458	FT – PAVT MRKG, POLYUREA, 6 INCH, WHITE	40	SFT – SIDEWALK, 4"
586	FT – PAVT MRKG, POLYUREA, 4 INCH, YELLOW		

NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
2. THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.

WARP BITUMINO UP IN THIS AR TO MEET SIDEW FOR BARRIER F ACCESS.

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
- INTERNAL REVIEW 6/5/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
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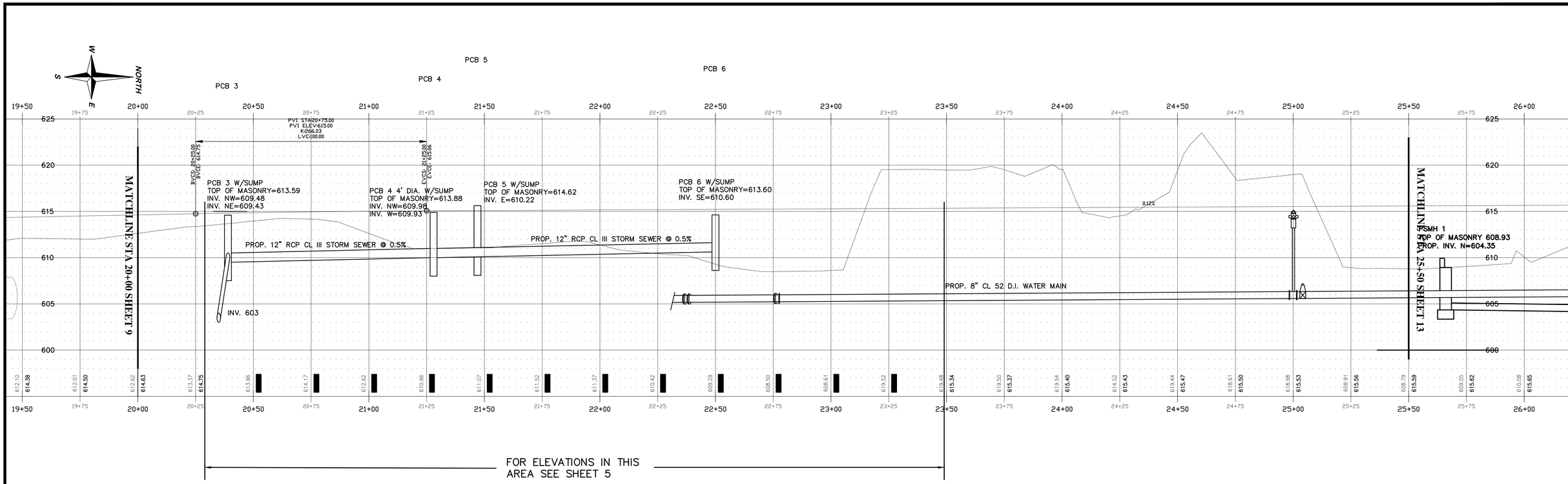
HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. COASTAL RESTORATION
MARQUETTE, MICHIGAN
PROPOSED ROAD PLAN

PROJECT MQ13-500
SHEET 10 OF 32



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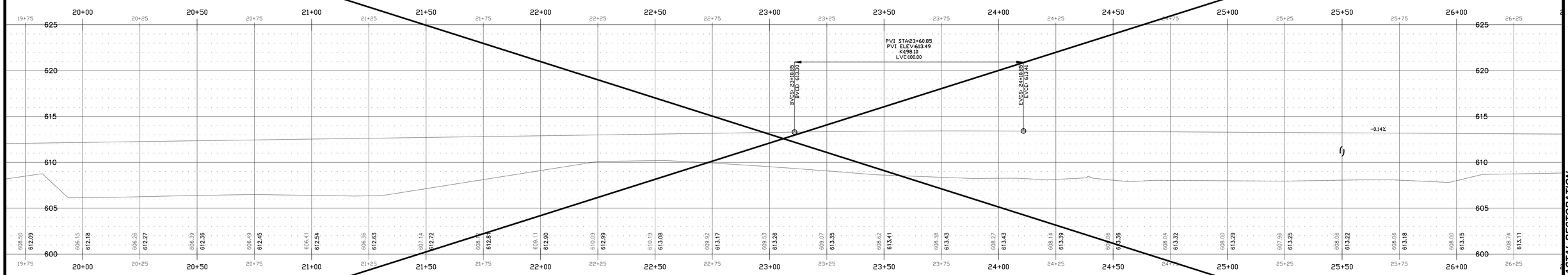

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PROJECT NO. MQ13-500

LAKESHORE BLVD. COASTAL RESTORATION

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300 WEST BARAGA AVE., MARQUETTE, MI 49855
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LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
ROAD PROFILE

PROJECT MQ13-500
SHEET 11 OF 32

WATER MAIN CONSTRUCTION (THIS SHEET)

STATION 25+50 TO 30+00
450 FT – WATER MAIN, DI 8" CL 52, T.D. G
450 FT – POLYETHYLENE PIPE WRAP

STATION 30+00 TO 31+00
1 EA – GATE VALVE AND BOX, 8"
1 EA – TEE, 8"x6" (M.J.)
1 EA – ANCHORING COUPLING, 6" (24" LONG)
7 FT – WATER MAIN, DI 6" CL 52, T.D. G
1 EA – GATE VALVE AND BOX, 6"
1 EA – FIRE HYDRANT
100 FT – WATER MAIN, DI 8" CL 52, T.D. G
107 FT – POLYETHYLENE PIPE WRAP
192 CYD – CONCRETE REMOVAL

USE RETAINER GLANDS ON ALL MECHANICAL JOINTS.
ALL GASKETS SHALL BE NITRILE. SEE SPECS.

STORM SEWER CONSTRUCTION (THIS SHEET)

STA 26+50
70 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
2 EA – CULV END SECT, CONC, 12 INCH

SANITARY SEWER CONSTRUCTION (THIS SHEET)

PSMH 1 – 25+66.5, 38'L
PSMH 2 – 29+14, 38'L

PSMH 1 TO PSMH 2
350 LFT – SEWER, SAN., 8 INCH, SDR26 PVC, T.D. B
1 EA – DRAINAGE STRUCTURE, SAN., 48" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE Q

PSMH 2 TO MATCHLINE
187 LFT – SEWER, SAN., 8 INCH, SDR26 PVC, T.D. B
1 EA – DRAINAGE STRUCTURE, SAN., 48" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE Q

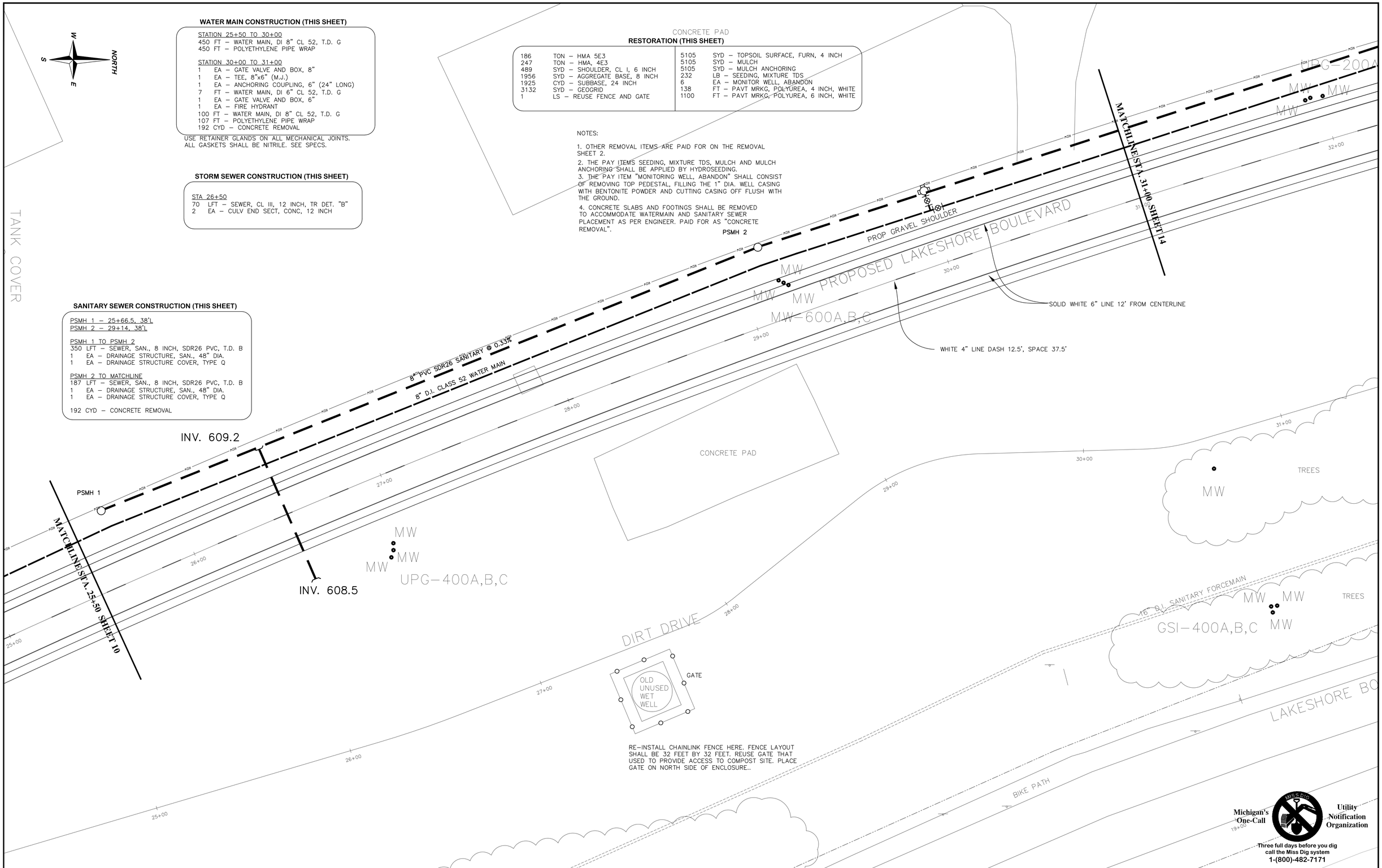
192 CYD – CONCRETE REMOVAL

RESTORATION (THIS SHEET)

186	TON – HMA 5E3	5105	SYD – TOPSOIL SURFACE, FURN, 4 INCH
247	TON – HMA, 4E3	5105	SYD – MULCH
489	SYD – SHOULDER, CL I, 6 INCH	5105	SYD – MULCH ANCHORING
1956	SYD – AGGREGATE BASE, 8 INCH	232	LB – SEEDING, MIXTURE TDS
1925	CYD – SUBBASE, 24 INCH	6	EA – MONITOR WELL, ABANDON
3132	SYD – GEOGRID	138	FT – PAVT MRKG, POLYUREA, 4 INCH, WHITE
1	LS – REUSE FENCE AND GATE	1100	FT – PAVT MRKG, POLYUREA, 6 INCH, WHITE

NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
2. THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.
3. THE PAY ITEM "MONITORING WELL, ABANDON" SHALL CONSIST OF REMOVING TOP PEDESTAL, FILLING THE 1" DIA. WELL CASING WITH BENTONITE POWDER AND CUTTING CASING OFF FLUSH WITH THE GROUND.
4. CONCRETE SLABS AND FOOTINGS SHALL BE REMOVED TO ACCOMMODATE WATERMAIN AND SANITARY SEWER PLACEMENT AS PER ENGINEER. PAID FOR AS "CONCRETE REMOVAL".



RE-INSTALL CHAINLINK FENCE HERE. FENCE LAYOUT SHALL BE 32 FEET BY 32 FEET. REUSE GATE THAT USED TO PROVIDE ACCESS TO COMPOST SITE. PLACE GATE ON NORTH SIDE OF ENCLOSURE..

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PHONE (906)228-0440

REVISIONS:
INTERNAL REVIEW 6/5/14
PRELIM DRAFT 8 12 19
PERMIT 8 29 19

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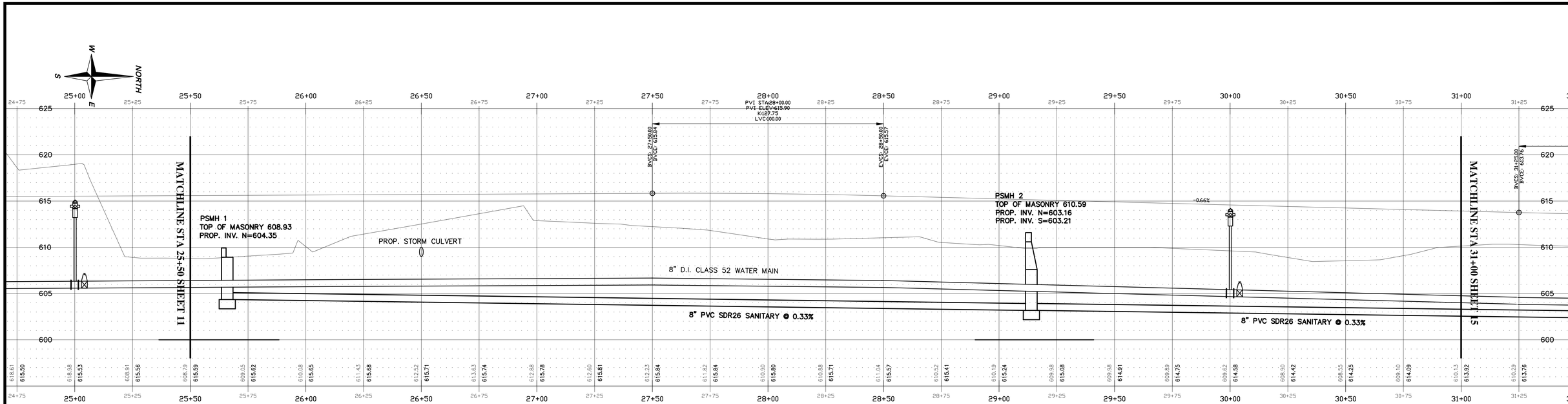
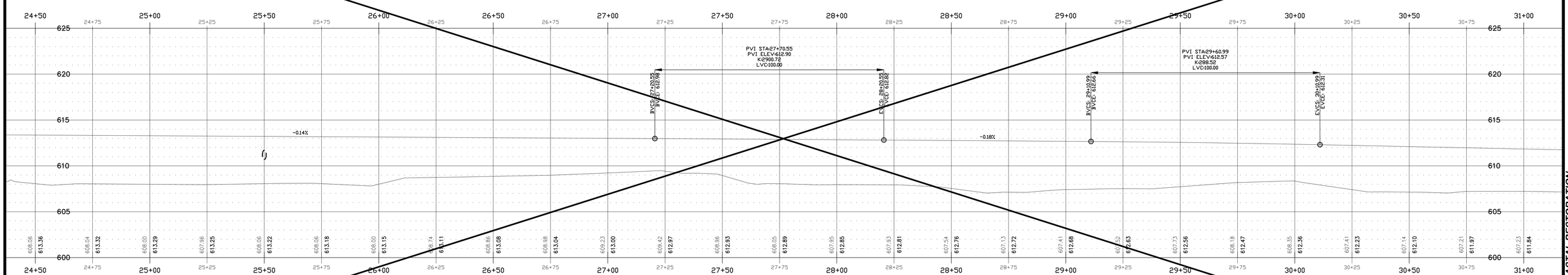
HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
PROPOSED ROAD PLAN

PROJECT MQ13-500
SHEET 12 OF 32



NOT IN CONTRACT



Michigan's One-Call

Utility Notification Organization

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PROJECT NO. MQ13-500

LAKESHORE BLVD. COASTAL RESTORATION

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
- INTERNAL REVIEW 6/11/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: ---J:/PROJECTS....MASTERBASEMAP.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
ROAD PROFILE

PROJECT MQ13-500
SHEET 13 OF 32

WATER MAIN CONSTRUCTION (THIS SHEET)

STATION 31+00 TO 35+00
400 FT – WATER MAIN, DI 8" CL 52, T.D. G
400 FT – POLYETHYLENE PIPE WRAP

STATION 35+00 TO 37+00
1 EA – GATE VALVE AND BOX, 8"
1 EA – TEE, 8"x6" (M.J.)
1 EA – ANCHORING COUPLING, 6" (24" LONG)
7 LFT – WATER MAIN, DI 6" CL 52, T.D. G
1 EA – GATE VALVE AND BOX, 6"
1 EA – FIRE HYDRANT
200 FT – WATER MAIN, DI 8" CL 52, T.D. G
207 FT – POLYETHYLENE PIIPE WRAP
46 CYD – CONCRETE REMOVAL

USE RETAINER GLANDS ON ALL MECHANICAL JOINTS.
ALL GASKETS SHALL BE NITRILE. SEE SPECS.

STORM SEWER CONSTRUCTION (THIS SHEET)

STA 34+00
70 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
2 EA – CULV END SECT, CONC, 12 INCH

SANITARY SEWER CONSTRUCTION (THIS SHEET)

PSMH 3 – 32+61, 38'L
PSMH 4 – 36+11, 38'L

MATCHLINE TO PSMH 3
162 LFT – SEWER, SAN., 8 INCH, SDR26 PVC, T.D. B
1 EA – DRAINAGE STRUCTURE, SAN., 48" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE Q

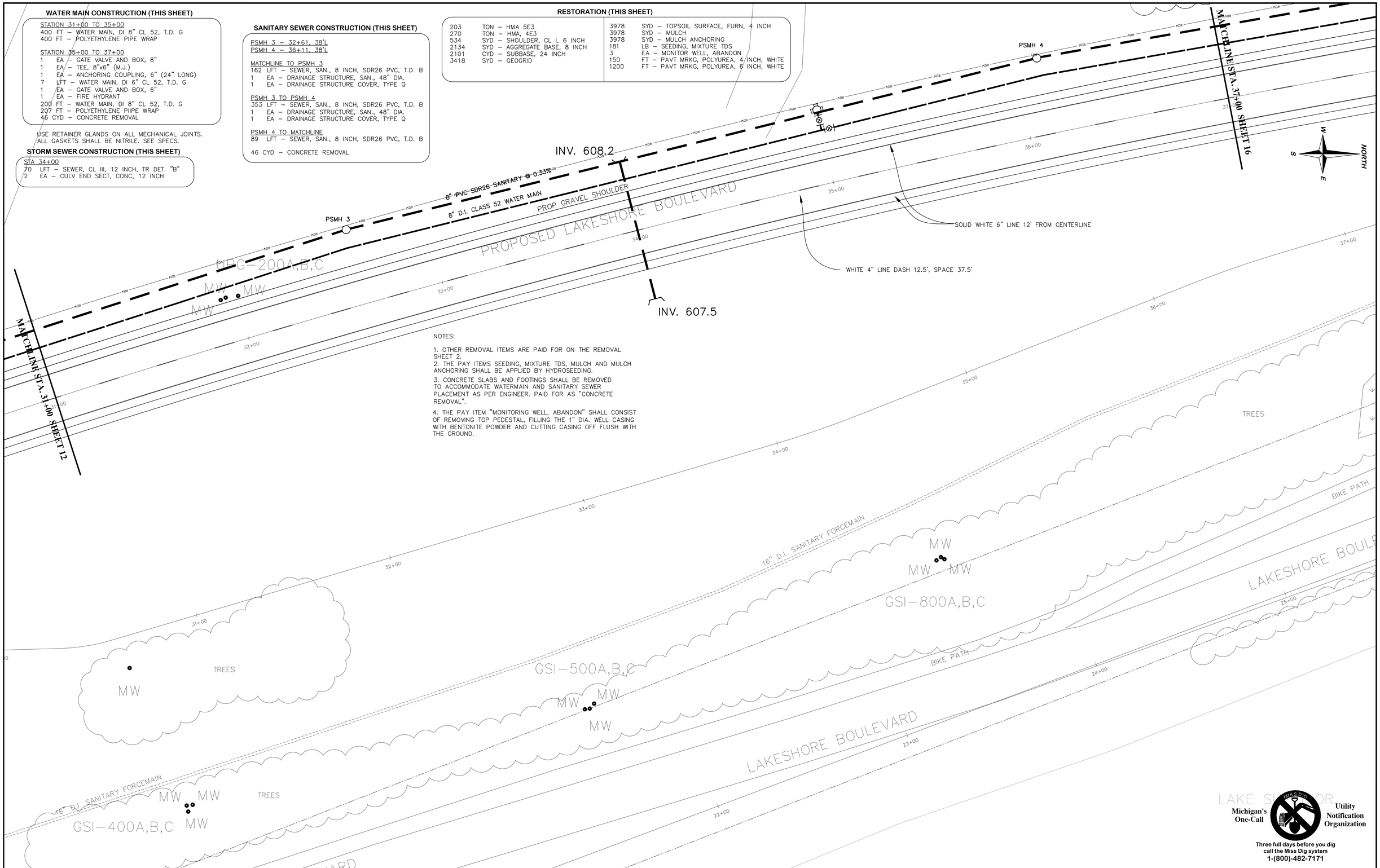
PSMH 3 TO PSMH 4
353 LFT – SEWER, SAN., 8 INCH, SDR26 PVC, T.D. B
1 EA – DRAINAGE STRUCTURE, SAN., 48" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE Q

PSMH 4 TO MATCHLINE
89 LFT – SEWER, SAN., 8 INCH, SDR26 PVC, T.D. B

46 CYD – CONCRETE REMOVAL

RESTORATION (THIS SHEET)

203	TON – HMA 5E3	3978	SYD – TOPSOIL SURFACE, FURN, 4 INCH
270	TON – HMA, 4E3	3978	SYD – MULCH
534	SYD – SHOULDER, CL I, 6 INCH	3978	SYD – MULCH ANCHORING
2134	SYD – AGGREGATE BASE, 8 INCH	181	LB – SEEDING, MIXTURE TDS
2101	CYD – SUBBASE, 24 INCH	3	EA – MONITOR WELL, ABANDON
3418	SYD – GEOGRID	150	FT – PAVT MRKG, POLYUREA, 4 INCH, WHITE
		1200	FT – PAVT MRKG, POLYUREA, 6 INCH, WHITE



NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
2. THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.
3. CONCRETE SLABS AND FOOTINGS SHALL BE REMOVED TO ACCOMMODATE WATERMAIN AND SANITARY SEWER PLACEMENT AS PER ENGINEER. PAID FOR AS "CONCRETE REMOVAL".
4. THE PAY ITEM "MONITORING WELL, ABANDON" SHALL CONSIST OF REMOVING TOP PEDESTAL, FILLING THE 1" DIA. WELL CASING WITH BENTONITE POWDER AND CUTTING CASING OFF FLUSH WITH THE GROUND.

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MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

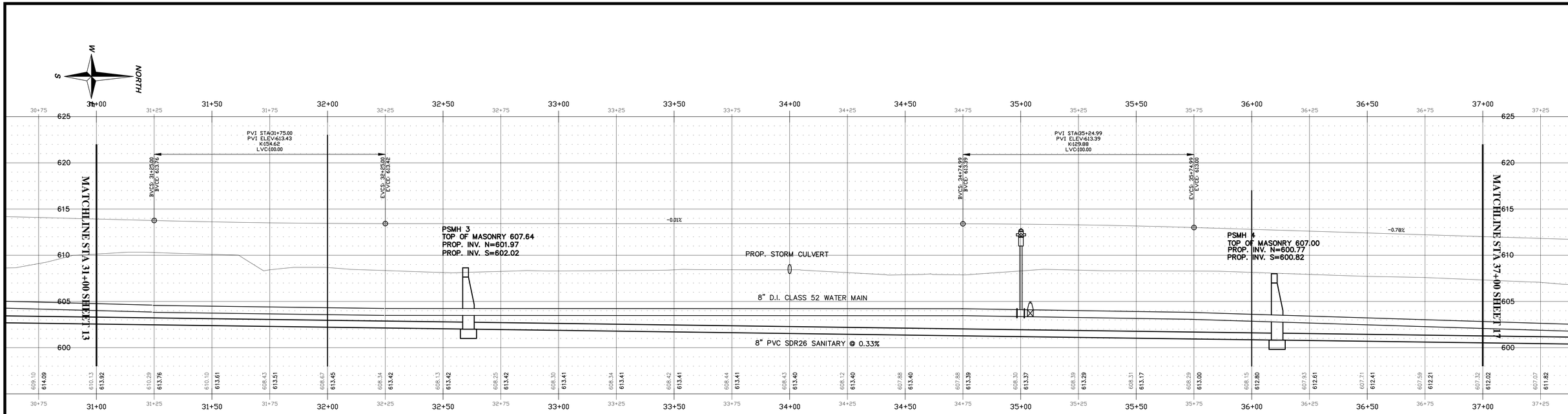
REVISIONS:
INTERNAL REVIEW 6/5/14
PERMIT 8_29_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: J:/PROJECTS...MASTERBASEMAP.dwg

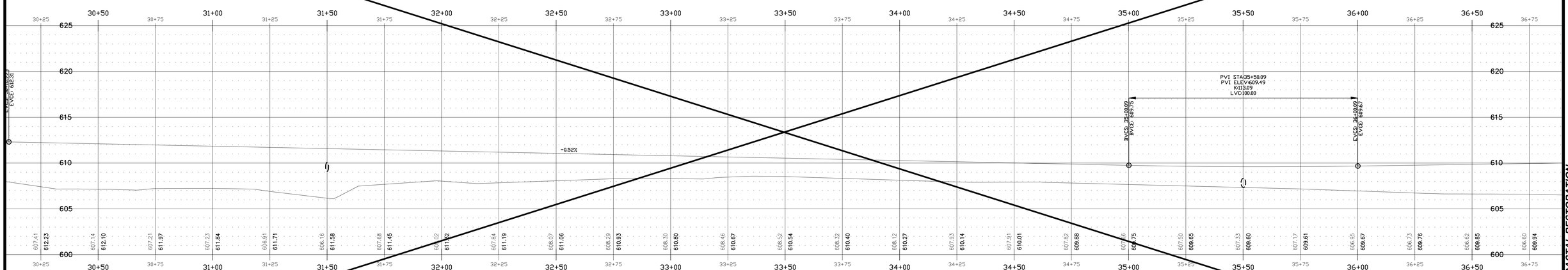
HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
PROPOSED ROAD PLAN

PROJECT MQ13-500
SHEET 14 OF 32



NOT IN CONTRACT



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PROJECT NO. MQ13-500

LAKESHORE BLVD. COASTAL RESTORATION

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
- INTERNAL REVIEW 6/11/14
- PRELIM DRAFT 8 12 19
- PERMIT 8 29 19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
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DATE: JULY 15, 2013
FILE NAME: ---J:/PROJECTS....MASTERBASEMAP.dwg

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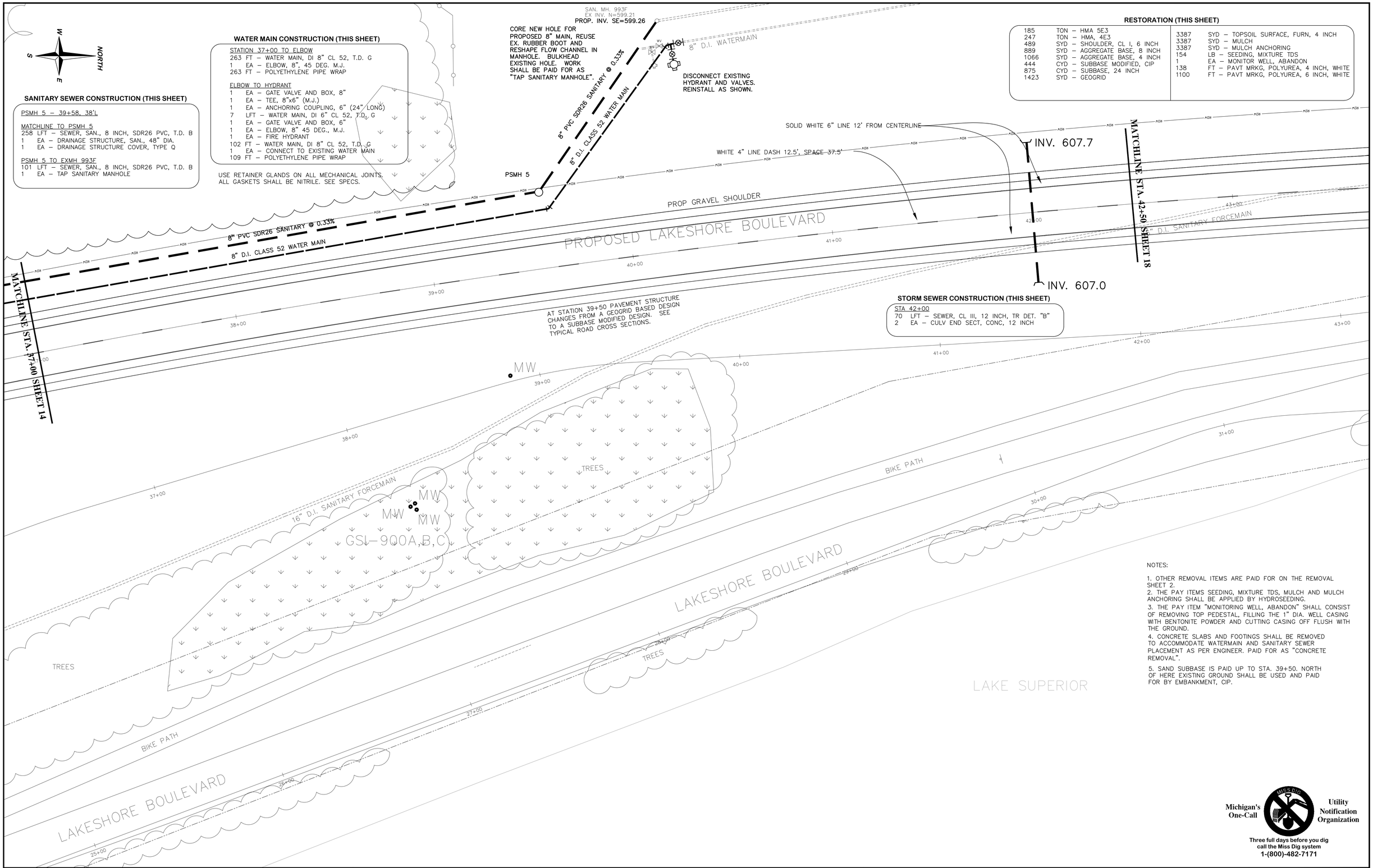
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
ROAD PROFILE

PROJECT MQ13-500
SHEET 15 OF 32



WATER MAIN CONSTRUCTION (THIS SHEET)

STATION 37+00 TO ELBOW
263 FT – WATER MAIN, DI 8" CL 52, T.D. G
1 EA – ELBOW, 8", 45 DEG. M.J.
263 FT – POLYETHYLENE PIPE WRAP

ELBOW TO HYDRANT
1 EA – GATE VALVE AND BOX, 8"
1 EA – TEE, 8"x6" (M.J.)
1 EA – ANCHORING COUPLING, 6" (24" LONG)
7 LFT – WATER MAIN, DI 6" CL 52, T.D. G
1 EA – GATE VALVE AND BOX, 6"
1 EA – ELBOW, 8" 45 DEG., M.J.
1 EA – FIRE HYDRANT
102 FT – WATER MAIN, DI 8" CL 52, T.D. G
1 EA – CONNECT TO EXISTING WATER MAIN
109 FT – POLYETHYLENE PIPE WRAP

USE RETAINER GLANDS ON ALL MECHANICAL JOINTS. ALL GASKETS SHALL BE NITRILE. SEE SPECS.

SANITARY SEWER CONSTRUCTION (THIS SHEET)

PSMH 5 – 39+58, 38'L

MATCHLINE TO PSMH 5
258 LFT – SEWER, SAN., 8 INCH, SDR26 PVC, T.D. B
1 EA – DRAINAGE STRUCTURE, SAN., 48" DIA.
1 EA – DRAINAGE STRUCTURE COVER, TYPE Q

PSMH 5 TO EXMH 993F
101 LFT – SEWER, SAN., 8 INCH, SDR26 PVC, T.D. B
1 EA – TAP SANITARY MANHOLE

RESTORATION (THIS SHEET)

185	TON – HMA 5E3	3387	SYD – TOPSOIL SURFACE, FURN, 4 INCH
247	TON – HMA, 4E3	3387	SYD – MULCH
489	SYD – SHOULDER, CL I, 6 INCH	3387	SYD – MULCH ANCHORING
889	SYD – AGGREGATE BASE, 8 INCH	154	LB – SEEDING, MIXTURE TDS
1066	SYD – AGGREGATE BASE, 4 INCH	1	EA – MONITOR WELL, ABANDON
444	CYD – SUBBASE MODIFIED, CIP	138	FT – PAVT MRKG, POLYUREA, 4 INCH, WHITE
875	CYD – SUBBASE, 24 INCH	1100	FT – PAVT MRKG, POLYUREA, 6 INCH, WHITE
1423	SYD – GEOGRID		

STORM SEWER CONSTRUCTION (THIS SHEET)

STA 42+00
70 LFT – SEWER, CL III, 12 INCH, TR DET. "B"
2 EA – CULV END SECT, CONC, 12 INCH

NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
2. THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.
3. THE PAY ITEM "MONITORING WELL, ABANDON" SHALL CONSIST OF REMOVING TOP PEDESTAL, FILLING THE 1" DIA. WELL CASING WITH BENTONITE POWDER AND CUTTING CASING OFF FLUSH WITH THE GROUND.
4. CONCRETE SLABS AND FOOTINGS SHALL BE REMOVED TO ACCOMMODATE WATERMAIN AND SANITARY SEWER PLACEMENT AS PER ENGINEER. PAID FOR AS "CONCRETE REMOVAL".
5. SAND SUBBASE IS PAID UP TO STA. 39+50. NORTH OF HERE EXISTING GROUND SHALL BE USED AND PAID FOR BY EMBANKMENT, CIP.

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300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

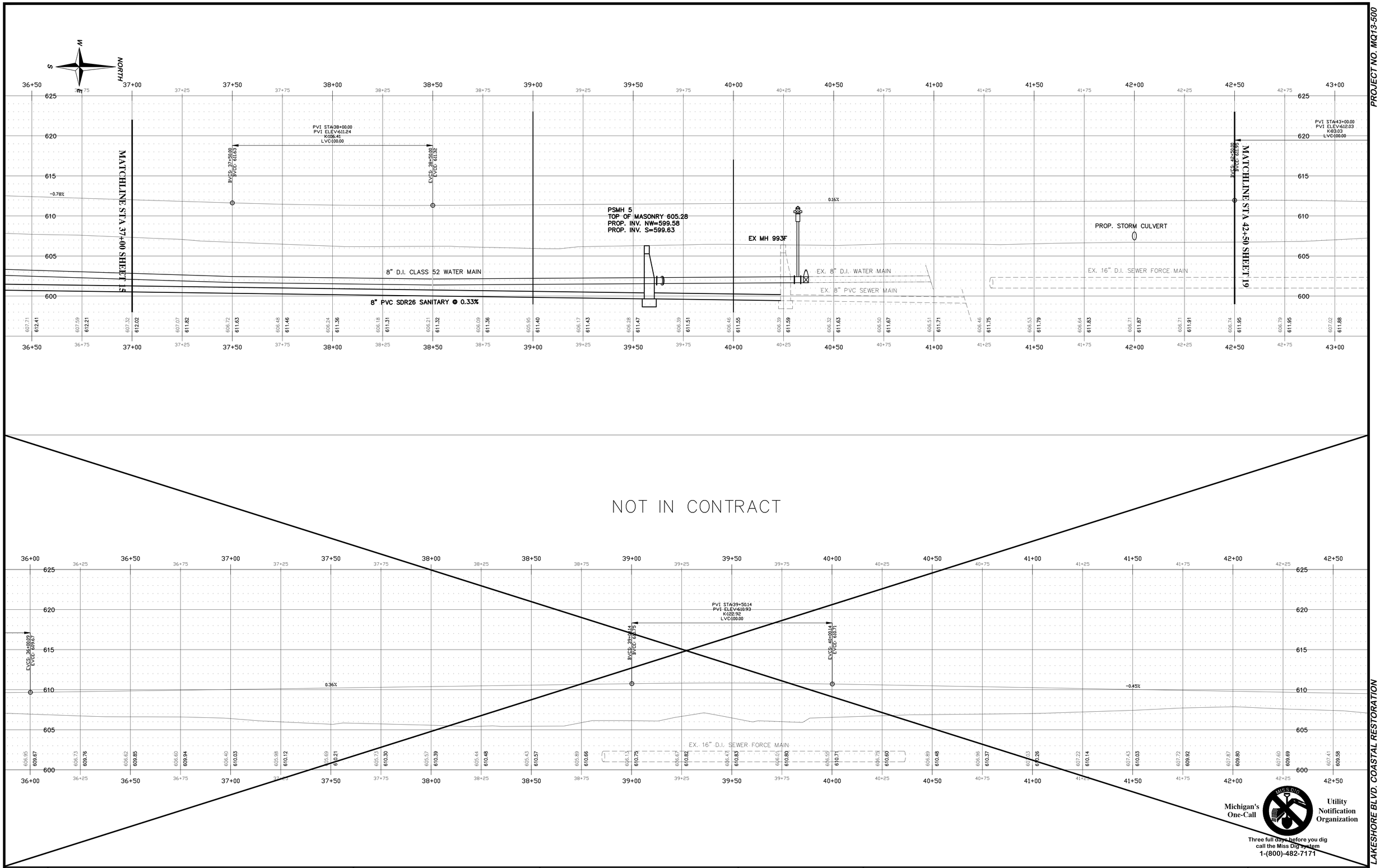
REVISIONS:
INTERNAL REVIEW 6/9/14
PRELIM DRAFT 8_12_19
PERMIT 8_29_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: J:/PROJECTS...MASTERBASEMAP.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
PROPOSED ROAD PLAN

PROJECT MQ13-500
SHEET 16 OF 32



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PROJECT NO. MQ13-500

LAKESHORE BLVD. COASTAL RESTORATION

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MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
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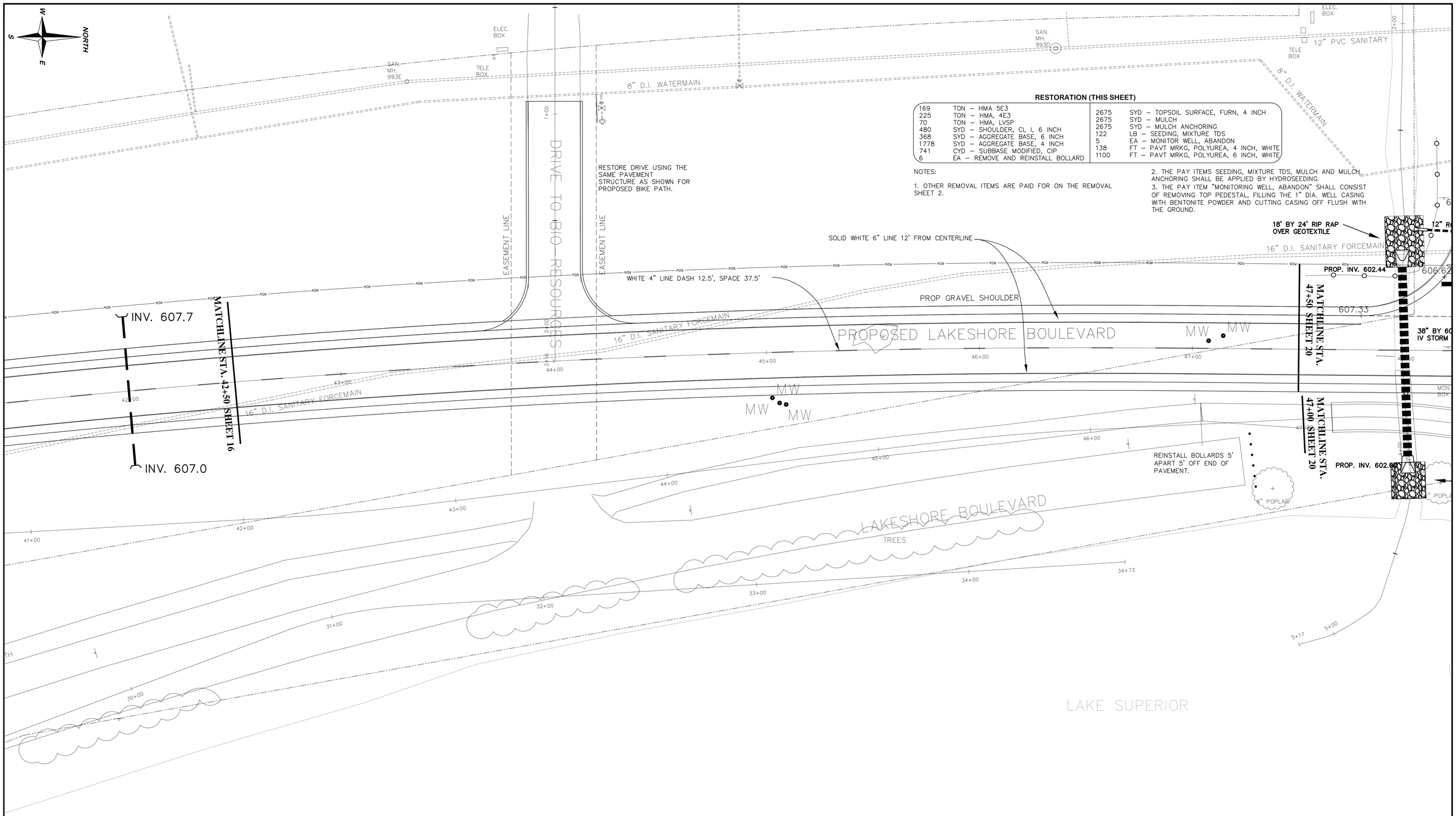
LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
ROAD PROFILE

PROJECT MQ13-500
SHEET 17 OF 32



RESTORATION (THIS SHEET)

169	TON – HMA 5E3	2675	SYD – TOPSOIL SURFACE, FURN, 4 INCH
225	TON – HMA, 4E3	2675	SYD – MULCH
70	TON – HMA, LVSP	2675	SYD – MULCH ANCHORING
480	SYD – SHOULDER, CL I, 6 INCH	122	LB – SEEDING, MIXTURE TDS
368	SYD – AGGREGATE BASE, 6 INCH	5	EA – MONITOR WELL, ABANDON
1778	SYD – AGGREGATE BASE, 4 INCH	138	FT – PAVT MRKG, POLYUREA, 4 INCH, WHITE
741	CYD – SUBBASE MODIFIED, CIP	1100	FT – PAVT MRKG, POLYUREA, 6 INCH, WHITE
6	EA – REMOVE AND REINSTALL BOLLARD		

NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
2. THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.
3. THE PAY ITEM "MONITORING WELL, ABANDON" SHALL CONSIST OF REMOVING TOP PEDESTAL, FILLING THE 1" DIA. WELL CASING WITH BENTONITE POWDER AND CUTTING CASING OFF FLUSH WITH THE GROUND.

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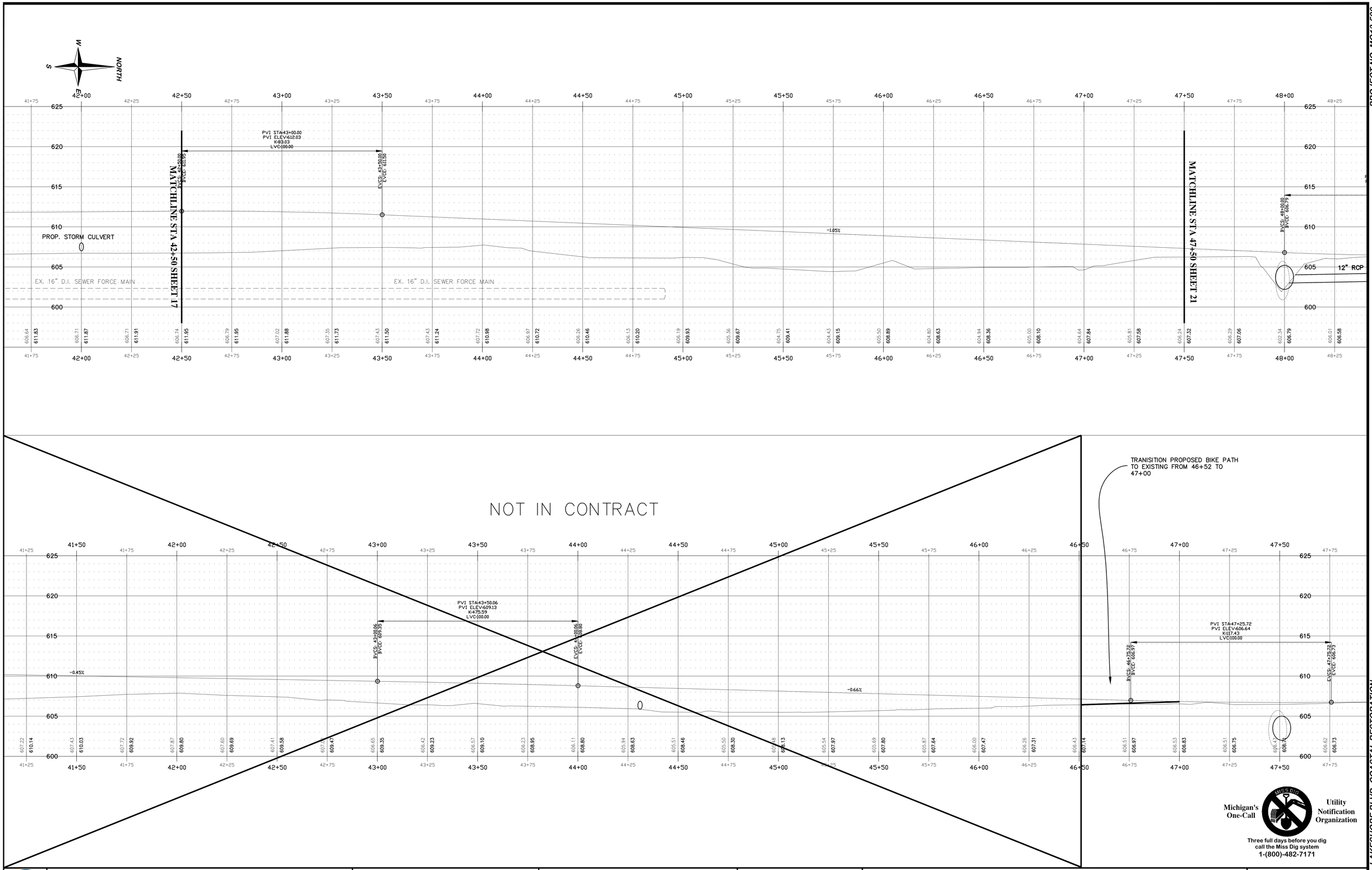
HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
PROPOSED ROAD AND BIKE PATH PLAN

PROJECT MQ13-500
SHEET 18 OF 32



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LAKESHORE BLVD. COASTAL RESTORATION

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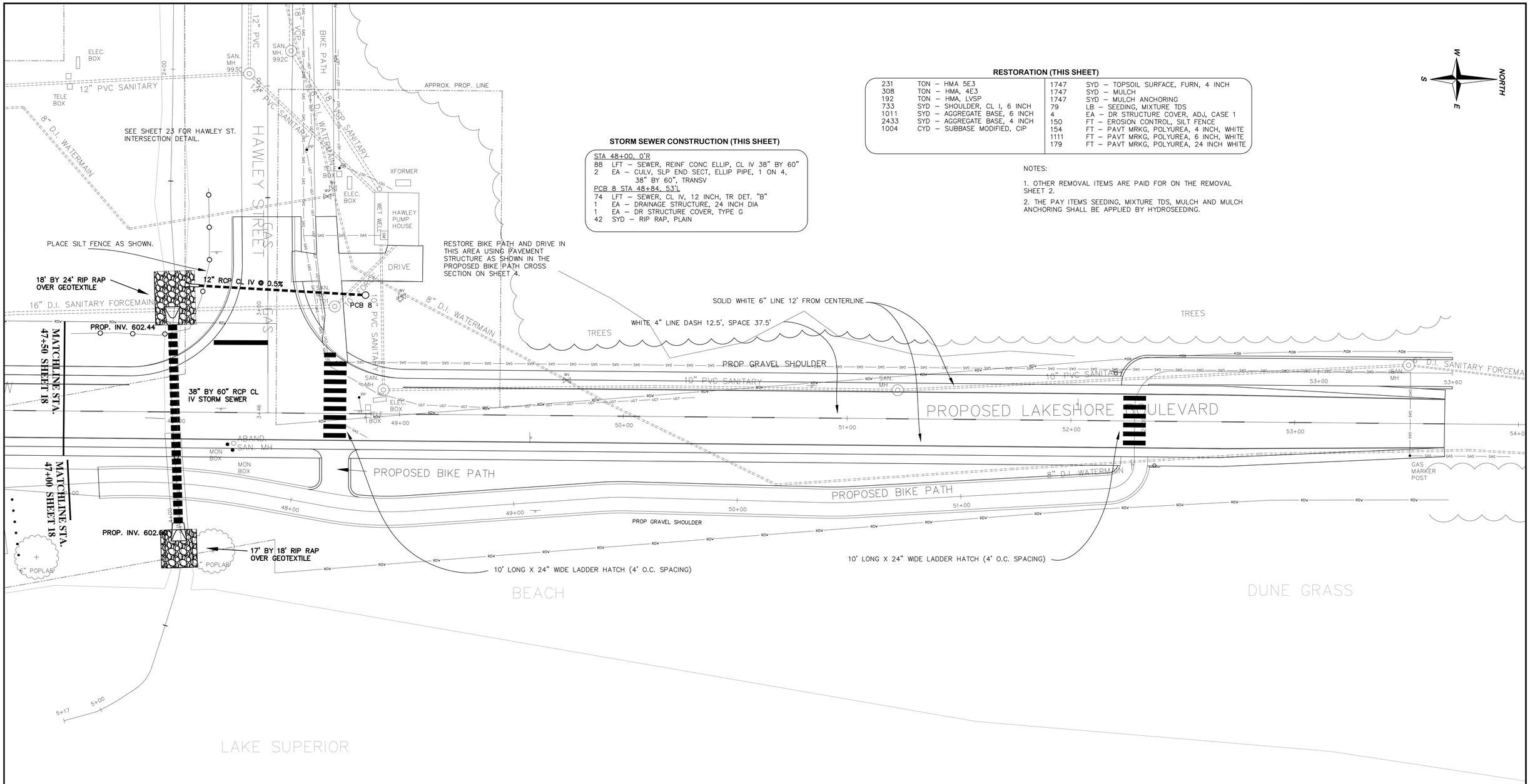
VERT. SCALE: N.A.

LAKESHORE BLVD. COASTAL RESTORATION
MARQUETTE, MICHIGAN
ROAD PROFILES

PROJECT MQ13-500
SHEET 19 OF 32



STORM SEWER CONSTRUCTION (THIS SHEET)

STA 48+00, 0'R
88 LFT – SEWER, REINF CONC ELLIP, CL IV 38" BY 60"
2 EA – CULV, SLP END SECT, ELLIP PIPE, 1 ON 4, 38" BY 60", TRANSV
PCB 8 STA 48+84, 53'L
74 LFT – SEWER, CL IV, 12 INCH, TR DET. "B"
1 EA – DRAINAGE STRUCTURE, 24 INCH DIA
1 EA – DR STRUCTURE COVER, TYPE G
42 SYD – RIP RAP, PLAIN

RESTORATION (THIS SHEET)

231	TON	– HMA 5E3	1747	SYD	– TOPSOIL SURFACE, FURN, 4 INCH
308	TON	– HMA, 4E3	1747	SYD	– MULCH
192	TON	– HMA, LVSP	1747	SYD	– MULCH ANCHORING
733	SYD	– SHOULDER, CL I, 6 INCH	79	LB	– SEEDING, MIXTURE TDS
1011	SYD	– AGGREGATE BASE, 6 INCH	4	EA	– DR STRUCTURE COVER, ADJ, CASE 1
2433	SYD	– AGGREGATE BASE, 4 INCH	150	FT	– EROSION CONTROL, SILT FENCE
1004	CYD	– SUBBASE MODIFIED, CIP	154	FT	– PAVT MRKG, POLYUREA, 4 INCH, WHITE
			1111	FT	– PAVT MRKG, POLYUREA, 6 INCH, WHITE
			179	FT	– PAVT MRKG, POLYUREA, 24 INCH WHITE

NOTES:

1. OTHER REMOVAL ITEMS ARE PAID FOR ON THE REMOVAL SHEET 2.
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REVISIONS:
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PRELIM DRAFT 9_12_19
PERMIT 9_29_19

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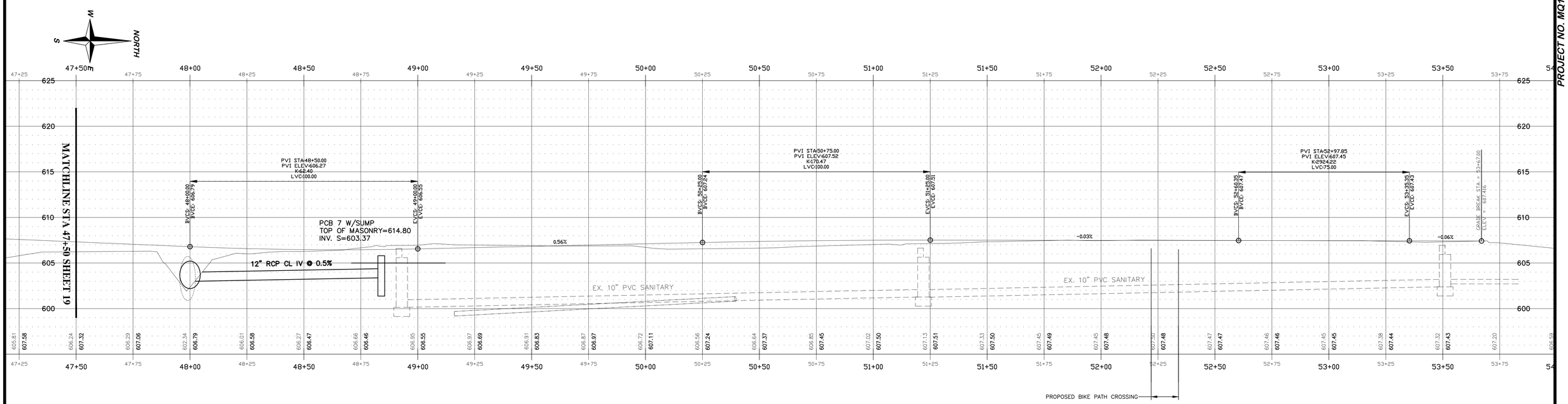
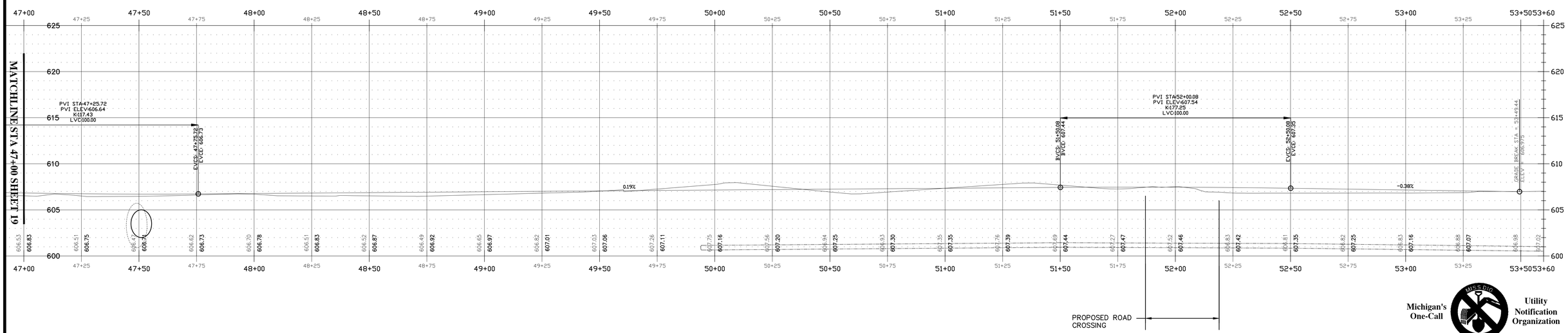
HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. COASTAL RESTORATION
MARQUETTE, MICHIGAN
PROPOSED ROAD AND BIKE PATH PLAN

PROJECT MQ13-500
SHEET 20 OF 32





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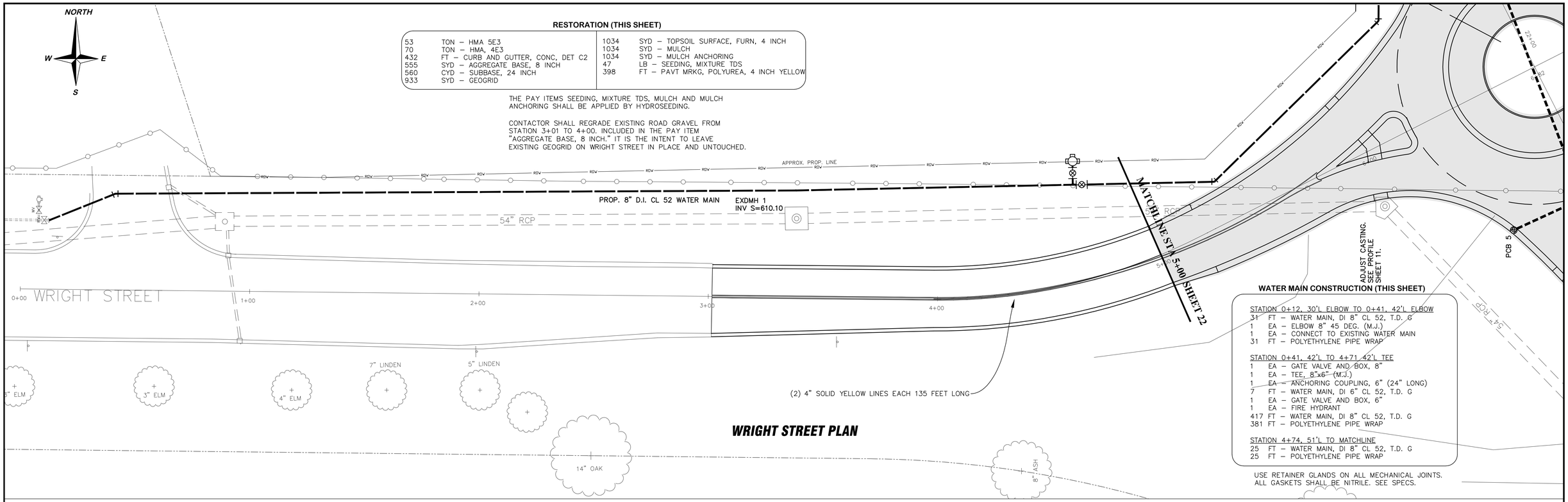
LAKESHORE BLVD. COASTAL RESTORATION
MARQUETTE, MICHIGAN
ROAD PROFILES

PROJECT MQ13-500
SHEET 21 OF 32

PROJECT NO. MQ13-500

LAKESHORE BLVD. COASTAL RESTORATION



WRIGHT STREET PLAN

RESTORATION (THIS SHEET)

53	TON – HMA 5E3	1034	SYD – TOPSOIL SURFACE, FURN, 4 INCH
70	TON – HMA, 4E3	1034	SYD – MULCH
432	FT – CURB AND GUTTER, CONC, DET C2	1034	SYD – MULCH ANCHORING
555	SYD – AGGREGATE BASE, 8 INCH	47	LB – SEEDING, MIXTURE TDS
560	CYD – SUBBASE, 24 INCH	398	FT – PAVT MRKG, POLYUREA, 4 INCH YELLOW
933	SYD – GEOGRID		

THE PAY ITEMS SEEDING, MIXTURE TDS, MULCH AND MULCH ANCHORING SHALL BE APPLIED BY HYDROSEEDING.

CONTACTOR SHALL REGRADE EXISTING ROAD GRAVEL FROM STATION 3+01 TO 4+00. INCLUDED IN THE PAY ITEM "AGGREGATE BASE, 8 INCH." IT IS THE INTENT TO LEAVE EXISTING GEOGRID ON WRIGHT STREET IN PLACE AND UNTOUCHED.

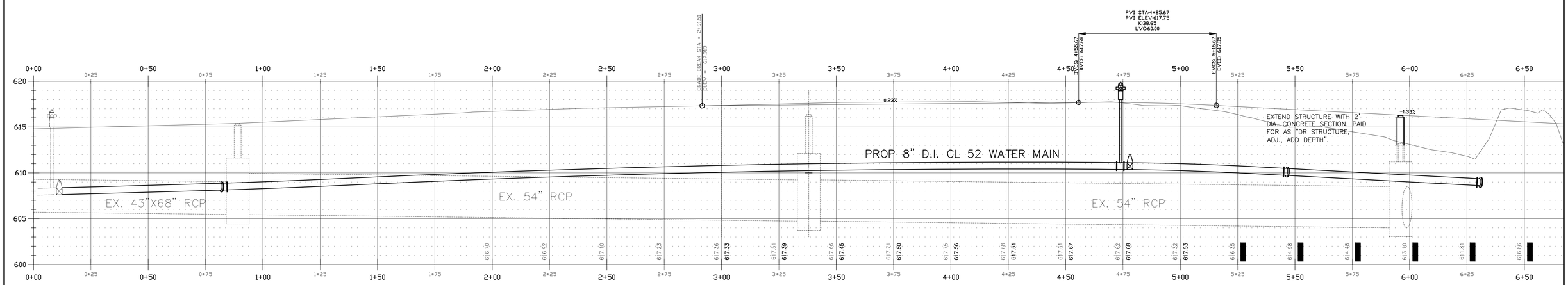
WATER MAIN CONSTRUCTION (THIS SHEET)

STATION 0+12, 30'L ELBOW TO 0+41, 42'L ELBOW
31 FT – WATER MAIN, DI 8" CL 52, T.D. G
1 EA – ELBOW 8" 45 DEG. (M.J.)
1 EA – CONNECT TO EXISTING WATER MAIN
31 FT – POLYETHYLENE PIPE WRAP

STATION 0+41, 42'L TO 4+71 42'L TEE
1 EA – GATE VALVE AND BOX, 8"
1 EA – TEE, 8"x6" (M.J.)
1 EA – ANCHORING COUPLING, 6" (24" LONG)
7 FT – WATER MAIN, DI 6" CL 52, T.D. G
1 EA – GATE VALVE AND BOX, 6"
1 EA – FIRE HYDRANT
417 FT – WATER MAIN, DI 8" CL 52, T.D. G
381 FT – POLYETHYLENE PIPE WRAP

STATION 4+74, 51'L TO MATCHLINE
25 FT – WATER MAIN, DI 8" CL 52, T.D. G
25 FT – POLYETHYLENE PIPE WRAP

USE RETAINER GLANDS ON ALL MECHANICAL JOINTS. ALL GASKETS SHALL BE NITRILE. SEE SPECS.



WRIGHT STREET PROFILE

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MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

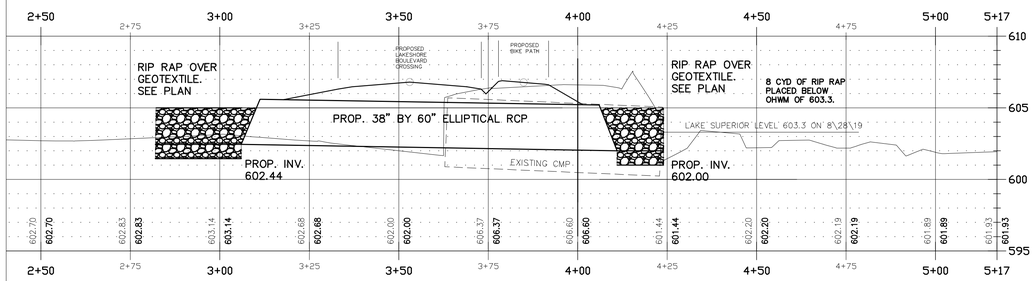
REVISIONS:
- INTERNAL REVIEW 6/12/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: J:/PROJECTS...MASTERBASEMAP.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

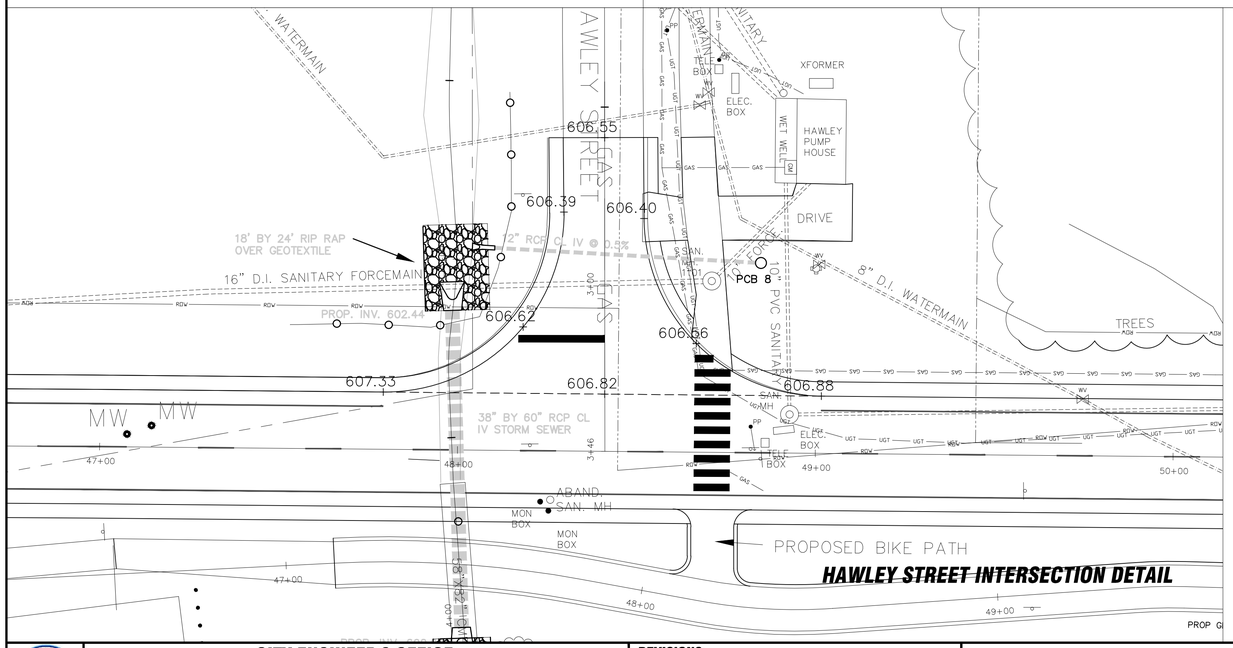
LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
WRIGHT STREET PLAN AND PROFILE

PROJECT MQ13-500
SHEET 22 OF 32



HAWLEY DITCH CULVERT CROSSING

AT PROPOSED ROAD STATION 48+00



HAWLEY STREET INTERSECTION DETAIL

0 40 80 Feet

Michigan's One-Call Utility Notification Organization

Three full days before you dig call the Miss Dig system 1-(800)-482-7171

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
- INTERNAL REVIEW 6/13/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19
- PERMIT REVISION 9_16_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: ---J:/PROJECTS....MASTERBASEMAP.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: 1"=4'

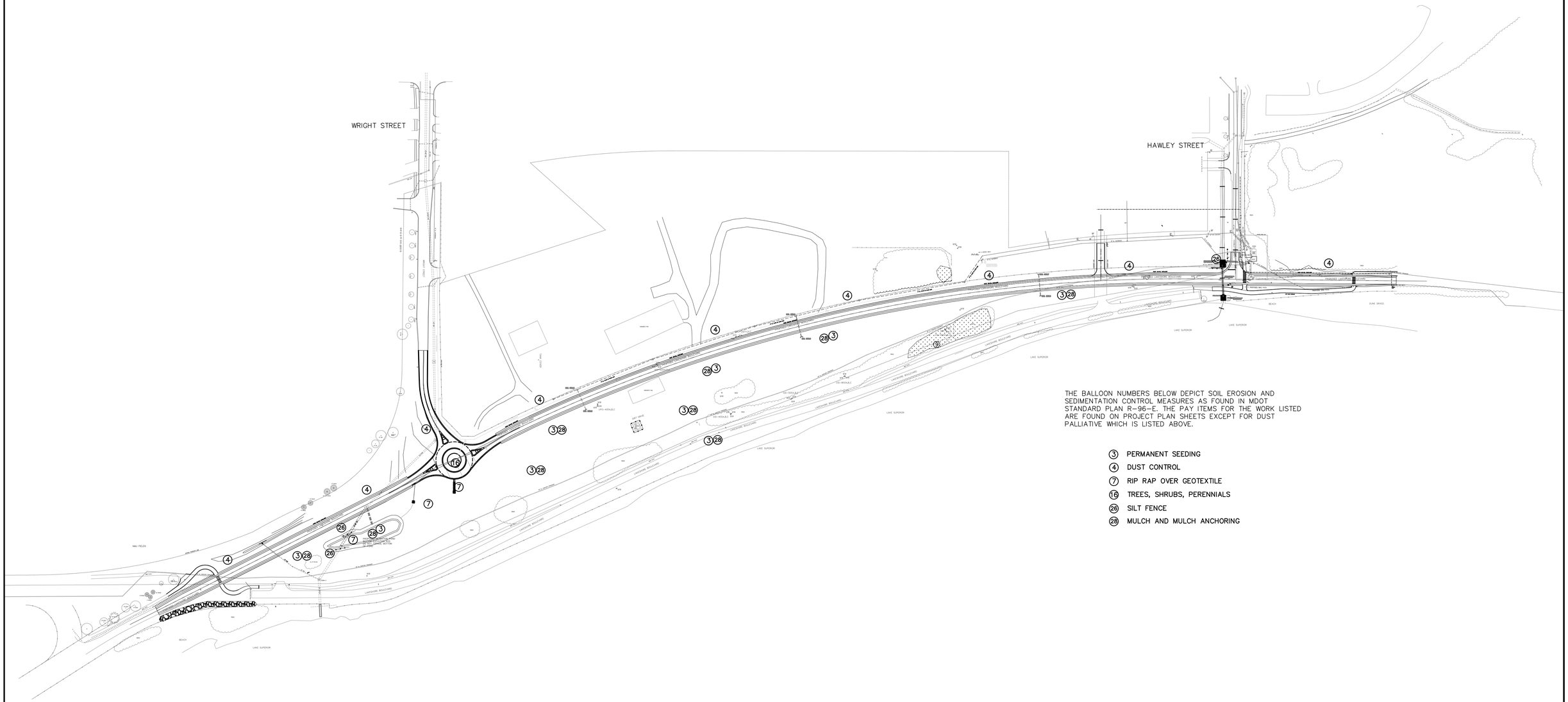
LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
HAWLEY DITCH AND INTERSECTION DETAIL

PROJECT MQ13-500
SHEET 23 OF 32

PAY ITEMS (THIS SHEET)

20	TON – DUST PALLIATIVE, APPLIED

DUST PALLIATIVE SHALL BE PLACED AS DIRECTED BY THE ENGINEER.



THE BALLOON NUMBERS BELOW DEPICT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AS FOUND IN MDOT STANDARD PLAN R-96-E. THE PAY ITEMS FOR THE WORK LISTED ARE FOUND ON PROJECT PLAN SHEETS EXCEPT FOR DUST PALLIATIVE WHICH IS LISTED ABOVE.

- (3) PERMANENT SEEDING
- (4) DUST CONTROL
- (7) RIP RAP OVER GEOTEXTILE
- (16) TREES, SHRUBS, PERENNIALS
- (26) SILT FENCE
- (28) MULCH AND MULCH ANCHORING

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CITY ENGINEER'S OFFICE
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REVISIONS:
- INTERNAL REVIEW 6/16/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19

DESIGN BY: JAMES R. COMPTON, PROJECT ENGINEER
DRAWN BY: JAMES R. COMPTON, PROJECT ENGINEER
DATE: JULY 15, 2013
FILE NAME: ---J:/PROJECTS...MASTERBASEMAP.dwg

HOR. SCALE: 1" =150'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
SOIL EROSION AND SEDIMENTATION CONTROL PLAN

PROJECT MQ13-500
SHEET 24 OF 32

PHASE A

FROM STATION 20+28 TO 47+00 INCLUDING ROUNDABOUT W/APPROACHES AND POND. THIS PHASE SHALL BE DONE LEAVING ALL ADJACENT ROADS ACTIVE.

PHASE B

FROM STATION 47+00 TO NORTH END OF PROJECT INCLUDING BIKEPATH.. TRAFFIC REGULATOR CONTROL SHALL BE USED FOR THIS PHASE.

PHASE C

REST OF PROJECT WORK NOT DONE IN PHASE A & B.

NOTES

PHASE A SHALL BE DONE FIRST.

PHASE B SHALL BE DONE AFTER PHASE A. TRAFFIC SHALL BE PLACED ON HAWLEY AND LAKESHORE NORTH OF HAWLEY AS SOON AS PHASE IS DONE..

PHASE C SHALL BE DONE AFTER PHASE A AND B.

TEMPORARY SIGNING FOR ENTIRE PROJECT

SIGN	TYPE	DESCRIPTION	MAX. NO. EACH	DIMENSIONS (INCHES)
		PLASTIC DRUM, HIGH INTENSITY, LIGHTED	50	
B-III		BARRICADE, TYPE III, HIGH INTENSITY	12	
D3-1a	IIB	LAKESHORE BLVD	11	24X8
G20-2	IIB	END ROAD WORK	2	36x18
M4-9	IIB	DETOUR (ARROW STRAIGHT)	6	30x24
M4-9(L)	IIB	DETOUR (ARROW TO LEFT)	3	30x24
M4-9(R)	IIB	DETOUR (ARROW TO RIGHT)	3	30x24
M4-10(L)	IIB	DETOUR IN ARROW LEFT	2	48x18
M4-10(R)	IIB	DETOUR IN ARROW RIGHT	1	48x18
R11-2	IIB	STREET CLOSED	4	48x30
R11-4	IIB	STREET CLOSED TO THRU TRAFFIC	3	60x30
SPECIAL	IIB	BIKE PATH CLOSED	2	24x24
W20-2	IIB	DETOUR AHEAD	5	48x48
W20-3	IIB	STREET CLOSED AHEAD	5	48x48

NOTES:

ACCESS TO LAKESHORE BOULEVARD NORTH OF PROJECT SHALL BE MAINTAINED AT ALL TIMES. WHEN WORK IS BEING DONE ON LAKESHORE BOULEVARD NORTH OF HAWLEY, TRAFFIC REGULATOR CONTROL SHALL BE USED.

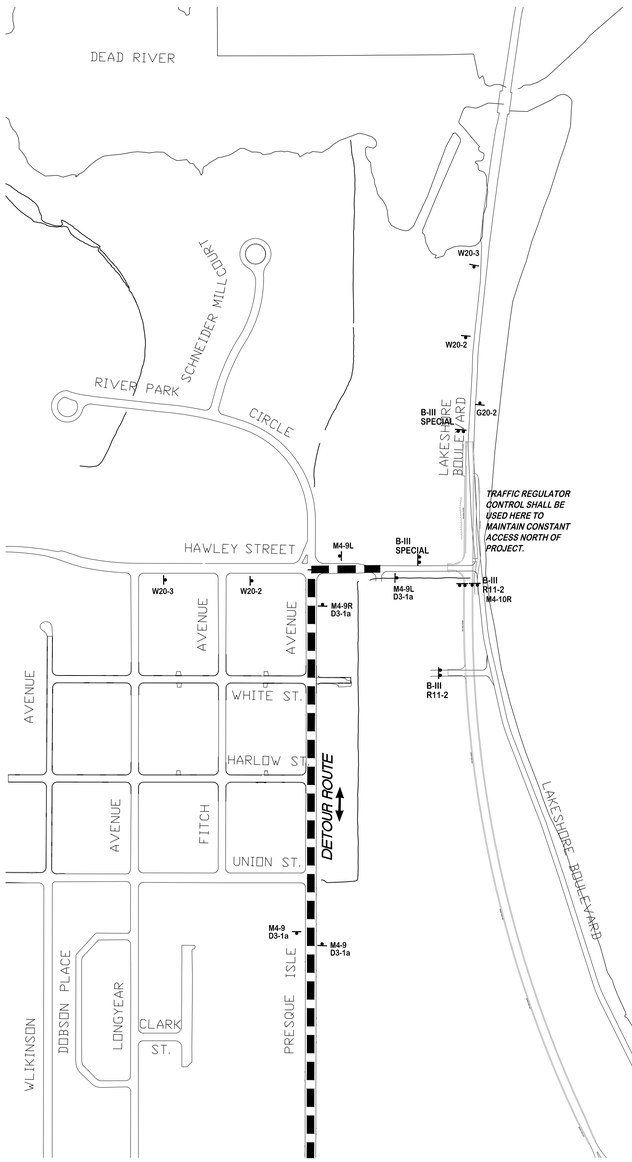
ALL REMOVED SIGNAGE AND POSTS ARE TO BE STOCKPILED ON SITE AND TURNED OVER TO THE CITY OF MARQUETTE PUBLIC WORKS DEPARTMENT.

ALL PROPOSED SIGNAGE WILL BE PROVIDED AND PLACED BY THE CITY OF MARQUETTE PUBLIC WORKS DEPARTMENT.

THE CONTRACTOR SHALL COORDINATE WITH PUBLIC WORKS TO ENSURE ALL SIGNAGE IS PLACED PRIOR TO STREET BEING OPENED TO TRAFFIC.

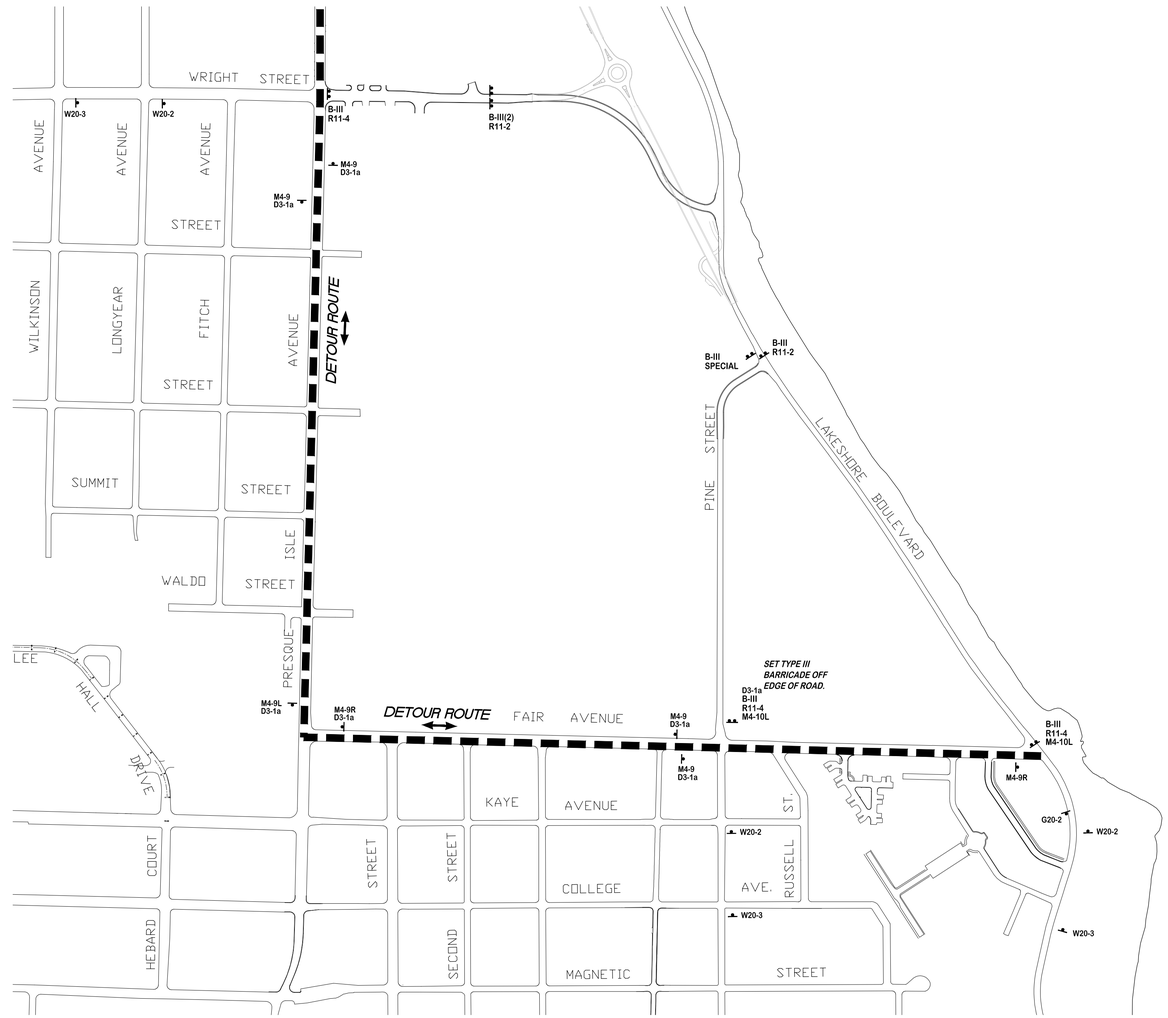
TEMPORARY SIGNING PAY ITEMS FOR ENTIRE PROJECT

50	EA – PLASTIC DRUM, HIGH INTENSITY, LIGHTED, FURN
50	EA – PLASTIC DRUM, HIGH INTENSITY, LIGHTED, OPER
342	SFT – SIGN, TYPE B, TEMP, PRISMATIC, FURN
342	SFT – SIGN, TYPE B, TEMP, PRISMATIC, OPER
10	EA – BARRICADE, TYPE 3, HIGH INTENSITY, FURN
10	EA – BARRICADE, TYPE 3, HIGH INTENSITY, OPER
1	LS – TRAFFIC REGULATOR CONTROL



PHASE B & C -TRAFFIC CONTROL PLAN - WRIGHT STREET TO HAWLEY STREET

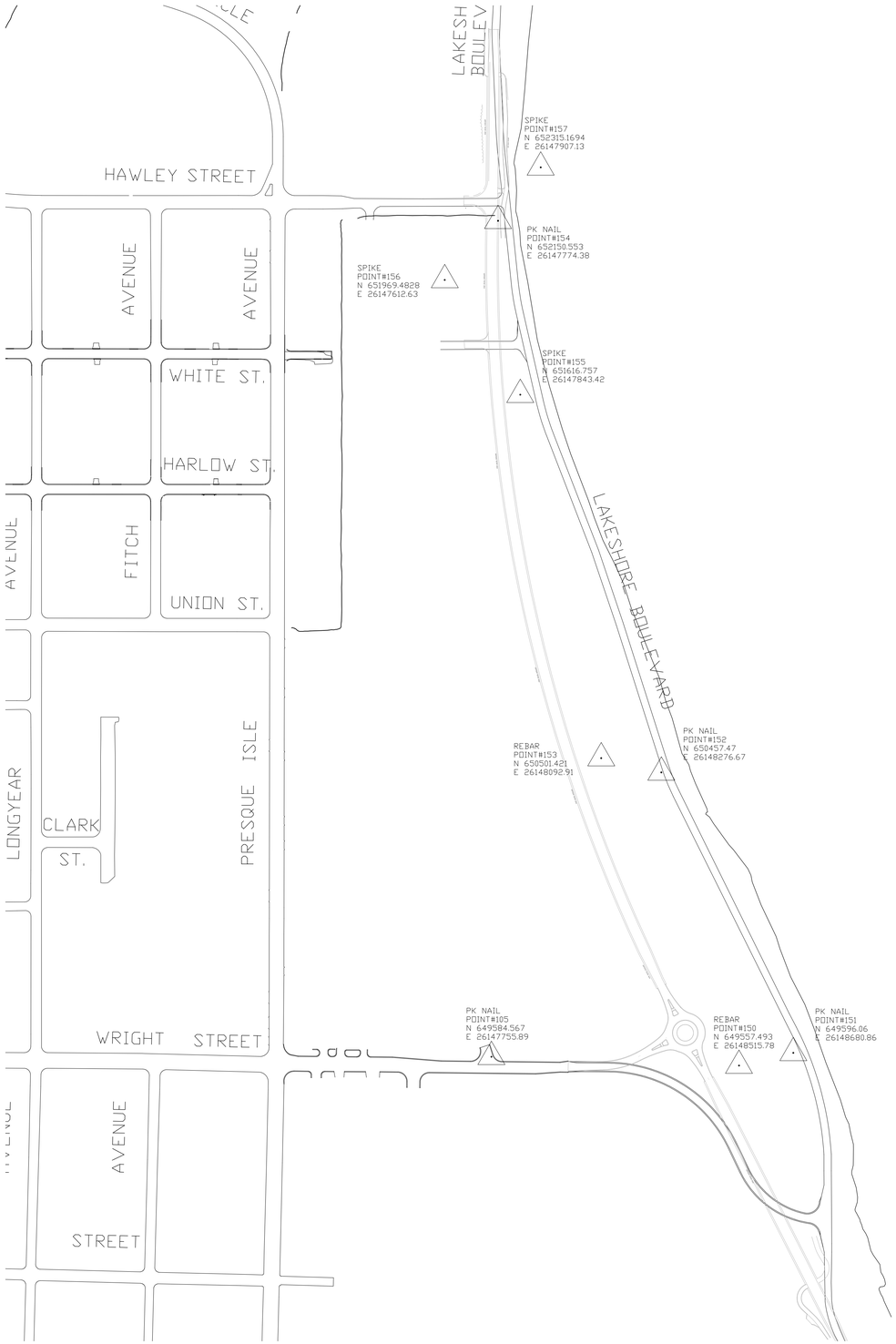
SCALE: 1" = 300'



PHASE B & C - TRAFFIC CONTROL PLAN - WRIGHT STREET TO FAIR AVENUE

SCALE: 1" = 300'

CITY ENGINEER'S OFFICE **MARQUETTE, MICHIGAN** 300 WEST BARAGA AVE., MARQUETTE, MI 49855 PHONE (906)228-0440	**REVISIONS:** PRELIMINARY 05-22-14 PRELIMINARY UPDATE 8 12 19 PERMIT 8 29 19	DESIGN BY: JAMES COMPTON P.E. DRAWN BY: JAMES COMPTON P.E. DATE: MAY 22, 2014 FILE NAME: UTILITY SCHEMATICS.dwg	HOR. SCALE: 1" = 300' VERT. SCALE: N.A.	**LAKESHORE BLVD. RELOCATION** MARQUETTE, MICHIGAN TRAFFIC CONTROL PLAN	**PROJECT MQ13-500** **SHEET 25 OF 32**



VERTICAL AND HORIZONTAL CONTROL

NORTH
W E
S

SANITARY SEWER LEGEND

18" CIPP/VCP	EXISTING SANITARY SEWER MAIN
Ⓢ	EXISTING SANITARY MANHOLE
8" PVC	PROPOSED SANITARY SEWER MAIN
PSMH #1 Ⓟ	PROPOSED SANITARY MANHOLE

NOTE:
THIS SCHEMATIC DRAWING IS FOR INFORMATIONAL PURPOSES ONLY. EXACT LOCATION OF VALVES, HYDRANTS, AND MANHOLES SHALL BE FIELD VERIFIED. PROPOSED WORK SHALL BE REFERENCED FROM PLAN SHEETS OF CONSTRUCTION SET OF DRAWINGS.

Michigan's One-Call
Utility Notification Organization
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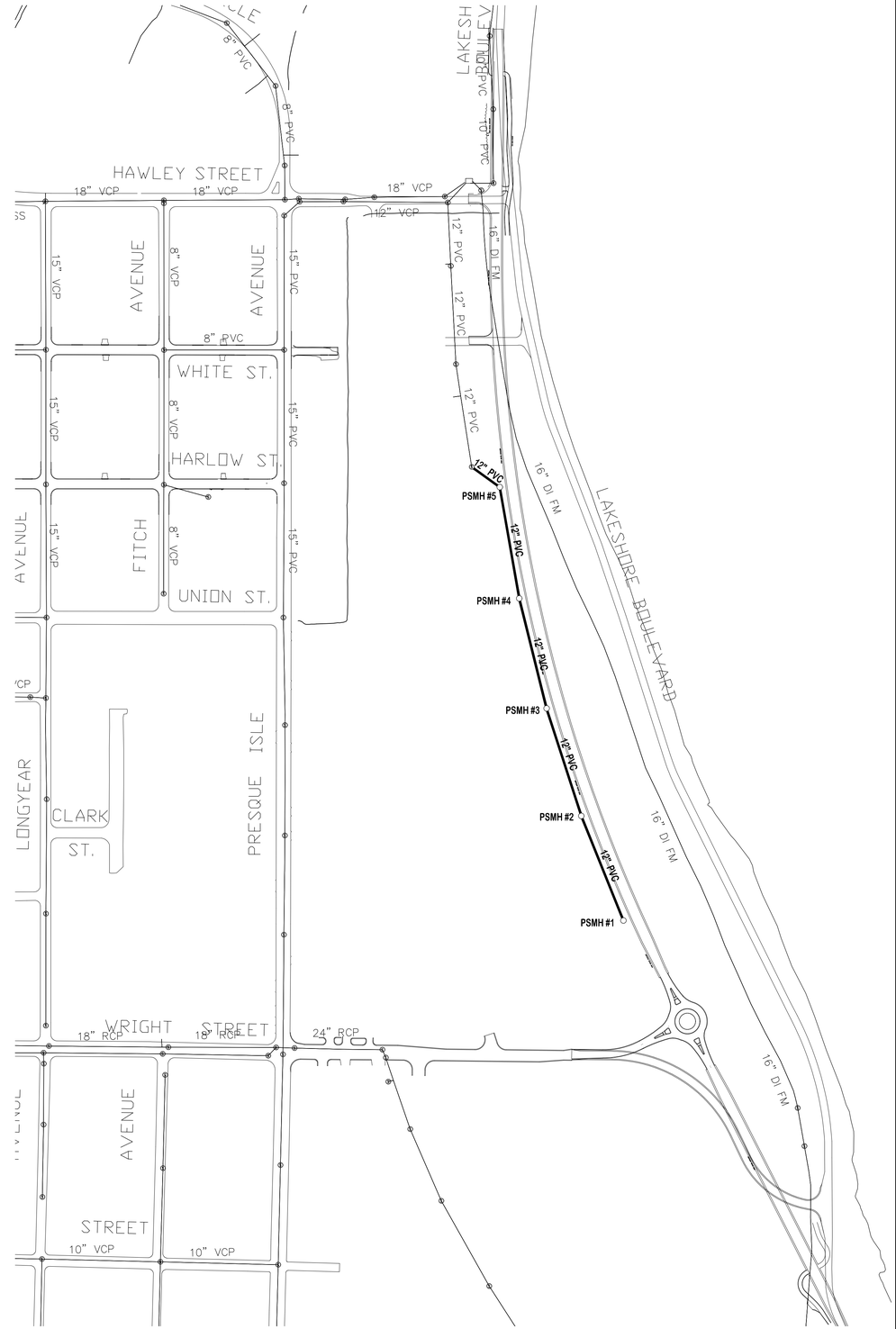
1-(800)-482-7171



SANITARY SYSTEM SCHEMATIC

SCALE: 1" = 200'

CITY ENGINEER'S OFFICE **MARQUETTE, MICHIGAN** 300 WEST BARAGA AVE., MARQUETTE, MI 49855 PHONE (906)228-0440	**REVISIONS:** PRELIMINARY 05-22-14 UPDATE 8_12_19 PERMIT 8_29_19	DESIGN BY: JAMES COMPTON P.E. DRAWN BY: JAMES COMPTON P.E. DATE: MAY 22, 2014 FILE NAME: UTILITY SCHEMATICS.dwg	HOR. SCALE: 1" = 200' VERT. SCALE: N.A.	**LAKESHORE BLVD. RELOCATION** MARQUETTE, MICHIGAN HORIZONTAL AND VERTICAL CONTROL AND SANITARY SCHEMATIC	PROJECT MQ13-500 SHEET 26 OF 32

WATER LEGEND

8"DI1999	EXISTING WATER MAIN
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
8" DI W.M.	PROPOSED WATER MAIN
	PROPOSED FIRE HYDRANT
	PROPOSED WATER VALVE

STORM SEWER LEGEND

12" RCP	EXISTING STORM SEWER MAIN
	EXISTING STORM MANHOLE
	EXISTING CATCH BASIN
12"	PROPOSED STORM SEWER MAIN
PDMH4	PROPOSED STORM MANHOLE
PCB2	PROPOSED CATCH BASIN

Michigan's One-Call — Utility Notification Organization

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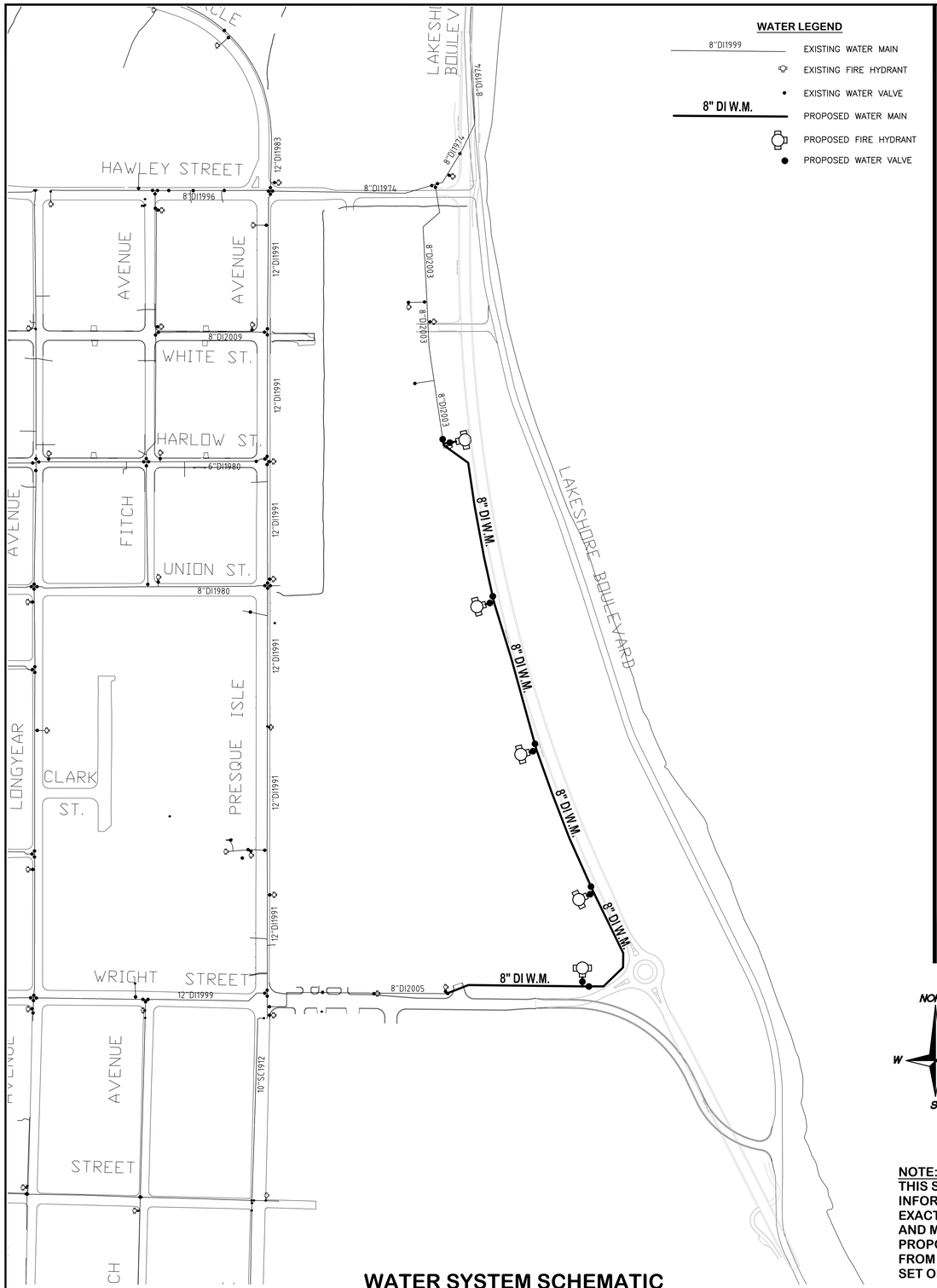
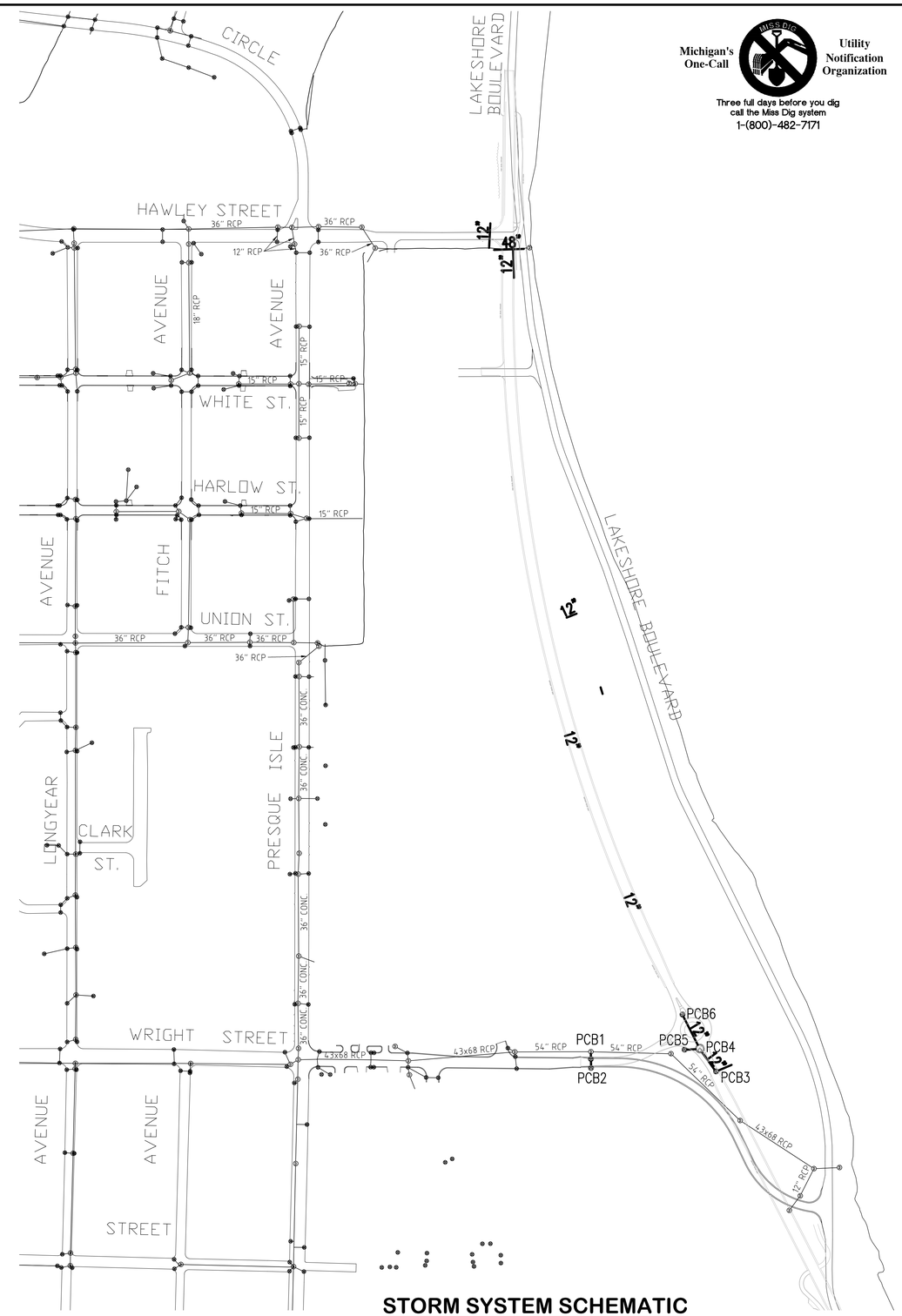


WATER SYSTEM SCHEMATIC

SCALE: 1" = 200'

NORTH



STORM SYSTEM SCHEMATIC

SCALE: 1" = 200'

NOTE:
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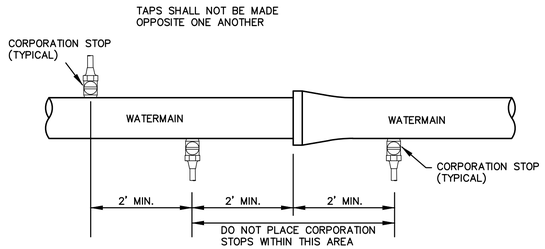
CITY ENGINEER'S OFFICE **MARQUETTE, MICHIGAN** 300 WEST BARAGA AVE., MARQUETTE, MI 49855 PHONE (906)228-0440	**REVISIONS:** PRELIMINARY 05-22-14 UPDATE 8_12_19 PERMIT 8_29_19	DESIGN BY: JAMES COMPTON P.E. DRAWN BY: JAMES COMPTON P.E. DATE: MAY 22, 2014 FILE NAME: UTILITY SCHEMATICS.dwg	HOR. SCALE: 1" =200' VERT. SCALE: N.A.	**LAKESHORE BLVD. RELOCATION** MARQUETTE, MICHIGAN WATER AND STORM UTILITY SCHEMATICS	**PROJECT MQ13-500** **SHEET 27 OF 32**

TAP SPACING ON WATERMAIN



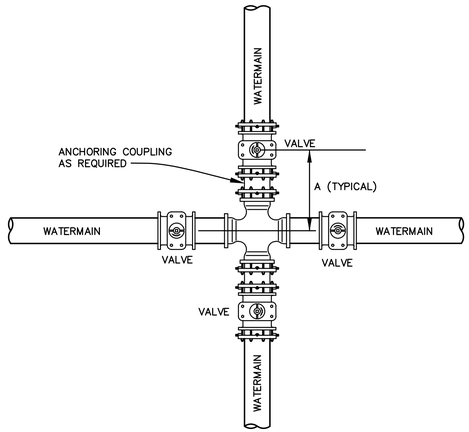
PIPE RESTRAINT SCHEDULE

PIPE SIZE IN INCHES	RESTRAINED PIPE LENGTH IN FEET (1)								
	HORIZONTAL BENDS				DEAD ENDS (2)	45° VERTICAL BENDS		REDUCER ONE SIZE REDUCTION	REDUCER TWO SIZE REDUCTION
	TEE, 90°	45°	22-1/2°	11-1/4°		UPPER	LOWER		
4	23	9	5	2	55	23	8	–	–
6	32	13	6	3	77	32	11	21	–
8	40	17	8	4	100	41	14	21	49
12	56	23	11	6	141	58	20	40	81
16	71	29	14	7	181	75	25	41	96
20	84	35	17	8	218	90	30	42	94
24	96	40	19	10	253	105	35	42	106
30	112	47	22	11	303	125	41	59	117

1. RESTRAIN ALL PIPE JOINTS WITHIN THE DISTANCE SHOWN ON THE TABLES MEASURED FROM THE POINT OF CONNECTION.

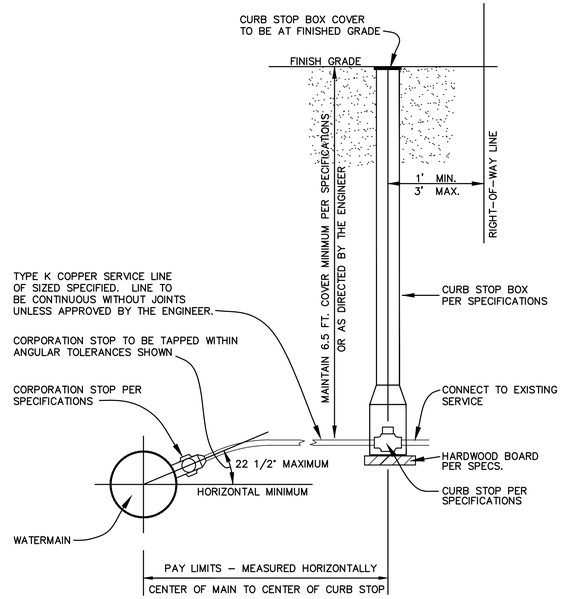
2. ISOLATION VALVES SHALL BE TREATED AS DEAD ENDS WITH RESTRAINT ON BOTH SIDES OF THE VALVE.

STANDARD VALVE LOCATION

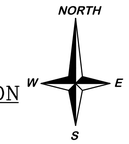


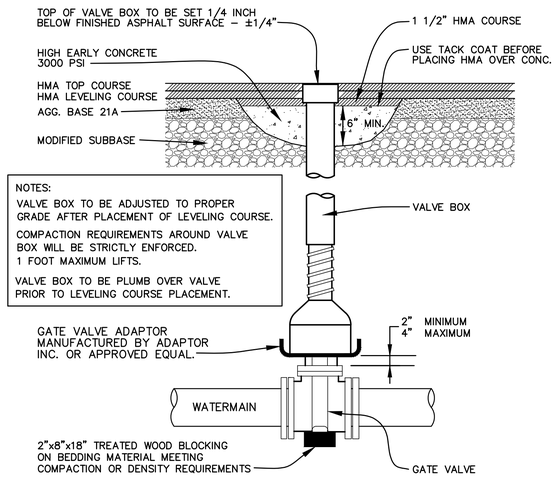
PIPE SIZE	6"	8"	10"	12"	16"
DIMENSION"A"	3'6"	3'6"	4'0"	4'0"	4'6"

TYPICAL SERVICE CONNECTION

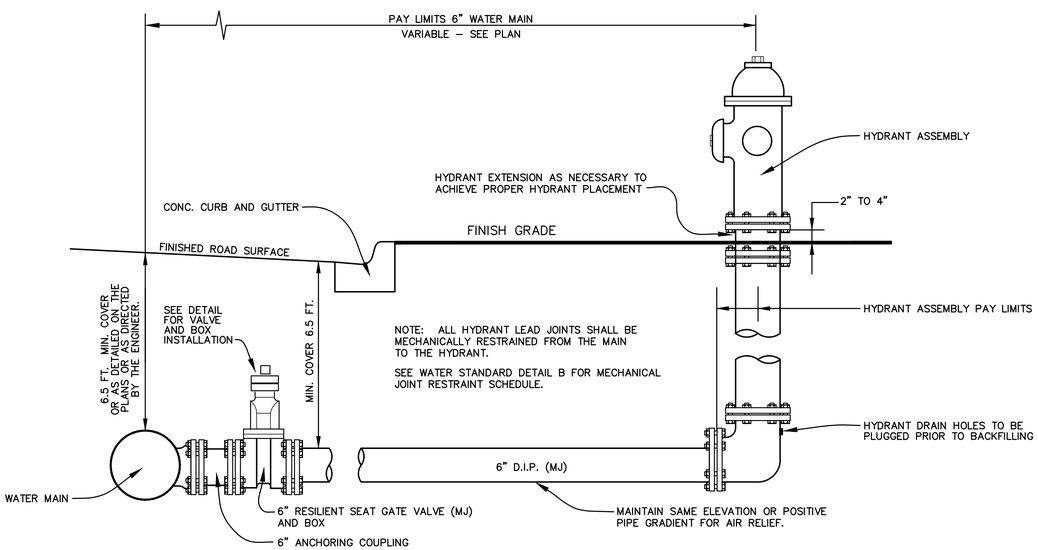


TYPICAL VALVE BOX INSTALLATION

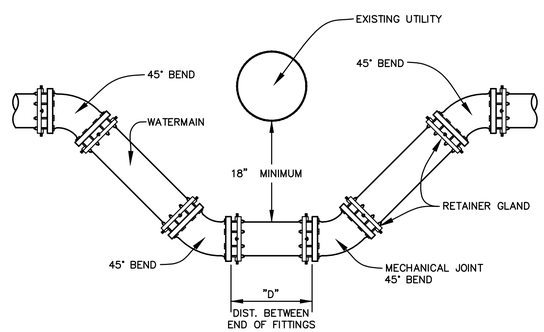




TYPICAL HYDRANT CONNECTION



WATER MAIN CROSSING DETAIL

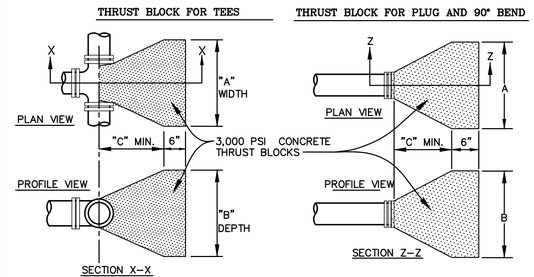


ALL JOINTS TO BE MADE UP USING MECHANICAL JOINT FITTING WITH RETAINER GLANDS. THE ENGINEER MAY ALLOW OTHER TYPES OF JOINT RESTRAINTS IF CIRCUMSTANCES WARRANT.

SEE WATER VALVE STANDARD LOCATION DETAIL (ABOVE) FOR MECHANICAL JOINT RESTRAINT SCHEDULE.

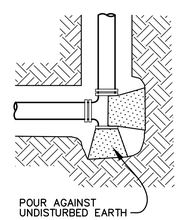
WATERMAIN DIA.		I.D. EXISTING UTILITY			
		≤12"	≤24"	≤36"	≤48"
6"	MINIMUM DIMENSION (INCH) D	13"	17"	22"	28"
8"	D	14"	14"	19"	25"
10"	D	14"	14"	16"	22"
12"	D	15"	15"	15"	19"
16"	D	15"	15"	15"	19"

THRUST BLOCK DETAIL



SCHEDULE FOR TEES AND/OR PLUGS

W.M. SIZE	MIN. THRUST BLOCK DIM.			BEARING SQ.FT.
	A (MIN)	B (MIN)	C (MIN)	
6"	1'6"	1'6"	12"	2.2
8"	2'3"	2'3"	1'3"	5.1
10"	2'6"	2'6"	1'6"	6.3
12"	3'0"	3'0"	1'9'	9.0
16"	4'0"	4'0"	2'10'	16.0



1. THE SHAPE OF THE BACK OF THE BLOCK MAY VARY AS LONG AS THE BEARING AREA IS NO LESS THAN THE AREA SHOWN IN THE TABLES AND THE POUR IS AGAINST FIRM UNDISTURBED EARTH.
2. JOINTS SHALL BE KEPT FREE OF CONCRETE AND A NON–ABRASIVE BARRIER APPROVED BY THE ENGINEER SHALL BE PLACED BETWEEN THE THRUST BLOCK AND ALL MECHANICAL JOINTS.
3. DIMENSIONS ARE BASED ON A SURGE PRESSURE OF 150 PSI AND SAFE BEARING LOADS OF 2 TONS PER SQ. FT. IN CLEAN DRY SAND

Michigan's One-Call Utility Notification Organization

Three full days before you dig
call the Miss Dig system
1-(800)-482-7171

PROJECT NO. MQ13-500

LAKESHORE BOULEVARD COASTAL RESTORATION

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
INTERNAL REVIEW 6/19/14
PRELIM DRAFT 8_12_19
PERMIT 8_29_19

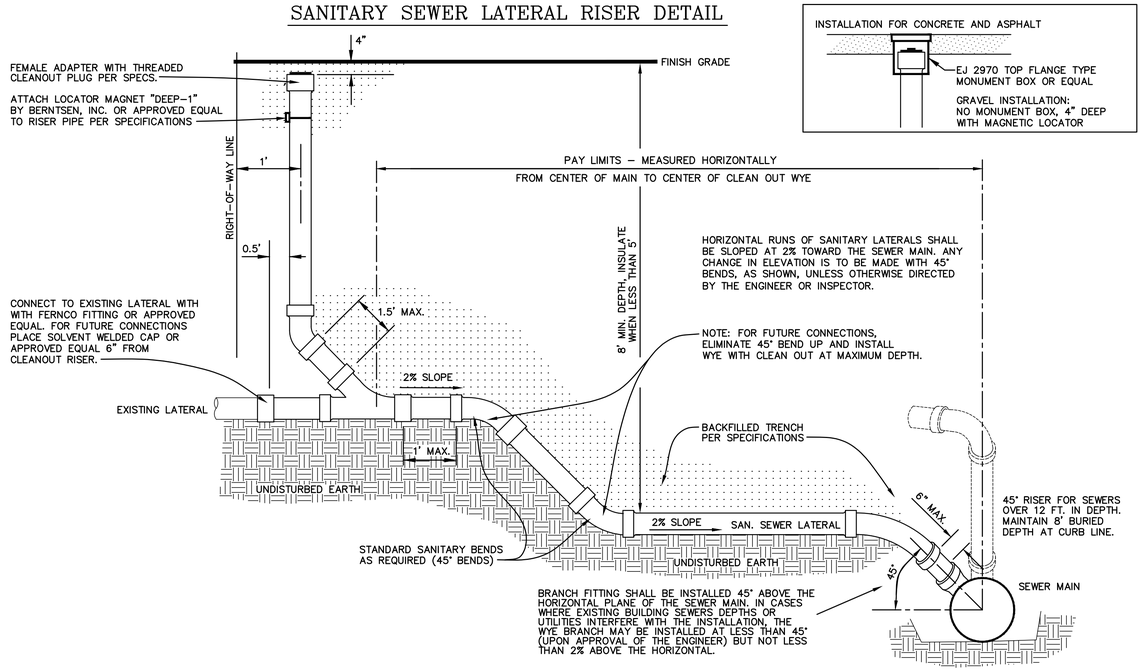
DESIGN BY: KEITH WHITTINGTON, CITY ENGINEER
DRAWN BY: JAMES COMPTON
DATE:6/19/
FILE NAME: J:PROJECTS/MQ13-500.....WATER.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

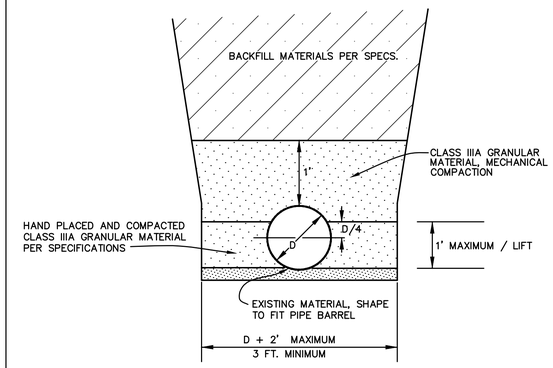
LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
WATER DETAILS

PROJECT MQ13-500
SHEET 28 OF 32

SANITARY SEWER LATERAL RISER DETAIL



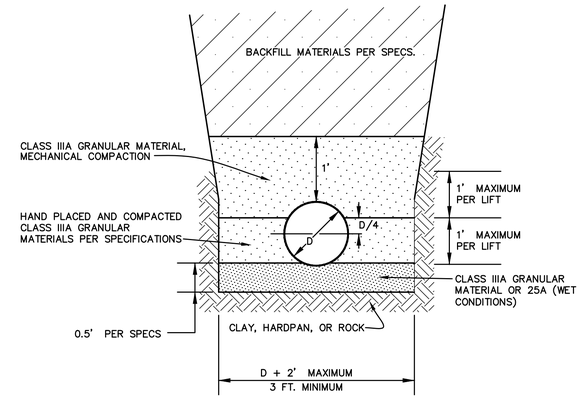
PIPE BEDDING DETAIL "G" IN SAND AND GRAVEL



BACKFILL MATERIALS AND METHODS SHALL CONFORM WITH SPECIFICATIONS

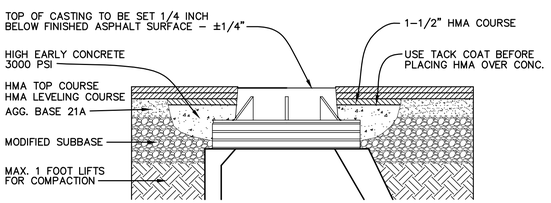
PIPE BEDDING DETAIL "G"

IN CLAY, HARDPAN, AND ROCK OR WHERE NATURAL MATERIAL IS UNDERCUT DURING EXCAVATION



BACKFILL MATERIALS AND METHODS SHALL CONFORM WITH SPECIFICATIONS

TYPICAL MANHOLE COVER INSTALLATION

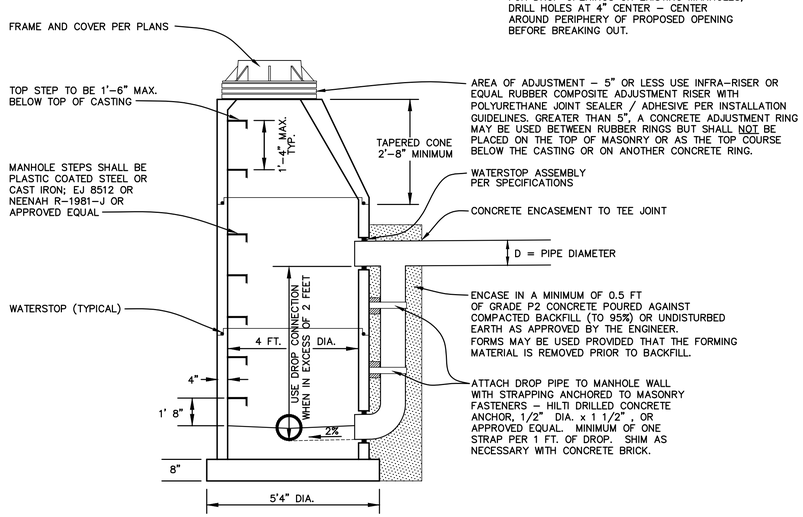


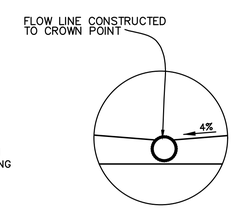
STANDARD CONCRETE DROP MANHOLE

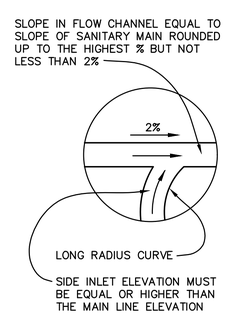
REFER TO M.D.O.T. STANDARD PLANS FOR OTHER CONFIGURATIONS

DROP PIPE DIAMETER SHALL BE THE SAME DIAMETER AS THE INCOMING PIPE, UNLESS NOTED OTHERWISE.

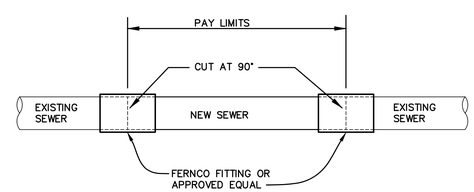
FOR DROP OPENINGS ON EXISTING MANHOLES, DRILL HOLES AT 4" CENTER – CENTER AROUND PERIPHERY OF PROPOSED OPENING BEFORE BREAKING OUT.





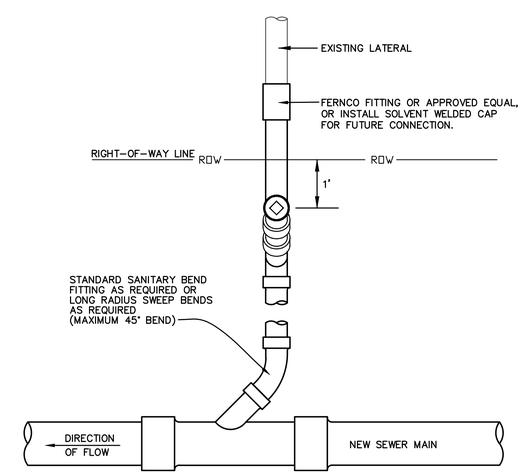


SANITARY SEWER LATERAL REPAIR DETAIL AND SANITARY SEWER POINT REPAIR



NOTE: ALL WORK MUST BE APPROVED BY THE ENGINEER PRIOR TO BACKFILL

PLAN VIEW OF SANITARY SEWER LATERAL



WYE SEWER LATERAL CONNECTION TO NEW MAIN

Michigan's One-Call Utility Notification Organization

Three full days before you dig call the Miss Dig system 1-(800)-482-7171

PROJECT NO. MQ13-500

LAKESHORE BOULEVARD COASTAL RESTORATION

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

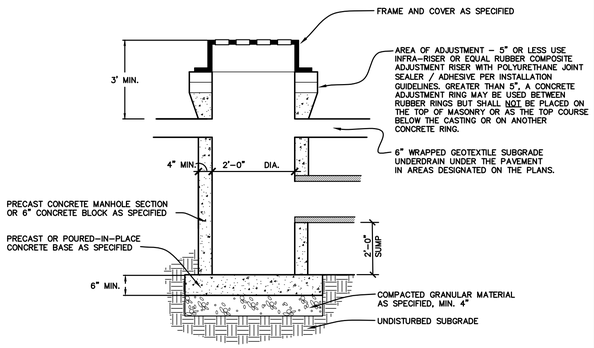
REVISIONS:
- INTERNAL REVIEW 6/19/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19

DESIGN BY: KEITH WHITTINGTON, CITY ENGINEER
DRAWN BY: JAMES COMPTON
DATE:6/19/
FILE NAME: J:PROJECTS/MQ13-500.....WATER.dwg

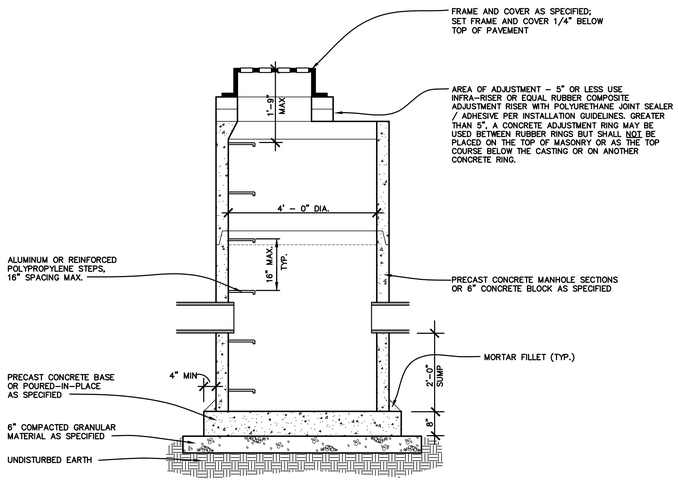
HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
SANITARY AND FENCE DETAILS

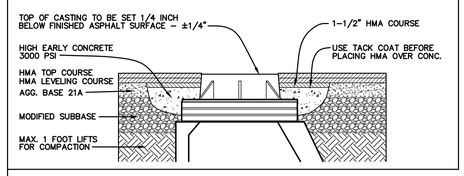
2' DIAMETER CATCH BASIN
NO SCALE



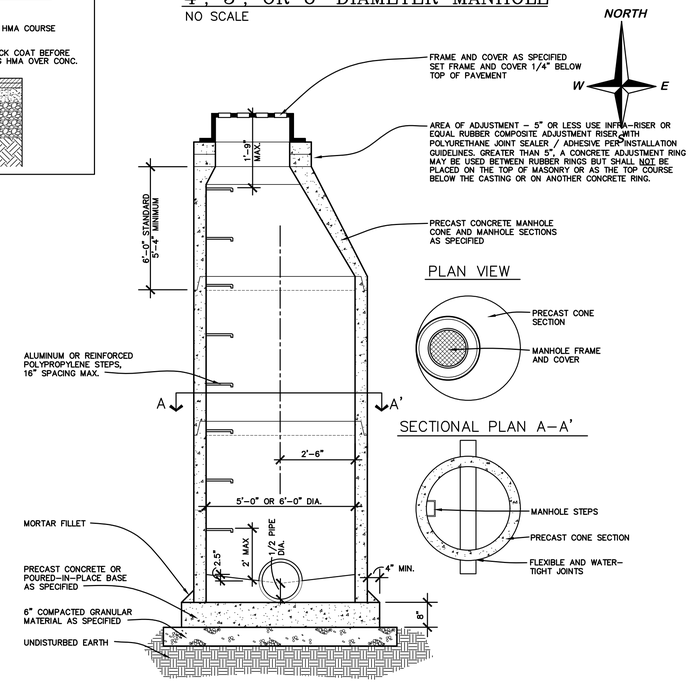
4' DIAMETER CATCH BASIN MANHOLE
NO SCALE



TYPICAL MANHOLE COVER INSTALLATION



4', 5', OR 6' DIAMETER MANHOLE
NO SCALE



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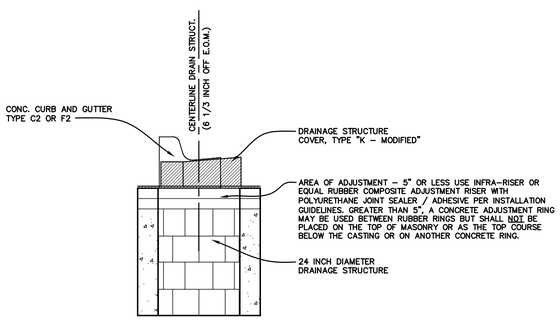
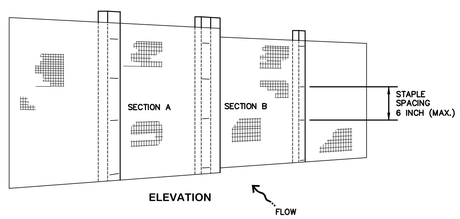
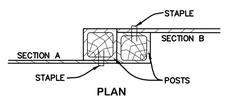
1-(800)-482-7171

CATCH BASIN DETAIL FOR C2 AND F2 CURBING

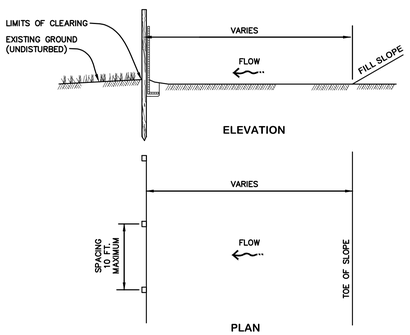


STANDARD DETAIL FOR SILT FENCE INSTALLATION





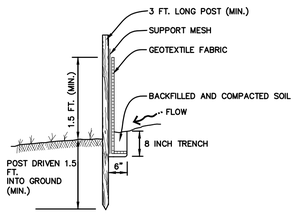
JOINING TWO ADJACENT SILT FENCE SECTIONS



SILT FENCE INSTALLATION AT TOE OF FILL

NOTE:

1. DIMENSIONS NOT LABELED ARE IN INCHES
2. ALTERNATE PRE–ASSEMBLED SILT FENCE OPTIONS WILL BE ALLOWED AS LONG AS SPECIFIED DIMENSIONS ARE SATISFIED. FOLLOW MANUFACTURER'S INFORMATION FOR INSTALLATION PROCEDURES.



POST AND FABRIC INSTALLATION DETAIL

PROJECT NO. MQ13-500

LAKESHORE BOULEVARD COASTAL RESTORATION

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:
- INTERNAL REVIEW 6/19/14
- PRELIM DRAFT 8_12_19
- PERMIT 8_29_19

DESIGN BY: KEITH WHITTINGTON, CITY ENGINEER
DRAWN BY: JAMES COMPTON
DATE:6/19/
FILE NAME: J:PROJECTS/MQ13-500.....WATER.dwg

HOR. SCALE: 1" = 20'
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
STORM DETAILS

PROJECT MQ13-500
SHEET 30 OF 32

LIGHTING ITEMS

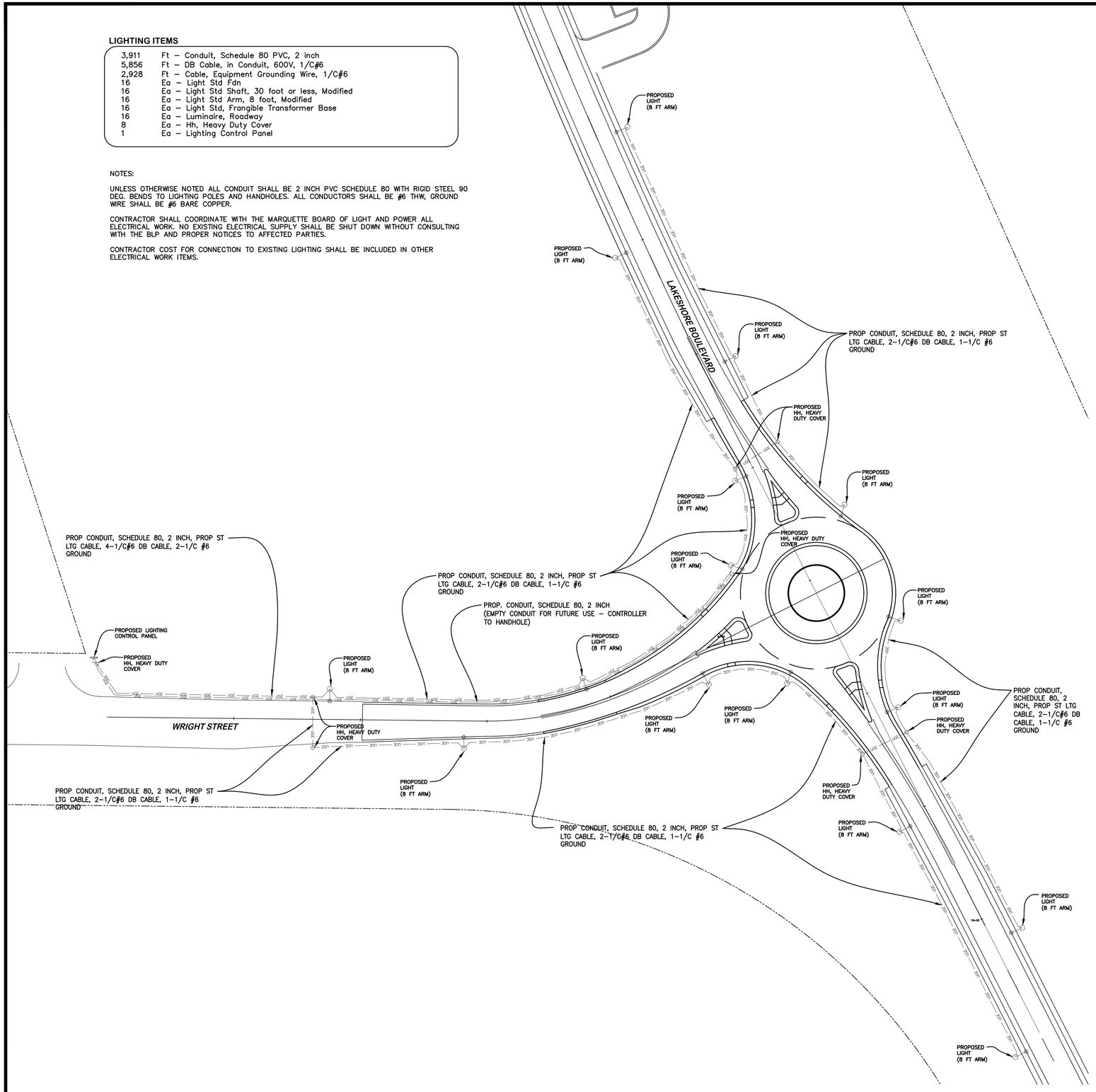
3,911	Ft –	Conduit, Schedule 80 PVC, 2 inch
5,856	Ft –	DB Cable, in Conduit, 600V, 1/C#6
2,928	Ft –	Cable, Equipment Grounding Wire, 1/C#6
16	Ea –	Light Std Fdn
16	Ea –	Light Std Shaft, 30 foot or less, Modified
16	Ea –	Light Std Arm, 8 foot, Modified
16	Ea –	Light Std, Frangible Transformer Base
16	Ea –	Luminaire, Roadway
8	Ea –	Hh, Heavy Duty Cover
1	Ea –	Lighting Control Panel

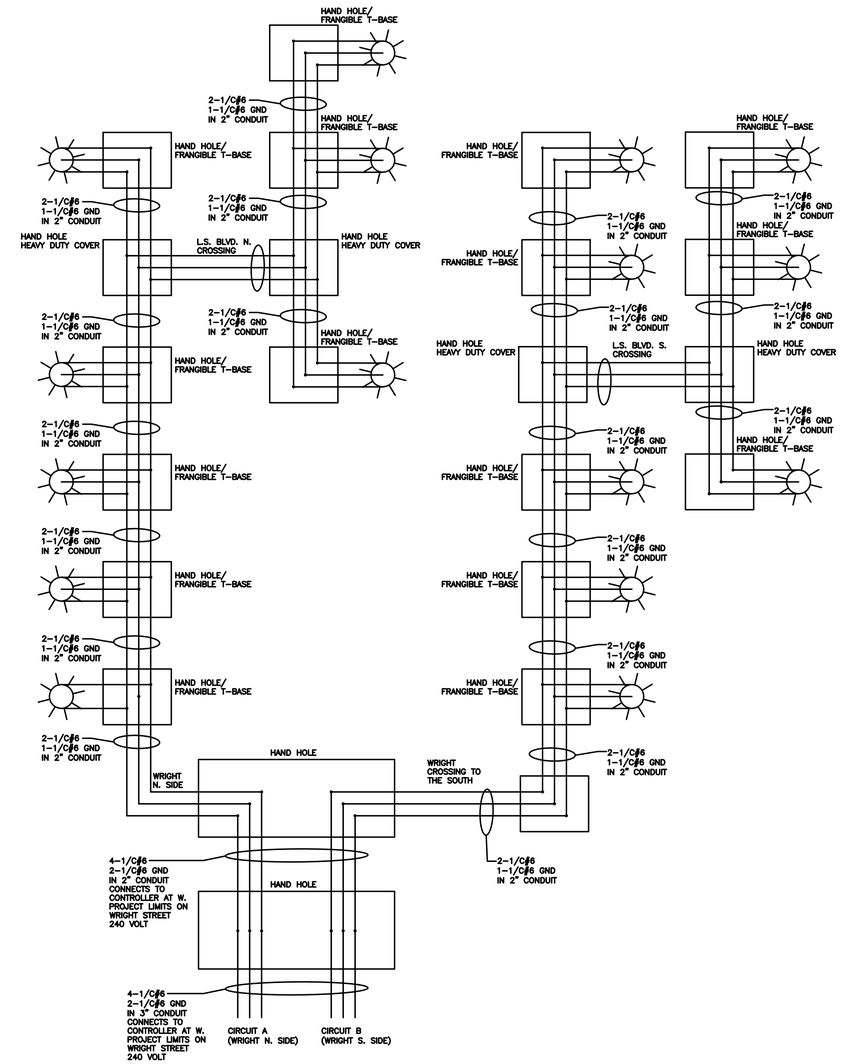
NOTES:

UNLESS OTHERWISE NOTED ALL CONDUIT SHALL BE 2 INCH PVC SCHEDULE 80 WITH RIGID STEEL 90 DEG. BENDS TO LIGHTING POLES AND HANDHOLES. ALL CONDUCTORS SHALL BE #6 THW, GROUND WIRE SHALL BE #6 BARE COPPER.

CONTRACTOR SHALL COORDINATE WITH THE MARQUETTE BOARD OF LIGHT AND POWER ALL ELECTRICAL WORK. NO EXISTING ELECTRICAL SUPPLY SHALL BE SHUT DOWN WITHOUT CONSULTING WITH THE BLP AND PROPER NOTICES TO AFFECTED PARTIES.

CONTRACTOR COST FOR CONNECTION TO EXISTING LIGHTING SHALL BE INCLUDED IN OTHER ELECTRICAL WORK ITEMS.





WRIGHT/ LAKESHORE LIGHTING WIRING DIAGRAM

NO SCALE

*HANDHOLES AT STREET LIGHTS ARE PART OF THE BREAKAWAY BASE INCLUDED WITH THE LIGHT POLE

Michigan's One-Call — Utility Notification Organization

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PROJECT NO. MQ13-500

LAKESHORE BLVD. COASTAL RESTORATION

CITY ENGINEER'S OFFICE
MARQUETTE, MICHIGAN
300 WEST BARAGA AVE., MARQUETTE, MI 49855
PHONE (906)228-0440

REVISIONS:

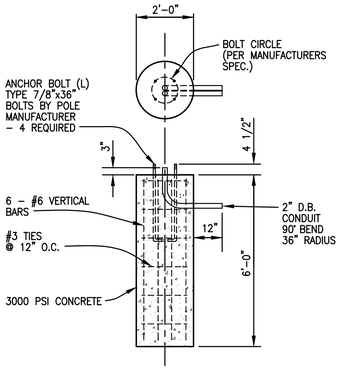
PRE-LIM LIGHTING PLAN	1.8.19
PERMIT	8.29.19
.	.
.	.

DESIGN BY: MHK
DRAWN BY: MHK
DATE: 1-8-19
FILE NAME: ---.dwg

HOR. SCALE: 1" = 40'
VERT. SCALE: N.A.

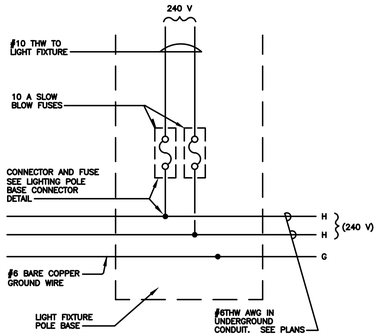
LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
LIGHTING PLAN

PROJECT MQ13-500
SHEET 31 OF 32



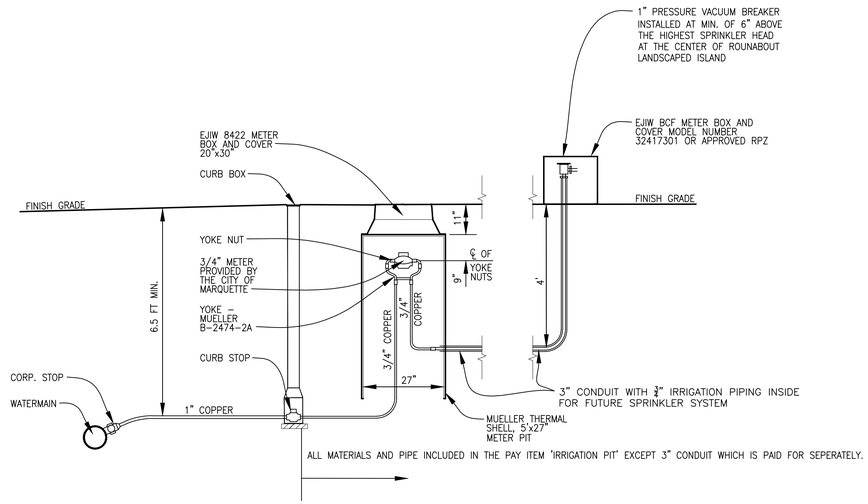
STREET LIGHT POLE FOUNDATION

NO SCALE



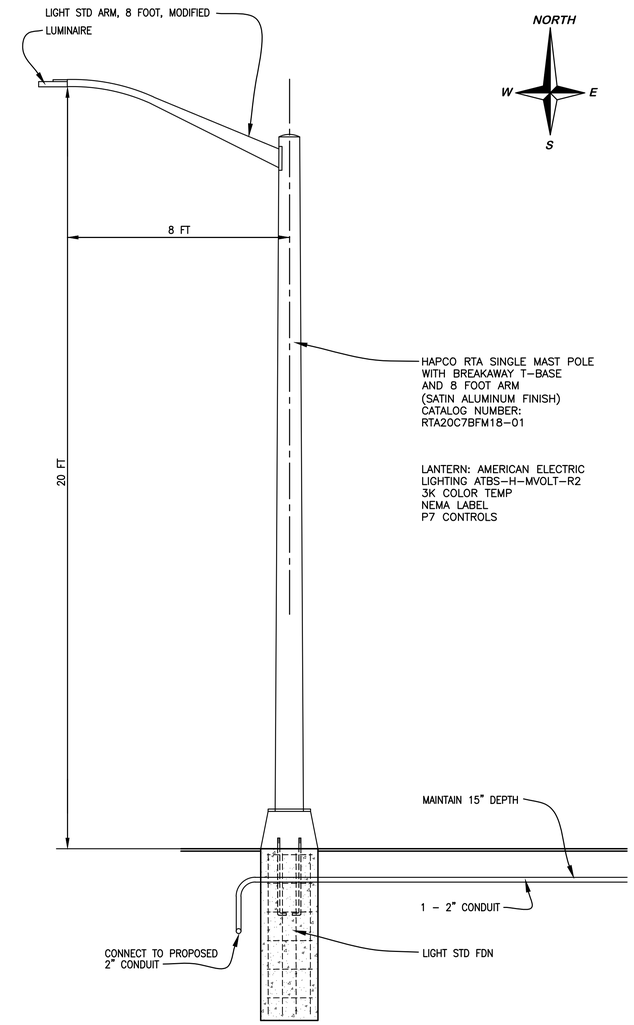
WIRING DIAGRAM

NO SCALE



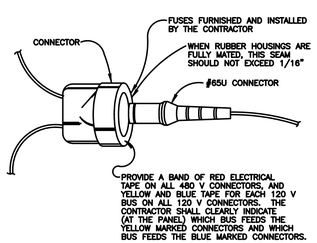
IRRIGATION PIT DETAIL

NO SCALE



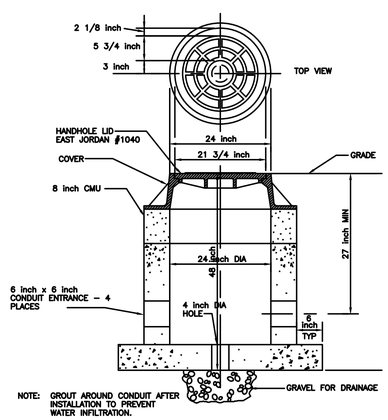
LIGHT POLE

NO SCALE



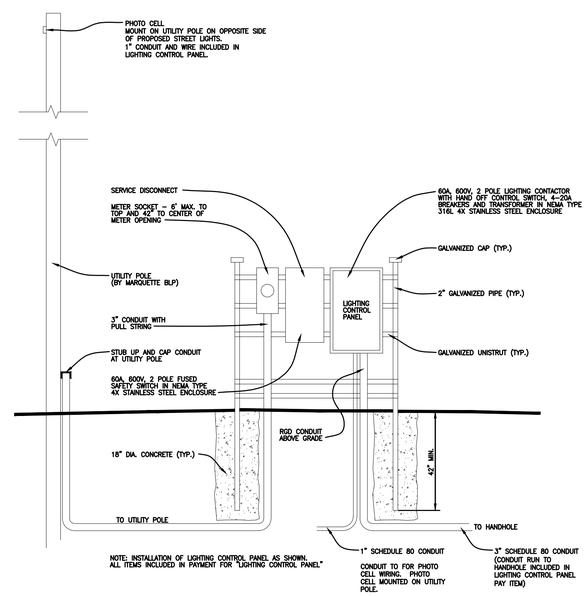
LIGHTING POLE BASE CONNECTOR DETAIL

NO SCALE



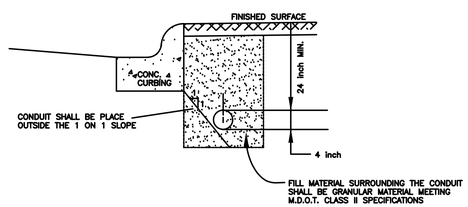
ELECTRIC HANDHOLE DETAIL

NO SCALE



ELECTRIC HANDHOLE DETAIL

NO SCALE



CONDUIT PLACEMENT DETAIL BEHIND CURB

NO SCALE

Michigan's One-Call

Utility Notification Organization

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PROJECT NO. MQ13-500

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PHONE (906)228-0440

REVISIONS:

PRE-LIM LIGHTING PLAN	1.8.19
PERMIT	8.29.19
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DESIGN BY: MHK
DRAWN BY: MHK
DATE: 1-8-19
FILE NAME: ---.dwg

HOR. SCALE: N.A.
VERT. SCALE: N.A.

LAKESHORE BLVD. RELOCATION
MARQUETTE, MICHIGAN
LIGHTING DETAILS

PROJECT MQ13-500
SHEET 32 OF 32