

# Construction Plans For SANITARY SEWER REPLACEMENT VARIOUS LOCATIONS

## Village of Elk Rapids - Antrim County - Michigan

Sections 20 & 21, Township 29N, Range 09W

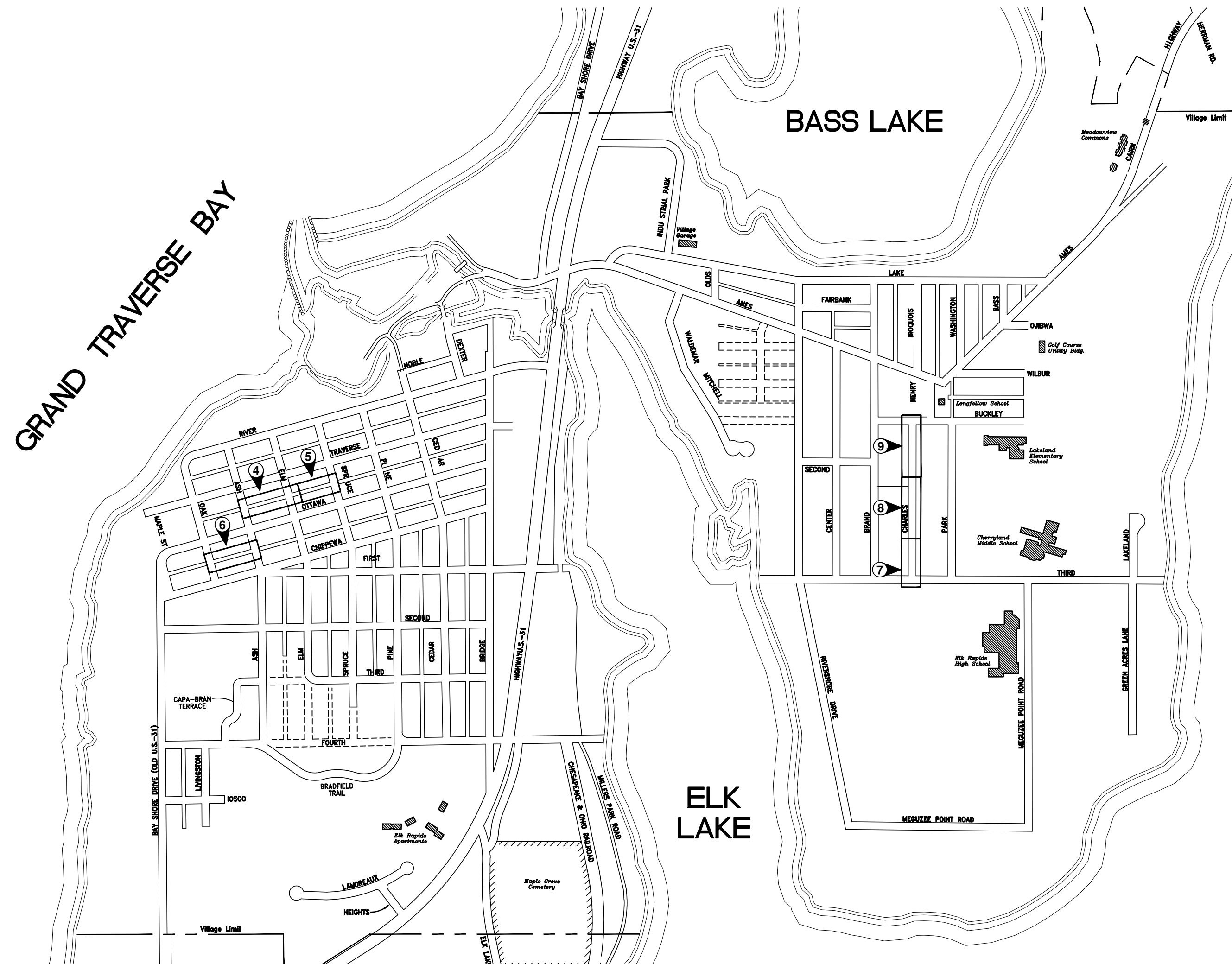
### Owner

VILLAGE OF ELK RAPIDS  
MANAGER: JOHN MATTHEWS  
P.O. BOX 398  
315 BRIDGE STREET  
ELK RAPIDS, MICHIGAN 49629  
(231) 264-9971 - (231) 264-9274  
jmatthews@elkrapids.org



### Engineer

GOSLING CZUBAK  
ENGINEERING SCIENCES, INC.  
1280 BUSINESS PARK DRIVE  
TRAVERSE CITY, MICHIGAN 49686-8607  
(231) 946-9191 - (800) 968-1062  
Fax : (231) 941-4603  
www.goslingczubak.com



SCALE: 1" = 600'

### PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY "MISS DIG" (1-800-482-7171) THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

### DTE ENERGY COMPANY GAS DISTRIBUTION

1294 NORTH U.S. 31  
PETOSKEY, MI 49770  
231-258-3785

### DTE ENERGY COMPANY HIGH PRESSURE GAS TRANSMISSION

250 MICHCON LN.,  
KALKASKA, MI 49646  
231-499-7648

### CHARTER COMMUNICATIONS VILLAGE OF ELK RAPIDS DPW

701 S. AIRPORT RD.  
TRAVERSE CITY, MI 49686  
231-929-7012 EXT. 102

### CONSUMERS ENERGY

821 HASTINGS  
TRAVERSE CITY, MI 49686  
231-929-6244

MR. ALEX PRAY  
315 BRIDGE STREET  
P.O. BOX 398  
ELK RAPIDS, MI 49629  
231-264-9971

### AT&T

142 E. STATE STREET  
TRAVERSE CITY, MI 49684  
231-941-2707



Know what's below.  
Call before you dig.

THE LOCATION OF THE EXISTING UTILITIES, AS SHOWN ON THIS PLAN, ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY "MISS DIG" AT 1 (800) 482-7171 OR 811 THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

### SHEET LIST

SHEET NUMBER	SHEET TITLE
1	COVER
2	GENERAL NOTES
3	DEMOLITION
4	STA. 0+00 TO STA. 4+50
5	STA. 4+50 TO STA. 8+50
6	STA. 8+50 TO STA. 13+00
7	STA. 13+00 TO STA. 18+00
8	STA. 18+00 TO STA. 23+00
9	STA. 23+00 TO STA. 27+11
10	DETAILS

SANITARY SWR REPLACE. VARIOUS LOCATIONS

Issue Date  
PRELIMINARY

Project No.  
2023150004

Sheet  
1

ORIGINAL SHEET SIZE IS 22x34 - HALF SCALE SHEET IS 11x17

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Bentley Systems, Inc. Plotter: Tim Korman 02/02/2024 2:54 PM

**PROPOSED FEATURES LEGEND**

- ⊙ PROPOSED SANITARY CLEANOUT
- PROPOSED SANITARY STRUCTURE
- FM — PROPOSED FORCE MAIN
- S — PROPOSED SANITARY LINE
- ⊙ PS ⊙ PROPOSED SANITARY PUMP STATION
- WL — PROPOSED WATER LINE
- PROPOSED WATER HYDRANT
- ⊗ PROPOSED WATER SYSTEM VALVE
- PROPOSED WATER WELL
- [ ] PROPOSED CONCRETE
- PROPOSED ASPHALT

**PLAN NOTES**

- DESIGN SUBJECT TO VERIFICATION OF SITE CONDITIONS.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL PUBLIC AND PRIVATE UTILITY LOCATIONS. CONTRACTOR SHALL ALSO CONTACT "MISS DIG" AT 1-800-482-7171 THREE WORKING DAYS PRIOR TO CONSTRUCTION BEGINNING.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT VERTICAL CONTROL DATA (I.E. BENCHMARKS, FLOORS, UTILITIES, ETC.)
- INSTALL SILT FENCE AS FIRST STEP BEFORE ANY GRADING ACTIVITIES BEGIN. SEE SESC PLAN. MEASURES SHOWN ON SESC PLAN ARE THE MINIMUM CONTROLS TO BE USED AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES TO PROTECT THE DISTURBED AREAS AND ADJACENT PROPERTIES FROM ACCELERATED EROSION AND SEDIMENTATION RESULTING FROM CONSTRUCTION AT NO ADDITIONAL CHARGE TO THE OWNER. SEE SESC PLAN FOR ADDITIONAL NOTES AND INFORMATION.
- ALL TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE OCCUPIED BY FILL, STRUCTURES, OR IMPROVED SURFACES.
- ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED, FERTILIZED, AND MULCHED. MULCH BLANKET SHALL BE INSTALLED IN AREAS WITH SLOPES 1:3H AND STEEPER OR AS NEEDED AND SHALL BE INCIDENTAL TO THE WORK.
- ANY AREAS UTILIZED BY CONTRACTOR FOR MATERIAL LAYDOWN SHALL BE RESTORED WITH TOPSOIL, SEED, FERTILIZER, AND MULCH.
- CONTRACTOR SHALL OBTAIN AND COMPLY WITH THE REQUIREMENTS OF SESC PERMIT. CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF ANY OTHER OWNER OBTAINED PERMITS (DRIVEWAY PERMIT, STATE SCHOOLS, ETC.)
- PAVEMENT STRIPING SHALL MEET PROJECT SPECIFICATIONS.

**SITE UTILITY NOTES**

- WATER AND SEWER IMPROVEMENTS TO MEET CURRENT LOCAL AND STATE MECHANICAL CODE REQUIREMENTS.
- MAINTAIN 10 FT OF HORIZONTAL CLEARANCE BETWEEN WATER AND SEWER. PROVIDE SCHEDULE 40 PVC SLEEVE AT ALL LOCATIONS WHERE 10' IS NOT MAINTAINED AND AT ALL CROSSINGS. AT CROSSINGS, PROVIDE 10 FT OF SLEEVE PIPE IN EACH DIRECTION.
- CONTRACTOR TO PERFORM ALL CHLORINATION AND DISINFECTION PROCEDURES ON THE NEW WATER SYSTEM TO ALL OUTLET LOCATIONS.
- CONTRACTOR TO COORDINATE ALL TESTING AND START-UP OF UTILITIES WITH OTHER CONTRACTORS INCLUDING BUT NOT LIMITED TO BUILDING CONTRACTOR.
- SANITARY SEWER GRAVITY
  - PVC SEWER SERVICE PIPE AND FITTINGS:
    - DESIGN STANDARD: ASTM - D 3034.
    - WALL THICKNESS: SCHEDULE 40
    - JOINTS: SOLVENT WELD
- WATER
  - MINIMUM COVER ON ALL BURIED WATER LINES, 6'-0" UNLESS OTHERWISE NOTED
  - WATER SERVICE LINES SHALL BE PVC C900 FOR PIPING LARGER THAN 3-INCH
  - WATER SERVICE LINES SHALL BE TYPE K COPPER FOR PIPING 3-INCH AND SMALLER
  - WATER VALVES SHALL BE LOCAL MUNICIPAL STANDARD
  - CURB BOXES SHALL BE MUELLER IMPROVED EXTENSION TYPE WITH ARCH PATTERN BASE AND OPTIONAL FOOT PIECE OR EQUAL

**SOIL BORING KEY**

**STRATA SYMBOLS**

- [ ] FILL
- [ ] POORLY GRADED SAND
- [ ] POORLY GRADED SAND
- [ ] SILTY GRAVEL AND SAND
- [ ] SILTY SAND
- [ ] POORLY GRADED GRAVEL AND SAND
- [ ] PAVING
- [ ] SILT
- [ ] POORLY GRADED CLAYEY SILTY SAND

**SOIL EROSION & SEDIMENTATION CONTROL NOTES**

- ALL WORK SHALL COMPLY WITH THE APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL (SESC) RULES AND REGULATIONS (SOIL EROSION AND SEDIMENTATION CONTROL - 1994 PA 451, PART 91, AS AMENDED, MCL 324.9101 ET SEQ.).
- SOIL EROSION AND SEDIMENTATION CONTROL SHALL PROTECT AGAINST LOSS OF SOIL BY THE ACTION OF WATER, ICE, AND WIND.
- THE CONTRACTOR IS REQUIRED TO FOLLOW THE CONDITIONS OUTLINED IN THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT.
- THE CONTRACTOR SHALL IMPLEMENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY THE PROJECT'S SESC PLAN, LEELELANU COUNTY PERMIT REQUIREMENTS, DTMB'S SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK, DATED FEBRUARY 2005, AND AS DIRECTED BY THE ENGINEER.
- BASIC PRINCIPLES OF THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN ARE AS FOLLOWS:
  - KEEP DISTURBED AREA AS SMALL AS POSSIBLE
  - STABILIZE AND/OR PROTECT DISTURBED AREAS AS SOON AS POSSIBLE.
  - KEEP STORM WATER RUNOFF VELOCITIES LOW.
  - RETAIN SEDIMENT WITHIN IMMEDIATE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO OR UPON COMMENCEMENT TO EARTHWORK ACTIVITIES.
- THE CONTRACTOR WILL PERFORM SWEEPING AS NEEDED TO REMOVE ANY SEDIMENT TRACKED OFF SITE. FREQUENCY OF SWEEPING WILL BE BASED ON SITE CONDITIONS. ALL DIRT AND MUD TRACKED ONTO PUBLIC ROADS SHALL BE REMOVED DAILY. SCRAPE DAILY OR AS NEEDED. SWEEP ROADS ONCE A WEEK. ROADS SHALL ALSO BE CLEANED IMMEDIATELY AFTER A RAIN EVENT.
- THE CONTRACTOR WILL PERFORM DUST CONTROL AS NEEDED BASED ON SITE CONDITIONS.
- DISTURBED AREAS THAT WILL REMAIN IDLE DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED, INCLUDING SOIL STOCKPILES, USING DTMB SESC BEST MANAGEMENT PRACTICES.
- ALL DISTURBED SURFACE AREAS (INCLUDING UTILITY TRENCHES) SHALL BE TEMPORARILY GRADED AND/OR DITCHED TO DIRECT WATER RUNOFF FROM SUCH AREAS TO SEDIMENTATION CONTROL DEVICES WHICH WILL PREVENT DISTURBING ERODED WATER CARRYING SOIL FROM ENTERING A WATERCOURSE, SEWER, OR ADJACENT LANDS. SUCH SEDIMENTATION CONTROL DEVICES SHALL INCLUDE BUT NOT BE LIMITED TO PROTECTIVE DITCHES, SEDIMENT TRAPS, SEDIMENT FILTERS, DITCH TRAPS, PIPE BARRIERS, STRAW BALE BERMERS AND FILTERS AS DETAILED AND REQUIRED AND LOCATED ON THE DRAWINGS. AFTER THE PROJECT WORK HAS BEEN COMPLETED, INSPECTED AND APPROVED, THE CONTRACTOR SHALL REMOVE ALL SEDIMENTATION CONTROL DEVICES, MATERIAL AND THEIR COLLECTED SILT AND DEBRIS AND COMPLETE THE PROJECT WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL MAINTAIN AND INSPECT SESC MEASURES THROUGHOUT THE COURSE OF THE PROJECT. RECOMMEND INSPECTING AND MAINTAINING EROSION AND SEDIMENTATION CONTROLS ON A DAILY BASIS. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AND MAINTAIN SESC MEASURES ONCE A WEEK AND AFTER RAIN EVENTS. COLLECTED SILT AND SEDIMENTATION SHALL BE REMOVED AS REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE SILT TRAPS OR SEDIMENTATION CONTROL DEVICES. IN SILT FENCE APPLICATIONS SEDIMENT SHALL BE REMOVED WHEN THE HEIGHT REACHES ONE HALF THE HEIGHT OF THE FABRIC. WHERE REQUIRED, THE CONTRACTOR SHALL REPLACE FILTER MATERIALS WHICH HAVE BECOME INEFFECTIVE DUE TO CONTAMINATION OR PHYSICAL DETERIORATION. THE CONTRACTOR SHALL INSPECT ALL SOIL AND EROSION AND SEDIMENTATION CONTROL DEVICES AFTER ALL STORM EVENTS.
- THE CONTRACTOR SHALL CORRECT NON-CONFORMING SESC MEASURES WITHIN 24 HOURS, IF WATERS OF THE STATE ARE BEING IMPACTED OR WITHIN 48 HOURS FOR ROUTINE MAINTENANCE ITEMS. OTHER SESC MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NEVER MORE THAN FIVE (5) DAYS AFTER DETECTION.
- THE CONTRACTOR SHALL COMPLETE PERMANENT SOIL EROSION CONTROL MEASURES FOR ANY DISTURBED LAND AREA WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. THE CONTRACTOR SHALL MAINTAIN TEMPORARY CONTROL MEASURES UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
- THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED. CARE SHALL BE TAKEN DURING REMOVAL TO PREVENT SOIL EROSION AND SEDIMENTATION.
- AFTER THE COMPLETION OF THE PROJECT, PERMANENT SESC MEASURES WILL BE MAINTAINED BY THE PROPERTY OWNER.

**DTMB SESC KEY LEGEND**

E5	DUST CONTROL		For use on construction sites, unpaved roads, etc. to reduce dust and sedimentation from wind and construction activities.
E6	MULCH		On flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosive forces from wind or water.
E9	MULCH BLANKETS		On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.

□ DENOTES PERMANENT MEASURE

○ DENOTES TEMPORARY MEASURE

**WATERBODY STATEMENT:**  
NEAREST WATERBODY APPEARS TO BE BOW LAKE, LOCATED ±4,200 FEET EAST OF THE PROJECT AREA

													By
													Revision
													Date
													No.

**GENERAL NOTES  
SANITARY SWR REPLACE. VARIOUS LOCATIONS  
VILLAGE OF ELK RAPIDS**

Date Issued:	PRELIMINARY
Date Surveyed:	2023
Designed By:	TNK
Drawn By:	TNK
Checked By:	MJH
Scale:	AS NOTED
Original sheet size is 22x34	
Location: T29N R09W S21 VILLAGE OF ELK RAPIDS ANTRIM COUNTY MICHIGAN ---	
Project Number:	2023150004
Sheet:	<b>2</b>



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**DEMOLITION  
 SANITARY SWR REPLACE, VARIOUS LOCATIONS  
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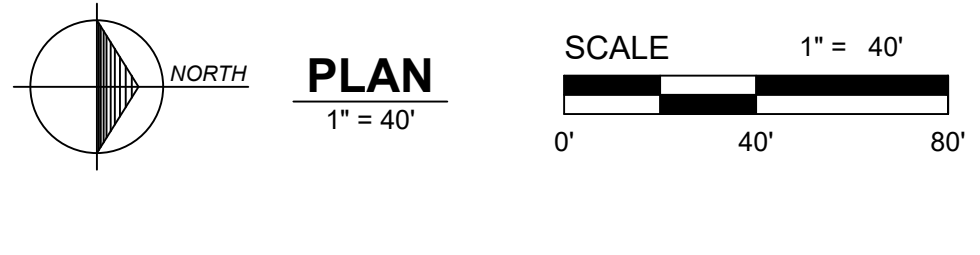
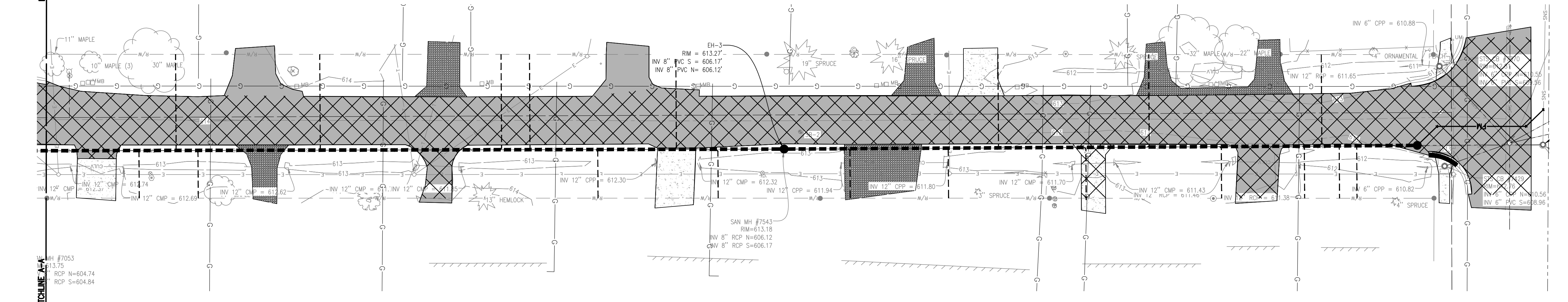
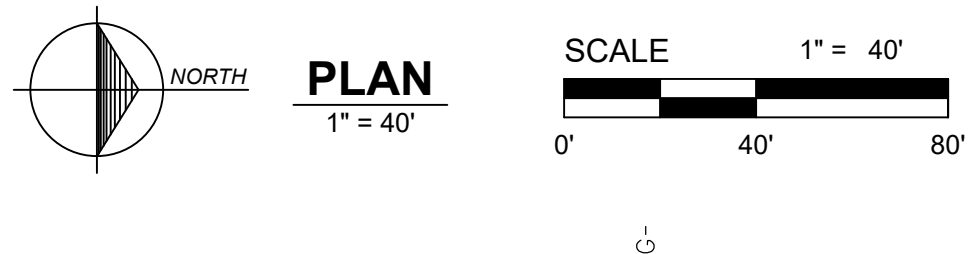
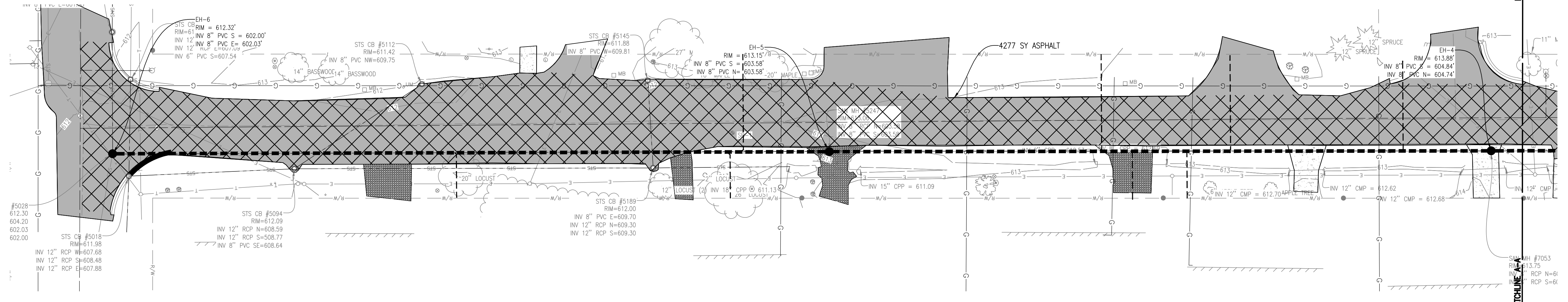
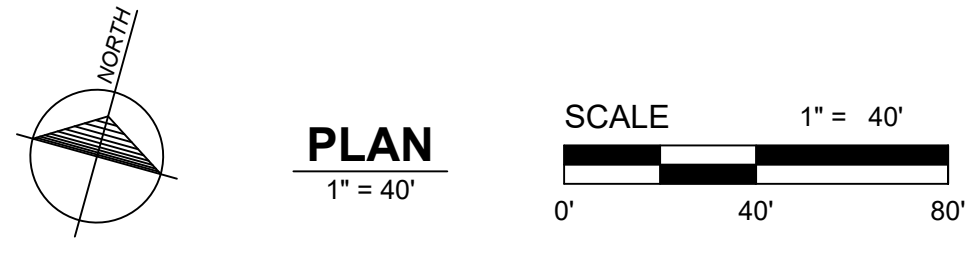
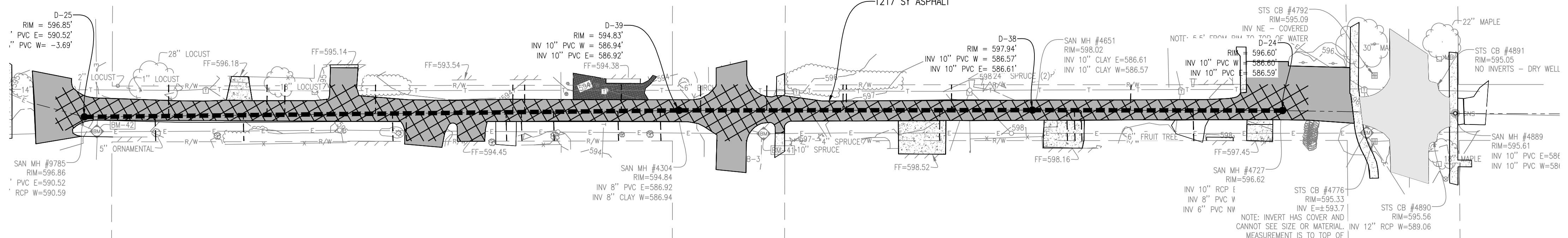
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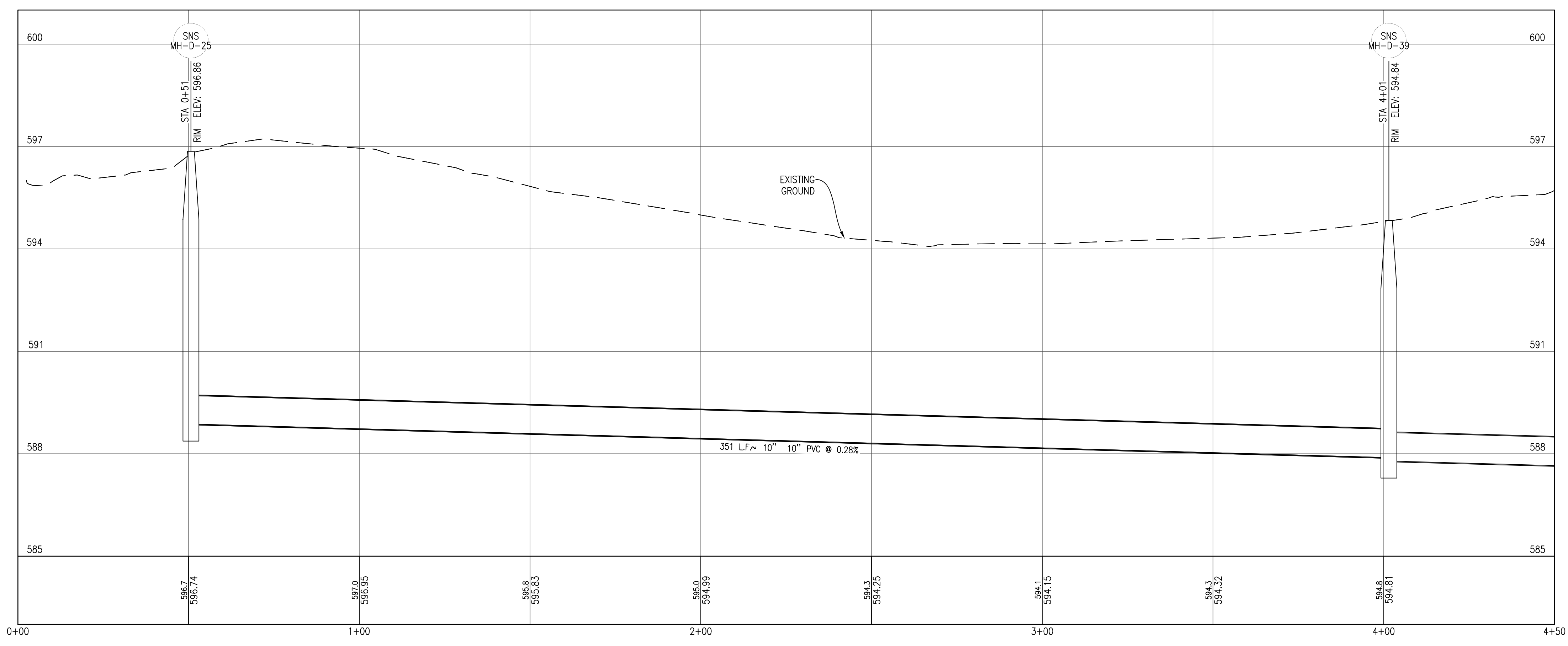
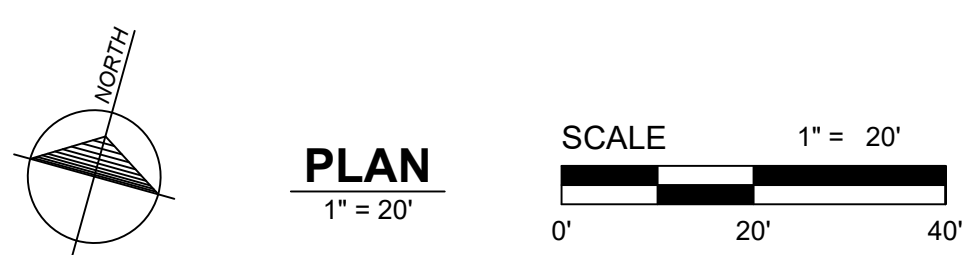
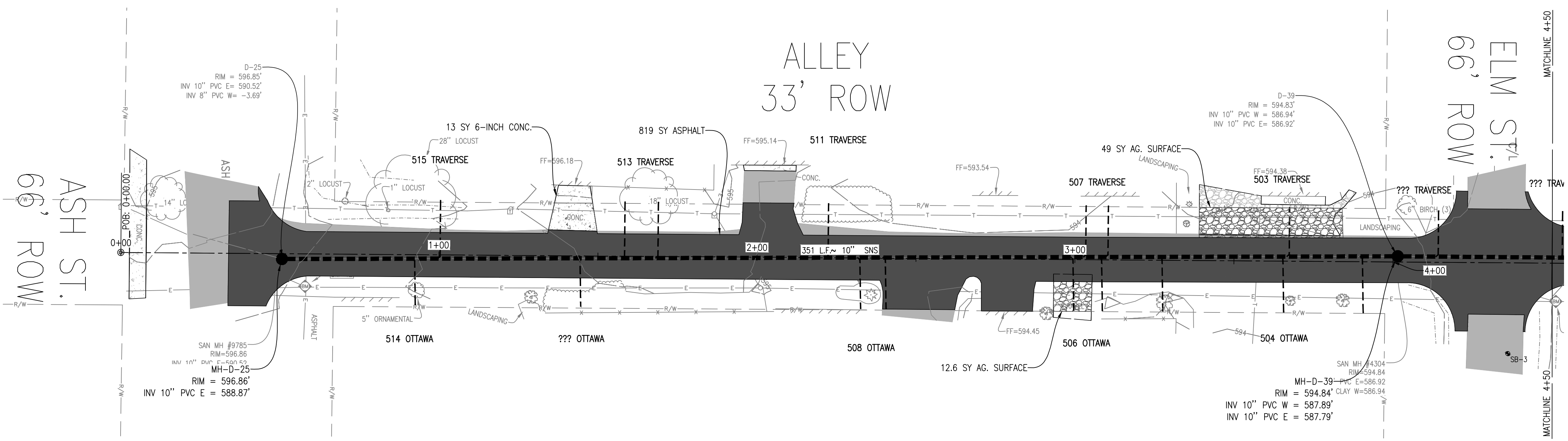
Location:  
 T29N R09W S21  
 VILLAGE OF ELK RAPIDS  
 ANTRIM COUNTY  
 MICHIGAN

Project Number:  
 2023150004

Sheet:  
**3**



SEWER SERVICE SCHEDULE		
Item No.	ADDRESS	SEWER SERVICE SIZE
1	503 Traverse St.	6-INCH
2	504 Ottawa St.	6-INCH
3	506 Ottawa St.	6-INCH
4	507 Traverse St.	6-INCH
5	508 Ottawa St.	6-INCH
6	511 Traverse St.	6-INCH
7	513 Traverse St.	6-INCH
8	514 Ottawa St.	6-INCH
9	515 Traverse St.	6-INCH



**PROFILE**  
 HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1" = 2'



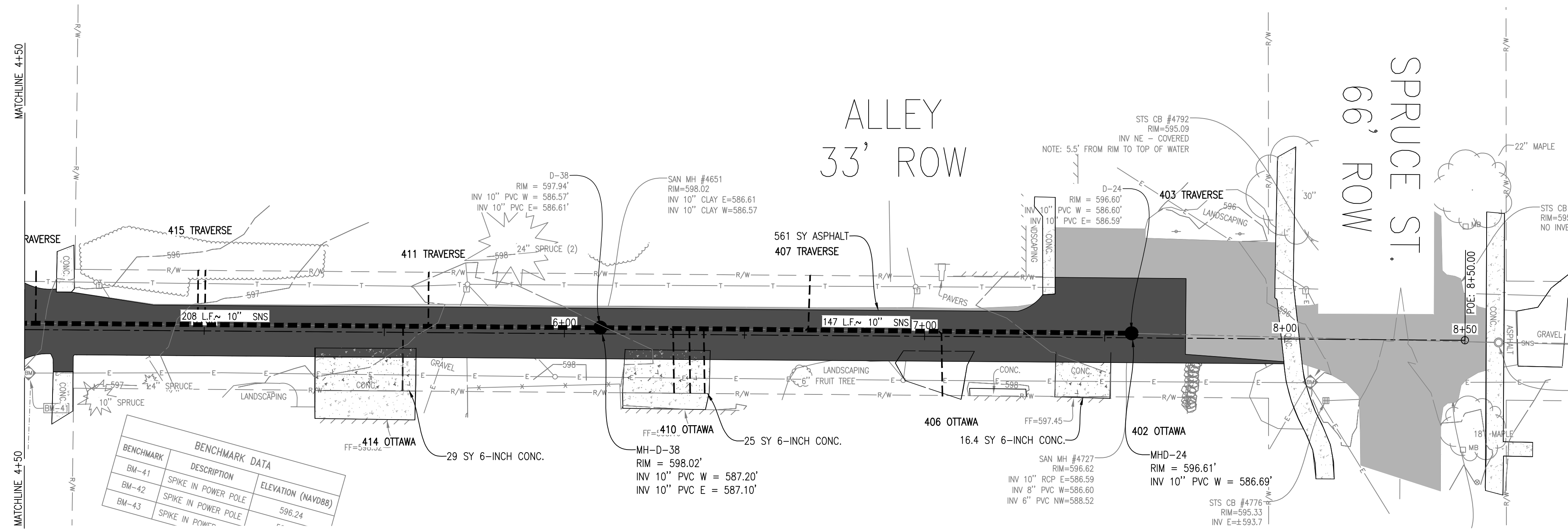
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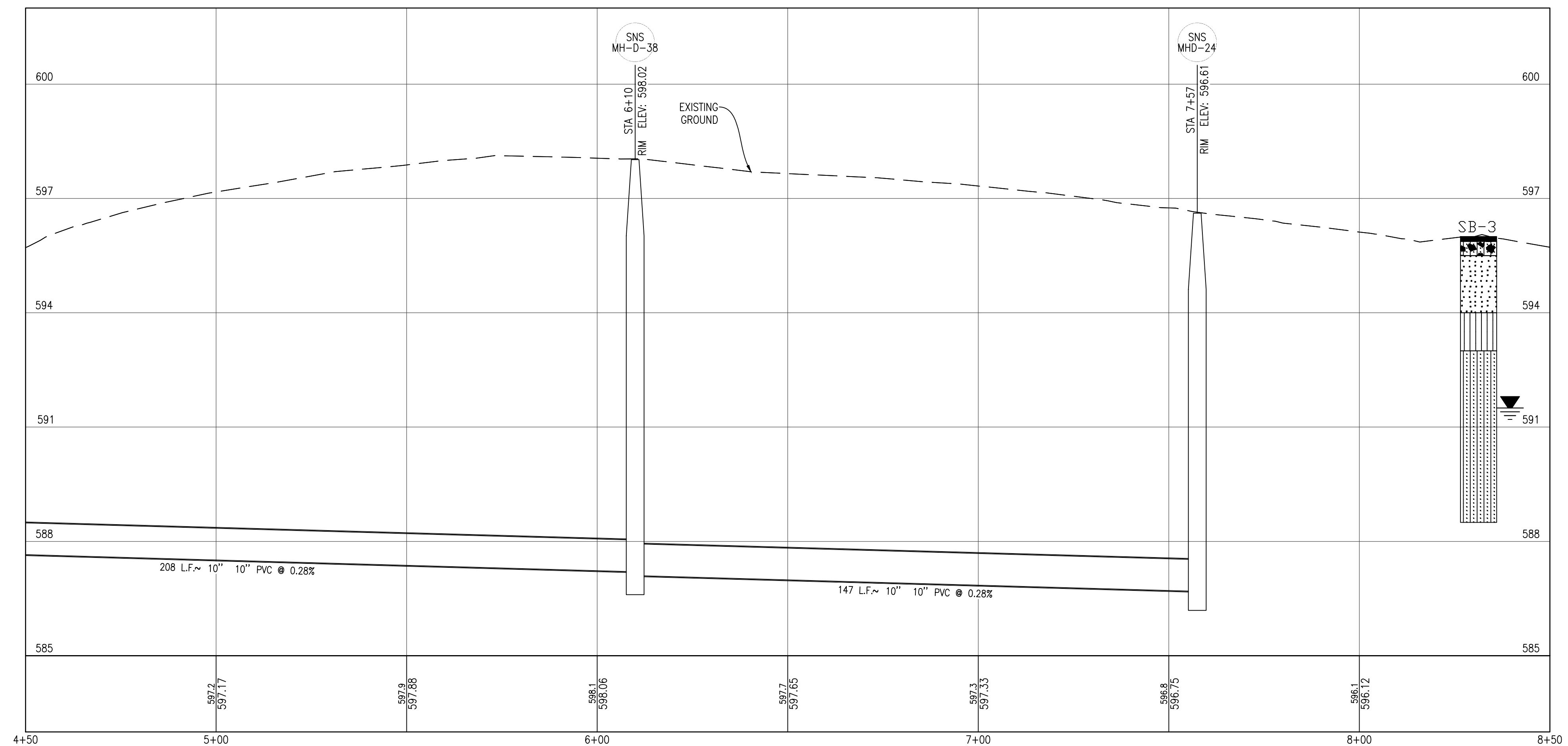
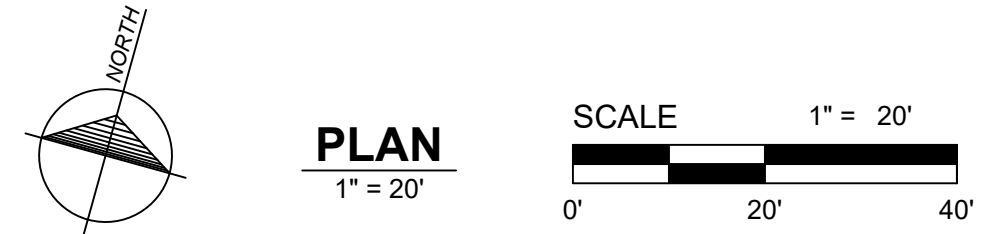
**STA. 0+00 TO STA. 4+50**  
**SANITARY SWR REPLACE, VARIOUS LOCATIONS**  
 VILLAGE OF ELK RAPIDS

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 Sheet: 4

SEWER SERVICE SCHEDULE		
Item No.	ADDRESS	SEWER SERVICE SIZE
10	402 Ottawa St.	6-INCH
11	403 Traverse St.	6-INCH
12	406 Ottawa St.	6-INCH
13	407 Traverse St.	6-INCH
14	410 Ottawa St.	6-INCH
15	411 Traverse St.	6-INCH
16	414 Ottawa St.	6-INCH
17	415 Traverse St.	6-INCH



BENCHMARK DATA		
BENCHMARK	DESCRIPTION	ELEVATION (NAVD88)
BM-41	SPIKE IN POWER POLE	
BM-42	SPIKE IN POWER POLE	596.24
BM-43	SPIKE IN POWER POLE	



**PROFILE**  
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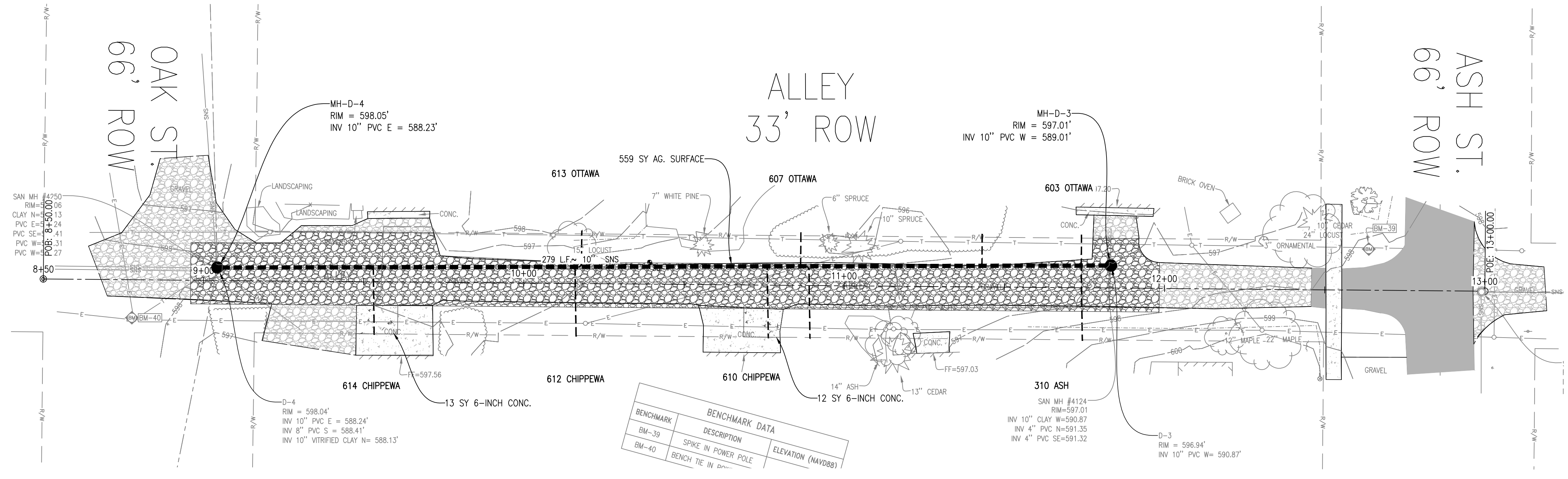
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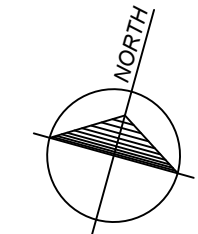
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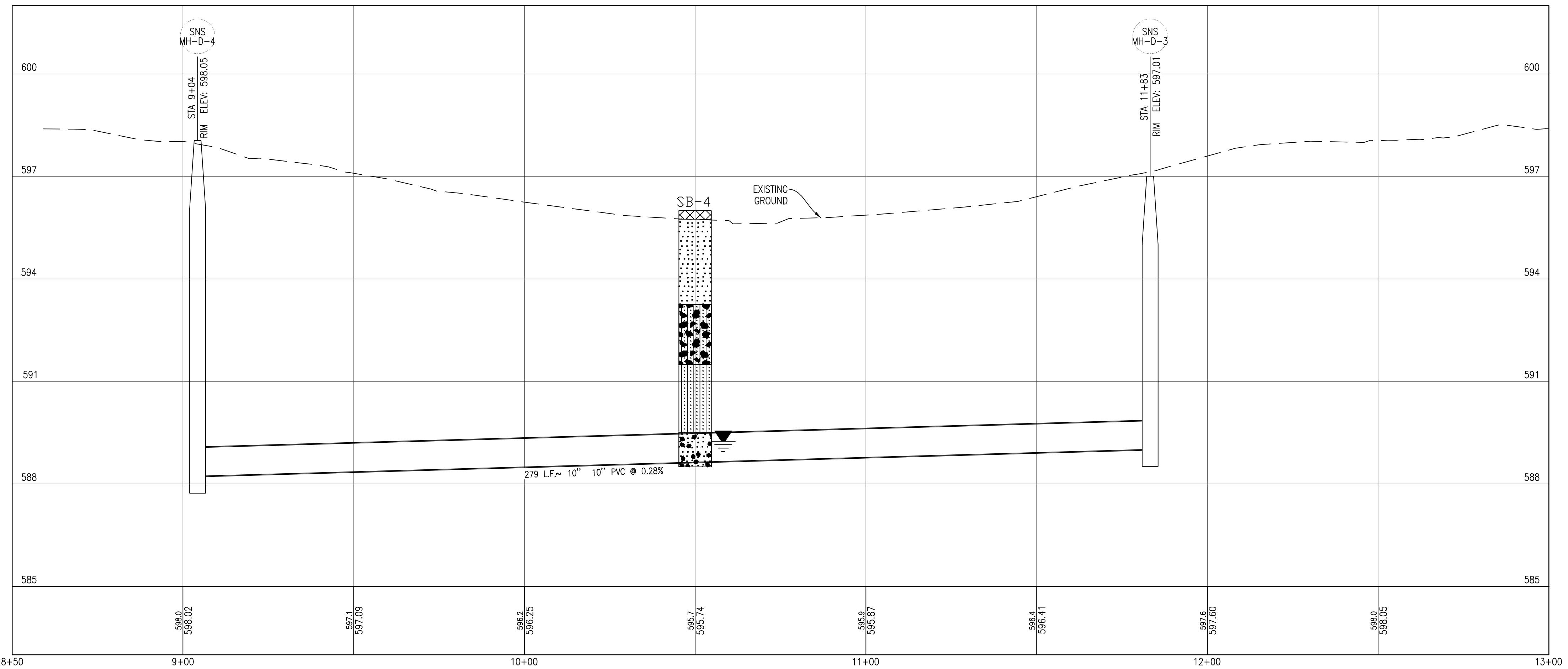
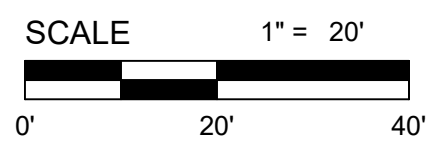
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19	607 Ottawa St.	6-INCH
20	613 Ottawa St.	6-INCH
21	610 Chippewa St.	6-INCH
22	612 Chippewa St.	6-INCH
23	614 Chippewa St.	6-INCH
24	310 Ash St.	6-INCH



BENCHMARK DATA		
BENCHMARK	DESCRIPTION	ELEVATION (NAVD88)
BM-39	SPIKE IN POWER POLE	
BM-40	BENCH TIE IN P...	



PLAN  
1" = 20'



**PROFILE**  
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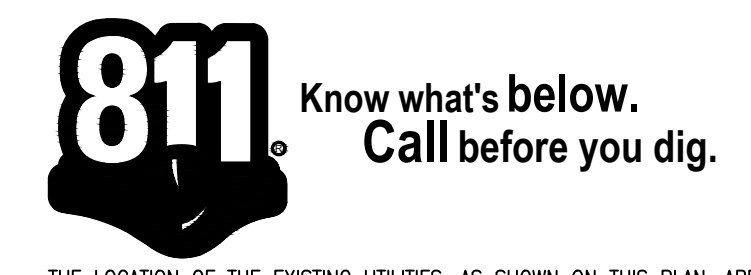
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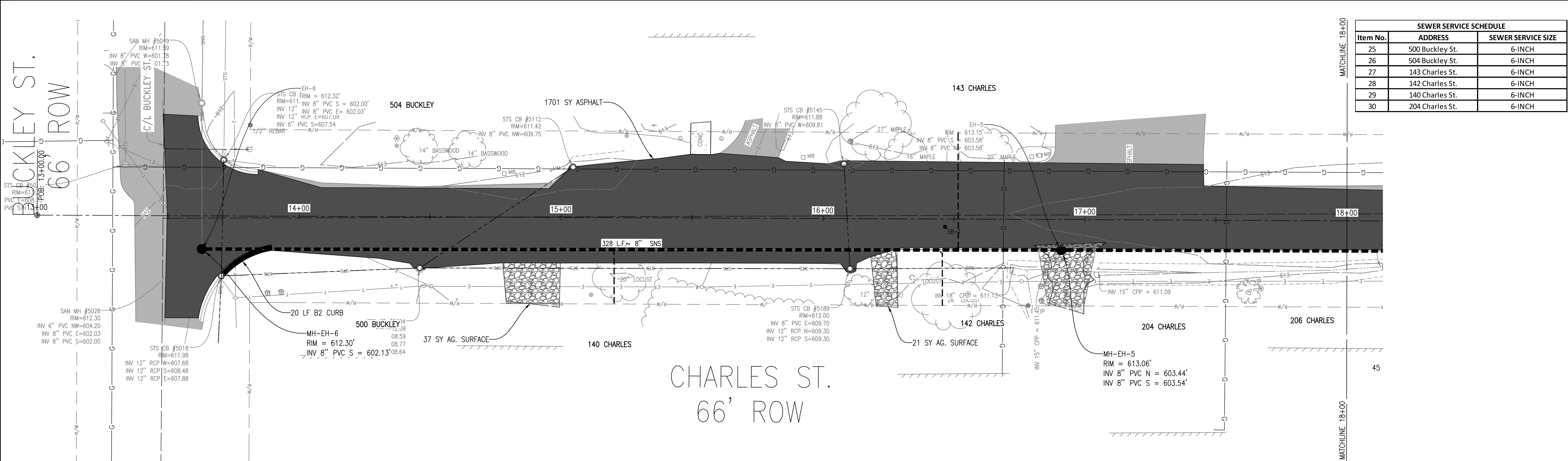
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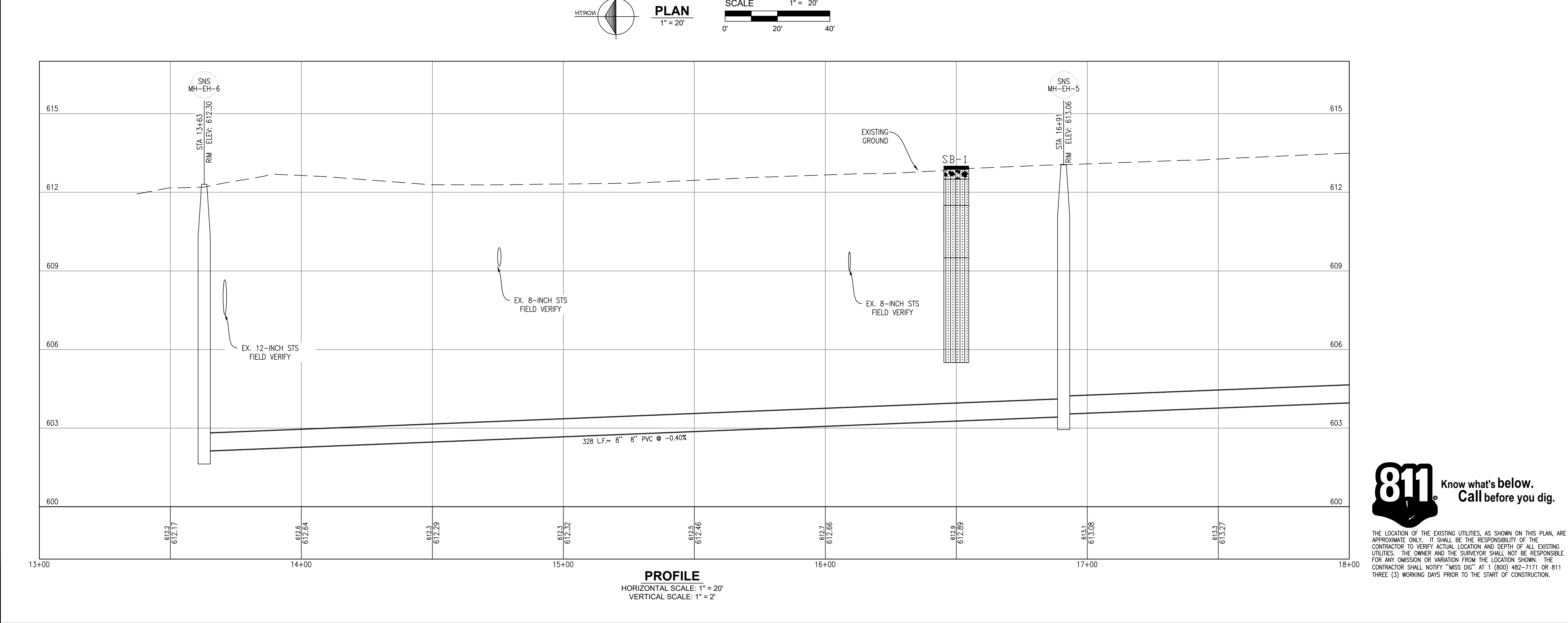


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DRILLING  
LANDSCAPE ARCHITECTURE



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

THE LOCATION OF THE EXISTING UTILITIES, AS SHOWN ON THIS PLAN, ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY "MISS DIG" AT 1 (800) 482-7171 OR 811 THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

Original sheet size is 22x34

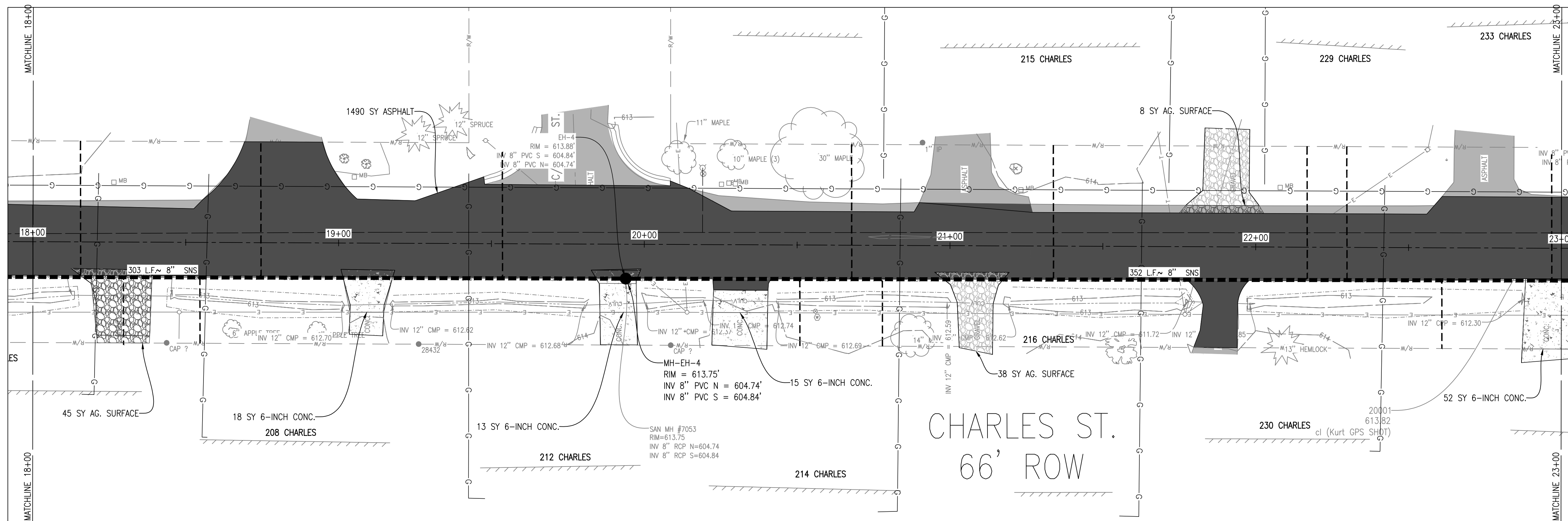
Location:  
T29N R09W S21  
VILLAGE OF ELK RAPIDS  
ANTRIM COUNTY  
MICHIGAN

Project Number:  
2023150004

Sheet:  
7

No.	Date	Revision	By

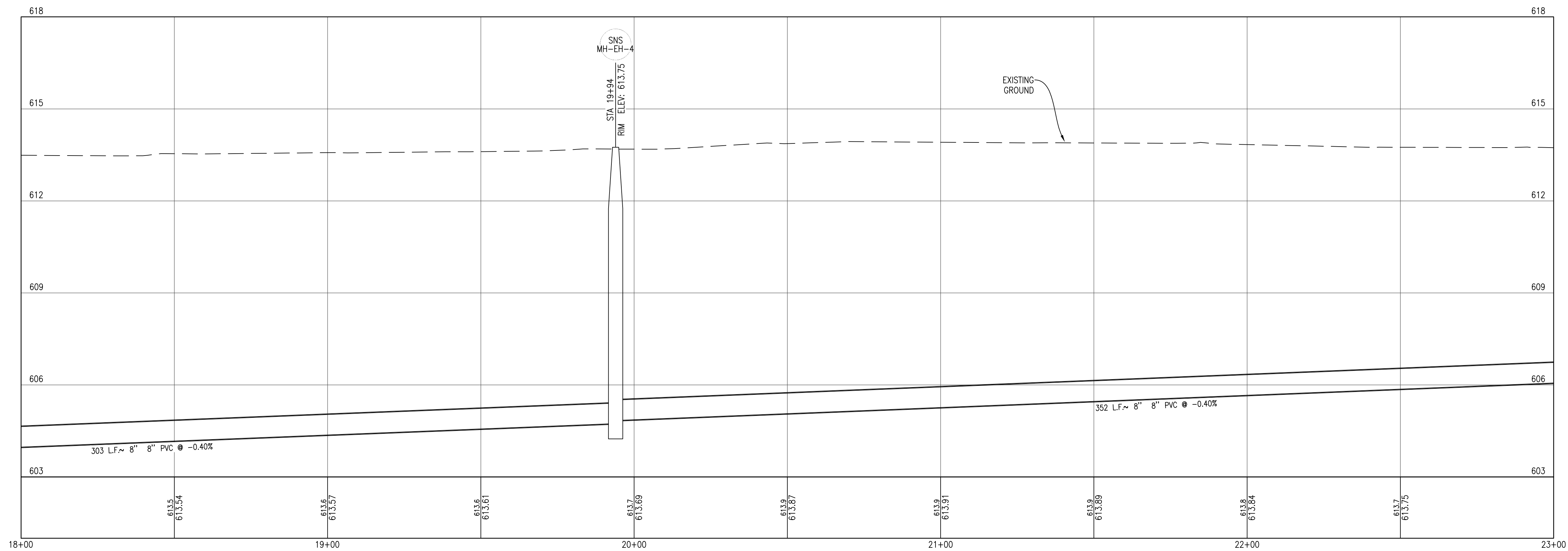
Date Issued: PRELIMINARY  
Date Surveyed: 2023  
Designed By: TNK  
Drawn By: TNK  
Checked By: MJH  
Scale: AS NOTED



Item No.	ADDRESS	SEWER SERVICE SIZE
31	208 Charles St.	6-INCH
32	212 Charles St.	6-INCH
33	213 Charles St.	6-INCH
34	214 Charles St.	6-INCH
35	215 Charles St.	6-INCH
36	216 Charles St.	6-INCH
37	229 Charles St.	6-INCH
38	230 Charles St.	6-INCH
39	233 Charles St.	6-INCH

**Gosling Czubak**  
 engineering sciences, inc.  
 1280 Business Park Dr.  
 Traverse City, Michigan  
 231-946-9191 phone  
 info@goslingczubak.com  
 www.goslingczubak.com

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**SURVEYING**  
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**CONSTRUCTION SERVICES**  
**DRILLING**  
**LANDSCAPE ARCHITECTURE**



**PROFILE**  
 HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1" = 2'

No.	Date	Revision	By

**STA. 18+00 TO STA. 23+00**  
**SANITARY SWR REPLACE. VARIOUS LOCATIONS**  
**VILLAGE OF ELK RAPIDS**

Date Issued: PRELIMINARY  
 Date Surveyed: 2023  
 Designed By: TNK  
 Drawn By: TNK  
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 Scale: AS NOTED  
 Original sheet size is 22x34

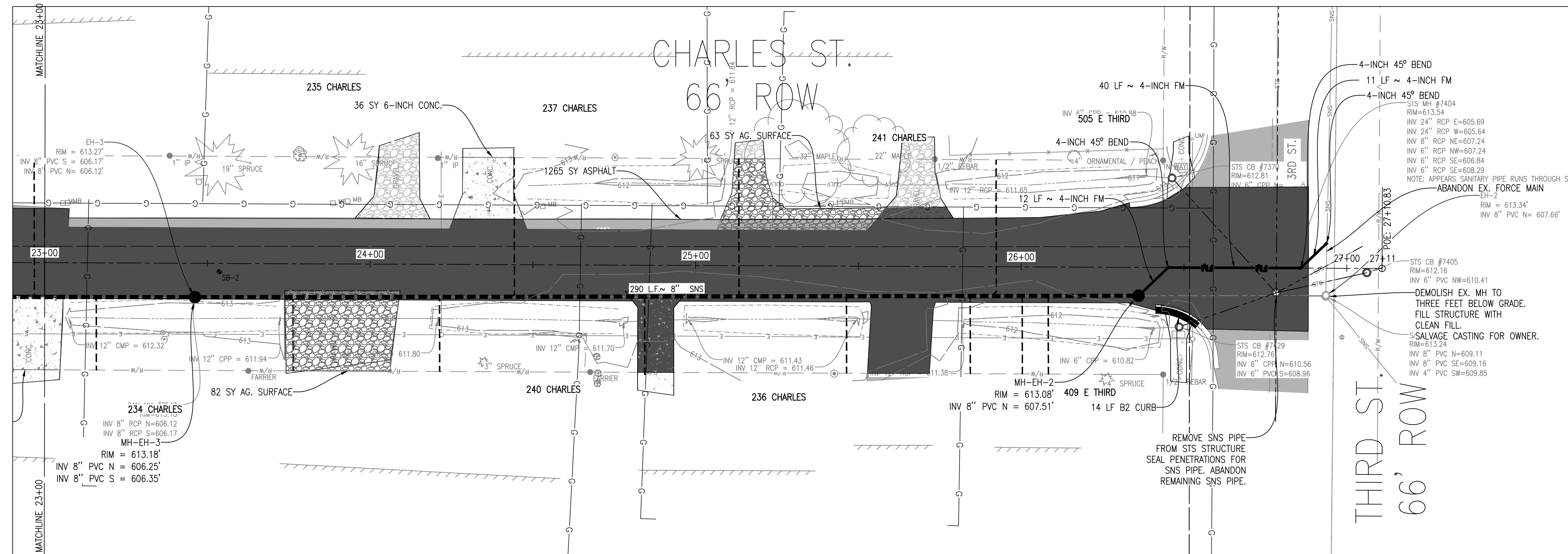


Location: T29N R09W S21  
 VILLAGE OF ELK RAPIDS  
 ANTRIM COUNTY  
 MICHIGAN

Project Number: 2023150004  
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SEWER SERVICE SCHEDULE		
Item No.	ADDRESS	SEWER SERVICE SIZE
40	234 Charles St.	6-INCH
41	235 Charles St.	6-INCH
42	236 Charles St.	6-INCH
43	237 Charles St.	6-INCH
44	240 Charles St.	6-INCH
45	241 Charles St.	6-INCH
46	409 E 3rd St.	6-INCH

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No.	Date	Revision	By

No.	Date	Revision	By

**STA. 23+00 TO STA. 27+11**  
**SANITARY SWR REPLACE, VARIOUS LOCATIONS**  
**VILLAGE OF ELK RAPIDS**

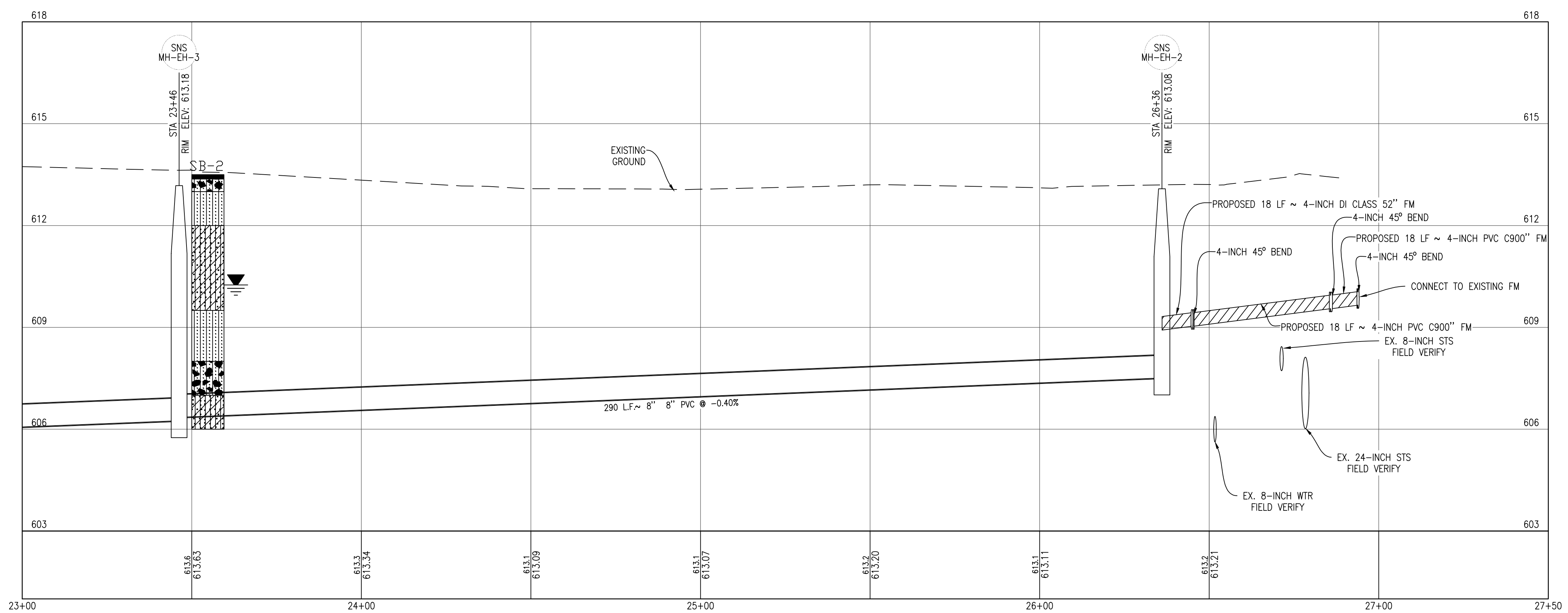
Date Issued: PRELIMINARY  
 Date Surveyed: 2023  
 Designed By: TNK  
 Drawn By: TNK  
 Checked By: MJH  
 Scale: AS NOTED

Original sheet size is 22x34

Location:  
 T29N R09W S21  
 VILLAGE OF ELK RAPIDS  
 ANTRIM COUNTY  
 MICHIGAN

Project Number:  
 2023150004

Sheet:  
**9**



**PROFILE**  
 HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1" = 2'

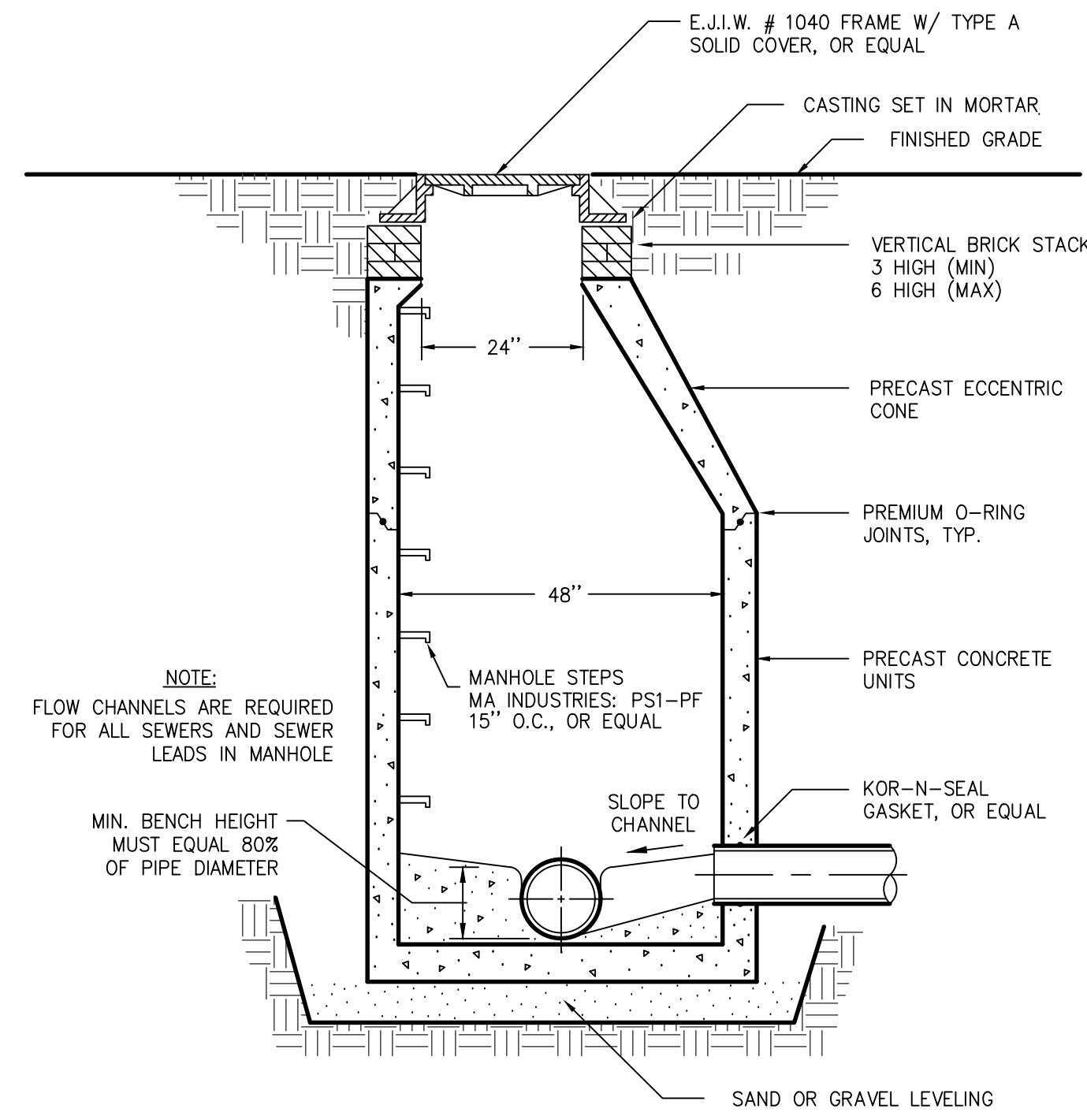


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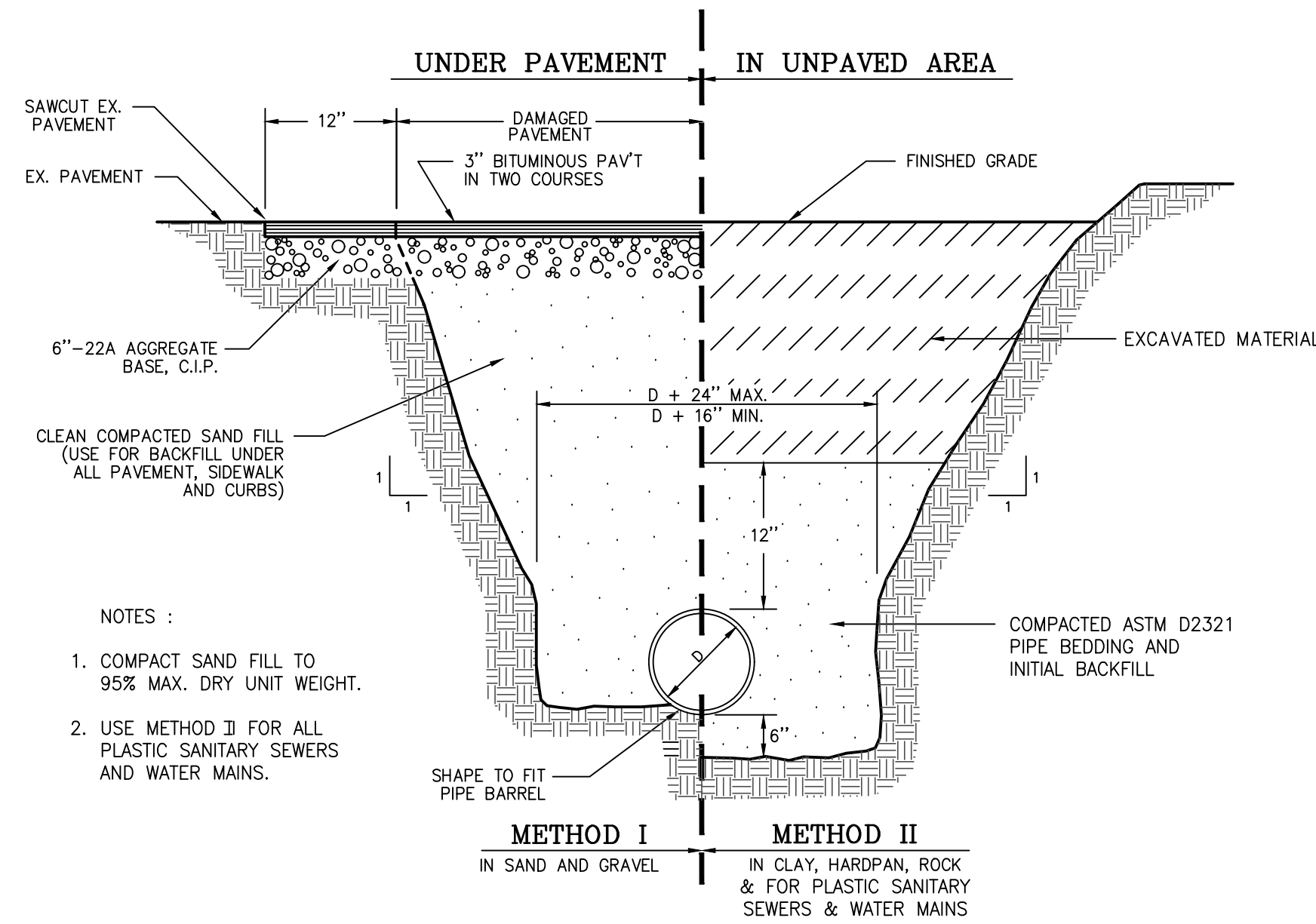
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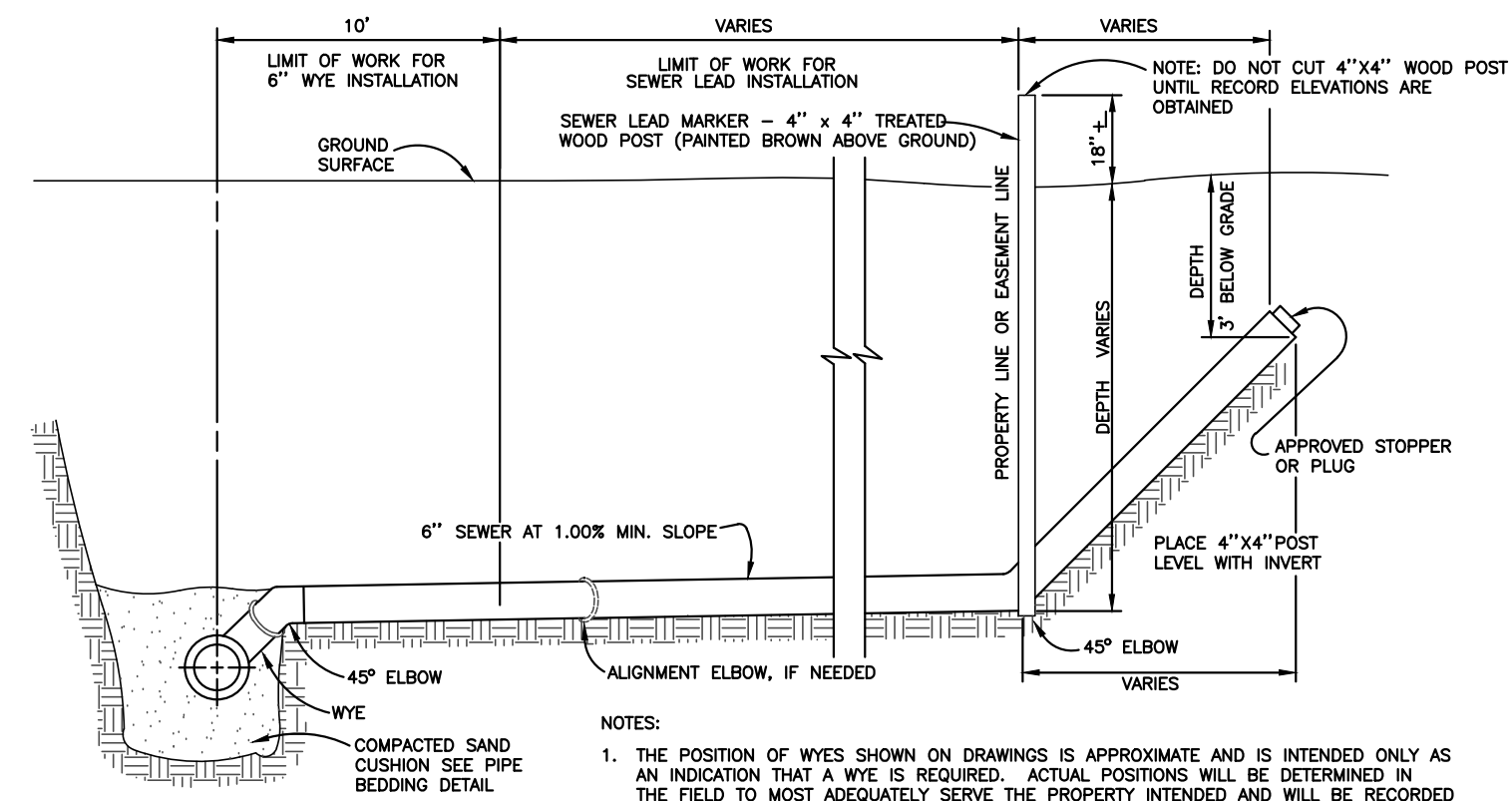
**SANITARY MANHOLE DETAIL**

NOT TO SCALE



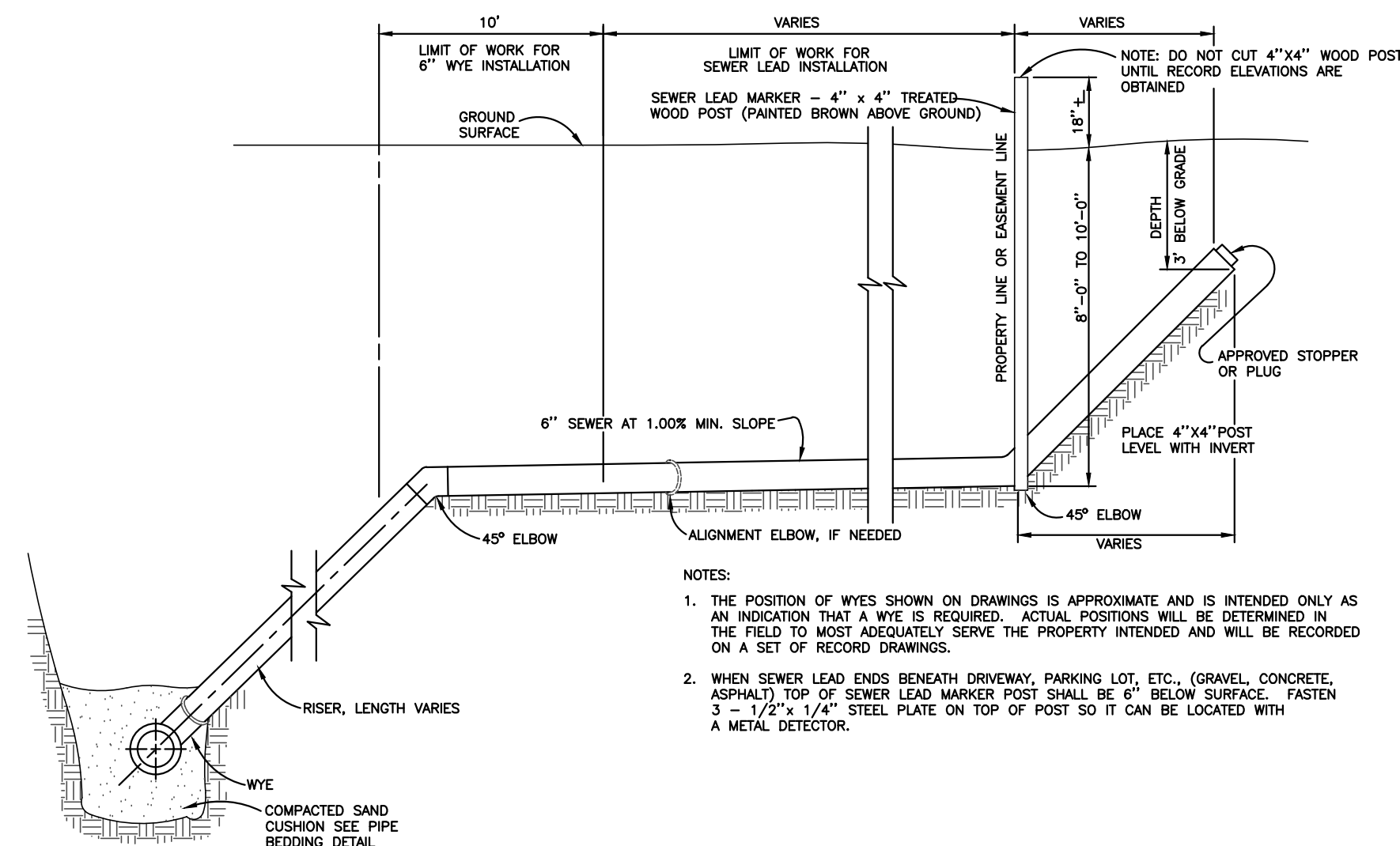
**TRENCH DETAIL**

NOT TO SCALE



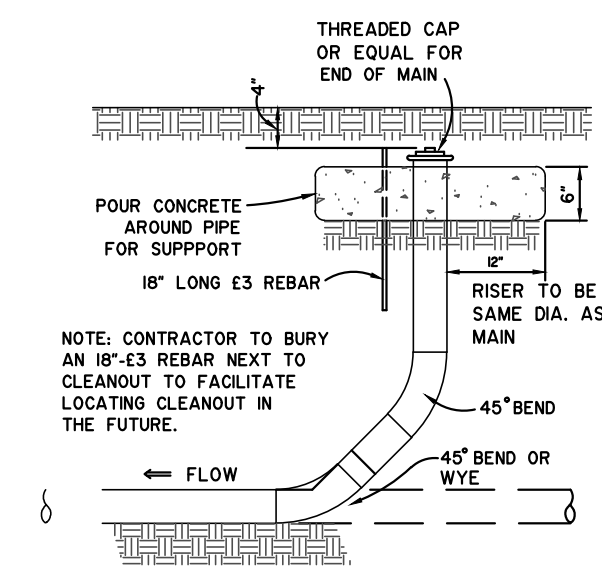
**WYE AND SEWER LEAD INSTALLATION DETAIL**

NO SCALE



**DEEP SEWER  
 WYE AND SEWER LEAD INSTALLATION DETAIL**

NO SCALE



**6\"/>**

NO SCALE

By	Revision	Date	No.

**DETAILS  
 SANITARY SWR REPLACE. VARIOUS LOCATIONS  
 VILLAGE OF ELK RAPIDS**

Date Issued:	2/21/2024
Date Surveyed:	12/3/2021
Designed By:	TNK
Drawn By:	TNK
Checked By:	MJH
Scale:	AS NOTED
Original sheet size is	22x34
Location:	T20N R09W S21 VILLAGE OF ELK RAPIDS ANTRIM COUNTY MICHIGAN
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Sheet:	10