

SIMMS CHEVROLET

NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY

FINAL ENGINEERING PACKAGE

4220 WEST VIENNA ROAD
CLIO, MI 48420

PART OF THE SOUTHEAST 1/4 OF SECTION 16
TOWNSHIP 09 NORTH, RANGE 06 EAST
VIENNA TOWNSHIP, COUNTY OF GENESEE, STATE OF MICHIGAN

PROPERTY DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4, SECTION 16, TOWN 9-NORTH, RANGE 6-EAST, VIENNA TOWNSHIP, GENESEE COUNTY, MICHIGAN MORE PARTICULARLY DESCRIBED AS:

ALL OF SAID SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 16;

EXCEPT THE EAST 352 FEET OF SAID SOUTHWEST 1/4 OF SOUTHEAST 1/4 LYING NORTH OF AND EAST OF THE "STOREBECK SUBDIVISION" AS RECORDED IN GENESEE COUNTY REGISTER IF DEEDS;

ALSO EXCEPT THE WEST 260 FEET OF SAID SOUTHWEST 1/4 OF SOUTHEAST 1/4 LYING NORTH OF SAID "STOREBECK SUBDIVISION";

ALSO EXCEPT ALL OF LOT 1, LOT 2 AND LOT A OF SAID "STOREBECK SUBDIVISION";

ALSO EXCEPT ALL OF LOTS 8 THRU LOT 11 OF SAID "STOREBECK SUBDIVISION";

ALSO EXCEPT THE SOUTHERLY 50.85 FEET OF LOTS 3 THRU LOT 7 OF SAID "STOREBECK SUBDIVISION".

DRAWING INDEX:

●	12-15-2025	C000 — COVER SHEET
●	12-15-2025	C100 — TOPOGRAPHIC SURVEY PLAN
●	12-15-2025	C101 — OVERALL SITE PLAN
●	12-15-2025	C102 — SITE REMOVAL PLAN
●	12-15-2025	C200 — SITE LAYOUT PLAN
●	12-15-2025	C300 — SITE GRADING & STORM SEWER PLAN
●	12-15-2025	C301 — SOIL EROSION CONTROL PLAN
●	12-15-2025	C302 — DRAINAGE AREA MAP & STORM WATER DESIGN CALCULATIONS
●	12-15-2025	C400 — NEW SANITARY SEWER PLAN
●	12-15-2025	C401 — NEW WATER MAIN PLAN
●	12-15-2025	C402 — SITE PHOTOMETRIC PLAN
●	12-15-2025	C500 — SITE LANDSCAPE PLAN
○		A1 — FLOOR PLAN
○		A2 — EXTERIOR ELEVATIONS
○		A3 — EXTERIOR ELEVATIONS
●	12-15-2025	— SANITARY SEWER DETAILS (COUNTY)
●	12-15-2025	— PRESSURE PIPE DETAILS (COUNTY)
●	12-15-2025	— GENERAL CONSTRUCTION NOTES (COUNTY)

●	DATE
●	MOST RECENT ISSUE / REVISION DATE
●	FILLED CIRCLE INDICATES SUBMITTED DRAWING

BENCHMARKS (NAVD88):

BM #1	TOP ARROW ON FIRE HYDRANT LOCATED APPROXIMATELY 63' WEST OF THE FENCE ALONG THE WEST PROPERTY LINE OF SIMMS CHEVROLET AND 608' NORTH OF ☉ VIENNA ROAD. ELEVATION = 696.87
BM #2	TOP ARROW ON FIRE HYDRANT LOCATED APPROXIMATELY 153' WEST OF ☉ SIMMS MAIN ENTRANCE AND 53' NORTH OF ☉ VIENNA ROAD. ELEVATION = 700.48
BM #3	TOP ARROW ON FIRE HYDRANT LOCATED ON THE EAST OF THE SIMMS SHOWROOM APPROXIMATELY 148' EAST OF ☉ SIMS MAIN ENTRANCE AND 234' NORTH OF ☉ VIENNA ROAD. ELEVATION = 701.16

GCDC-WWS CONTRACTOR ALERT STATEMENT:

THIS PROJECT HAS BEEN DESIGNED IMPLEMENTING THE LATEST GCDC-WWS DESIGN SPECIFICATIONS (7TH EDITION). CAREFULLY REVIEW THE NOTES, DETAILS, AND DESIGN PRIOR TO SUBMITTING A BID. FULL COMPLIANCE WITH THE STANDARDS WILL BE REQUIRED.

NPDES STATEMENT:

THE OWNER WILL NOT NEED TO OBTAIN AN NPDES STORM WATER DISCHARGE PERMIT FROM THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE). TOTAL DISTURBED AREA: 1.41 ACRES

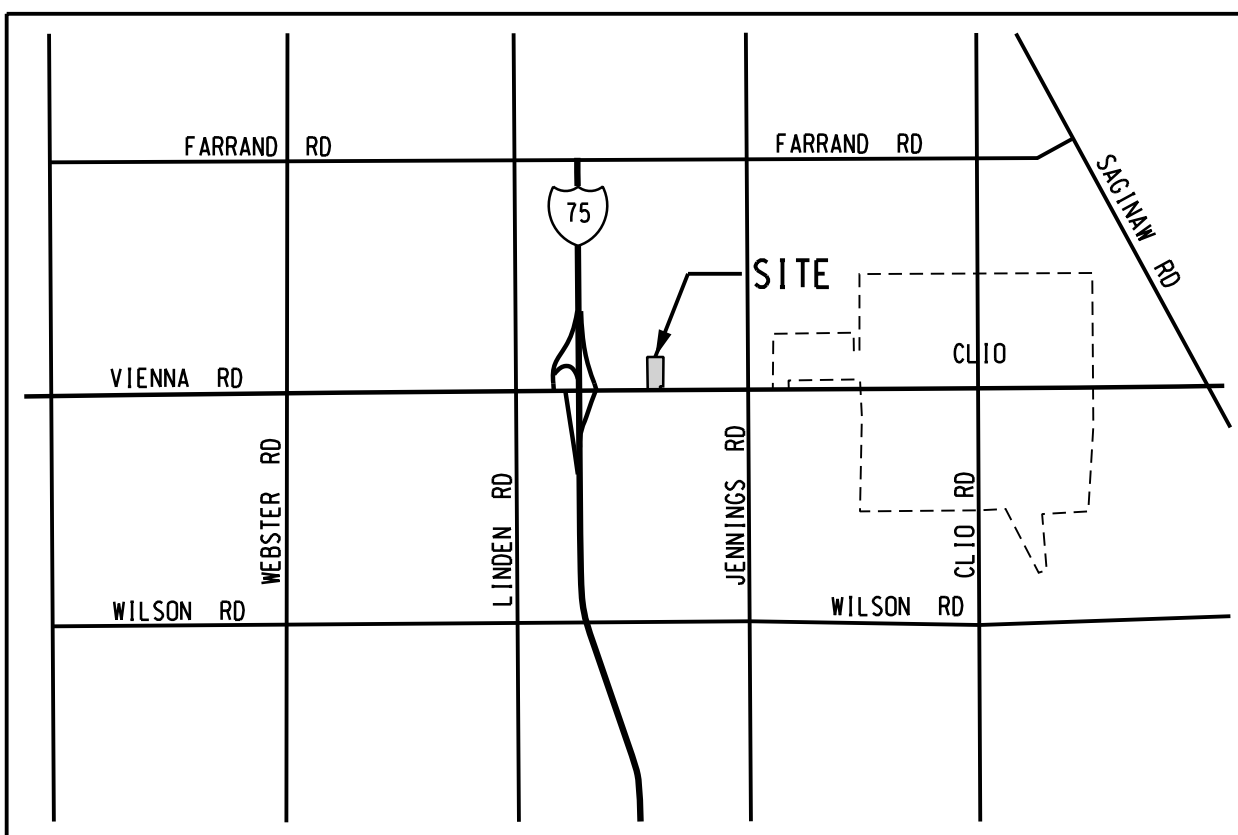
TOPOGRAPHIC SURVEY STATEMENT:

THE EXISTING FEATURES SHOWN ON THIS PLAN ARE FROM AN ACTUAL TOPOGRAPHIC SURVEY PERFORMED BY GRIGGS QUADERER, INC. IN MARCH OF 2024. THE UNDERGROUND UTILITIES SHOWN WERE EITHER VERIFIED BY THIS SURVEY OR WERE PLOTTED IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE. NO EXISTING UTILITIES WERE EXPOSED FOR VERIFICATION OF LOCATION AND ELEVATION. NO GUARANTEES ARE GIVEN THAT THE LOCATIONS ARE ABSOLUTELY ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT.

OWNER: BRUCE SIMMS
SIMMS CHEVROLET
4220 WEST VIENNA ROAD
CLIO, MI 48420
PHONE: (810) 686-1700
EMAIL: BRUCESIMMS1@gmail.com

ARCHITECT: JOHN COSTA, AIA
ARCHITECTURAL DESIGN & CONSULTATION
417 OLDMILL DRIVE
FLUSHING, MI 48433
PHONE: (810) 659-5275
EMAIL: JNL.COSTA@SBCGLOBAL.NET

ENGINEER: RUDY QUADERER
GRIGGS QUADERER, INC.
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48439
PHONE: (810) 695-0154
EMAIL: RQUADERER@GQINCORP.COM

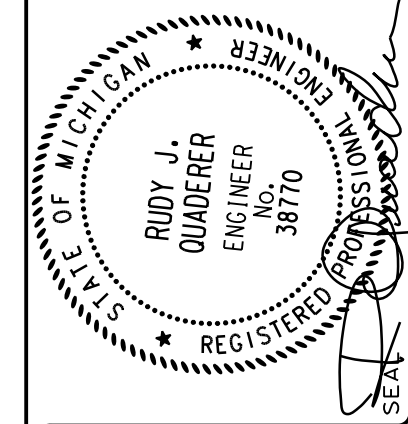


LOCATION MAP
NOT TO SCALE



STANDARD LEGEND		
DESCRIPTION	PROPOSED	EXISTING
BUILDING		
STORM SEWER		
SANITARY SEWER		
WATER		
GAS LINE		
ELECTRIC LINE		
TELEPHONE LINE		
MANHOLE		
CATCH BASIN		
FIRE HYDRANT		
GATE VALVE & WELL		
POWER POLE		
LIGHT POLE		
CURB & GUTTER		
FENCE		
DECIDUOUS TREE		
EVERGREEN TREE		
EASEMENT		
WETLAND BOUNDARY		
SIGN		
ASPHALT SURFACE		
CONCRETE SURFACE		
SOIL BORING		
SPOT ELEVATION		
CONTOUR LINE		

AGENCY CONTACT INFORMATION					
AGENCY	SUBMITTAL DATE	STATUS	AGENCY	SUBMITTAL DATE	STATUS
CYNTHIA BRYAN VIENNA TOWNSHIP 3400 W. VIENNA ROAD CLIO, MI 48420 PH: (810) 686-7580	08-20-2024	APPROVED	SOIL EROSION CONTROL GCDC-WWS DION BURROUGHS G-4610 BEECHER RD. FLINT, MI 48532 PH: 810-732-7870	02-28-2025	UNDER REVIEW
SANITARY GCDC-WWS LYNNETTE WEINZ, PE G-4610 BEECHER RD. FLINT, MI 48532 PH: 810-732-7870	02-28-2025	UNDER REVIEW	IPP GCDC-WWS THAD DOMICK G-4610 BEECHER RD. FLINT, MI 48532 PH: 810-732-7870	02-28-2025	UNDER REVIEW
STORM GCDC-SWM HEATHER KRONENBERG G-4608 BEECHER RD. FLINT, MI 48532 PH: 810-732-1590	-	-	ROAD GC ROAD COMMISSION BILL DELORENZO 211 W. OAKLEY ST. FLINT, MI 48503 PH: 810-767-4920	-	NOT REQUIRED



NO.	DATE	SUBJECT
12-15-25	ISSUED TO VIENNA TWP.	
04-09-25	ISSUED TO CONTRACTOR	
02-28-25	ISSUED TO GCDC-WWS	
08-20-24	VIENNA TWP. (SITE PLAN APP.)	

DRAWN	BRZEZINSKI
DESIGNED	
CHECKED	
FIELD CREW TH / KM	

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CLIO, MI 48420

COVER SHEET

Griggs Quaderer, Inc.
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WWW.GQINCORP.COM
RUDY@GQINCORP.COM
CHRIS@GQINCORP.COM

CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING

20th ANNIVERSARY
2004 - 2024

PHASE: SPA
JOB NO.: 240201
C000

PROPERTY DESCRIPTION:

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GENERAL UTILITY NOTE:

THE UTILITIES AS SHOWN ON THIS DOCUMENT WERE EITHER VERIFIED BY AN ACTUAL FIELD SURVEY OR WERE PLOTTED IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE. GRIGGS QUADERER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN INCLUDE ALL POSSIBLE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, GRIGGS QUADERER DOES NOT GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH GRIGGS QUADERER DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE UNDERGROUND UTILITY PIPE SIZES AS SHOWN ON THIS DOCUMENT WERE OBTAINED EITHER BY RECORD PLAN INFORMATION OR BY FIELD MEASUREMENTS. GRIGGS QUADERER CAN NOT GUARANTEE THE ACCURACY OF THE PIPE SIZES OR THEIR LOCATIONS EITHER BY FIELD MEASUREMENT OR BY RECORD DATA AND SHALL NOT BE HELD RESPONSIBLE FOR ANY DISCREPANCIES REGARDING THESE UTILITIES.

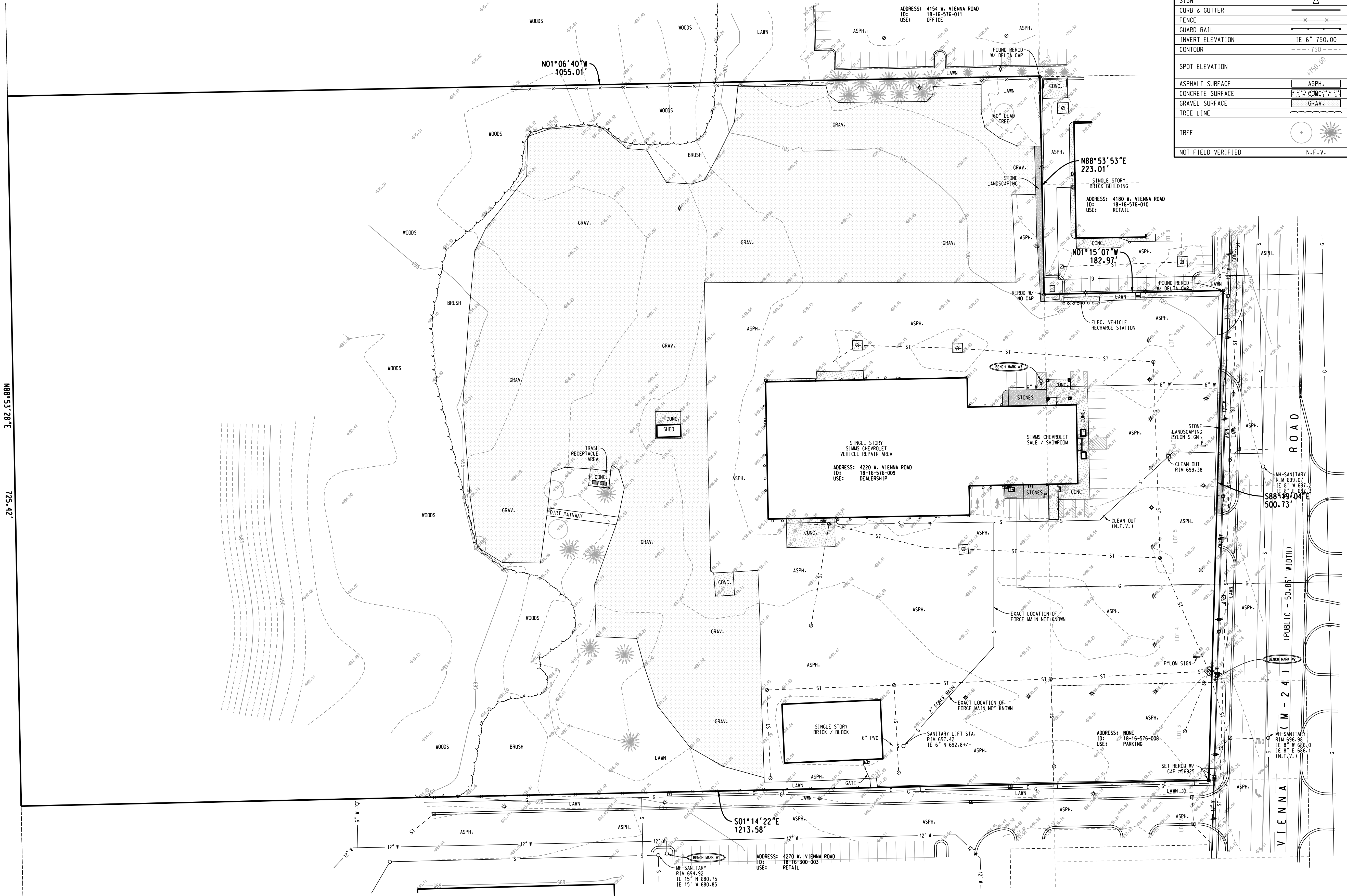
BENCHMARKS (NAVD88):

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NORTH



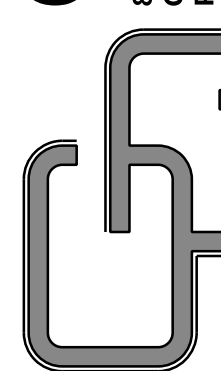
STANDARD LEGEND	
DESCRIPTION	EXISTING
BUILDING	— ST —
STORM SEWER	— S —
SANITARY SEWER	— S —
WATER	— W —
GAS LINE	— G —
ELECTRIC LINE	— E —
TELEPHONE LINE	— T —
MANHOLE	— O —
CATCH BASIN	— CB —
FIRE HYDRANT	— FH —
VALVE	— V —
UTILITY POLE W/GUY WIRE	— UP —
UTILITY RISER	— UR —
LIGHT POLE	— LP —
SIGN	— SIG —
CURB & GUTTER	— CG —
FENCE	— F —
GUARD RAIL	— GR —
INVERT ELEVATION	— IE 6" 750.00 —
CONTOUR	— 750 —
SPOT ELEVATION	
ASPHALT SURFACE	— ASPH. —
CONCRETE SURFACE	— CONC. —
GRAVEL SURFACE	— GRAV. —
TREE LINE	— TL —
TREE	— T —
NOT FIELD VERIFIED	— N.F.V. —



SIMMS CHEVROLET
NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY

Griggs Quaderer, Inc.

8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48409
PH: (517) 695-0154



CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING

PHASE: SPA

JOB NO.: 240201

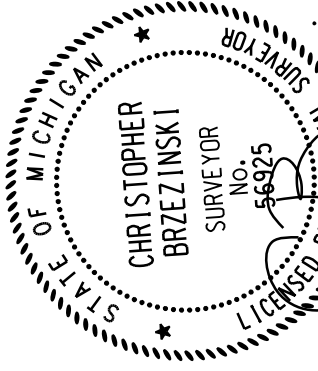
C100

DRAWN: BRZEZINSKI

DESIGNED: BRZEZINSKI
CHECKED: BRZEZINSKI
FIELD: CREW TH / KM

12-15-25 ISSUED TO VIENNA TWP.
04-09-25 ISSUED TO CONTRACTOR
02-28-25 ISSUED TO GOC-WMS
08-20-24 VIENNA TWP. (SITE PLAN APP.)

NO. DATE
REVISION OR ISSUE



OVERALL TOPOGRAPHIC & BOUNDARY SURVEY

ONE FAMILY RESIDENTIAL
DISTRICT (RU-1)

SHOPPING CENTER COMMERCIAL
DISTRICT (C-3)

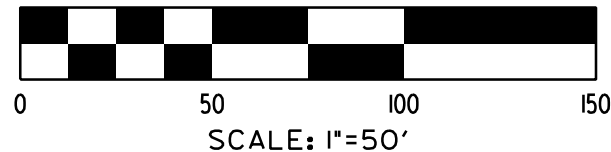
PARKING DATA:			
USE	REQUIREMENTS	PARKING REQUIRED	PARKING PROVIDED
MOTOR VEHICLE SALES ESTABLISHMENT	1 SPACE PER 100 SF UFA OF SALES OR 3 SPACES PER EA AUTO SERVICE STALL WHICHEVER IS GREATER. 3,500 SF (10.85) / 100 =	30 SPACES*	37 SPACES
NEW BODY SHOP	3 SPACES PER SERVICE BAY 2 BAYS (3) =	6 SPACES	28 SPACES
NEW OFFICE	1 SPACE PER 200 SF UFA 600 SF / 200 =	3 SPACES	
BARRIER FREE	26 TO 50 SPACES	2 SPACES	4 SPACES
TOTAL		39 SPACES	65 SPACES

* PER LAST APPROVED SITE PLAN PREPARED BY CREEKNOD ARCHITECTURE IN OCT., 2018.

LAND USE INFORMATION:

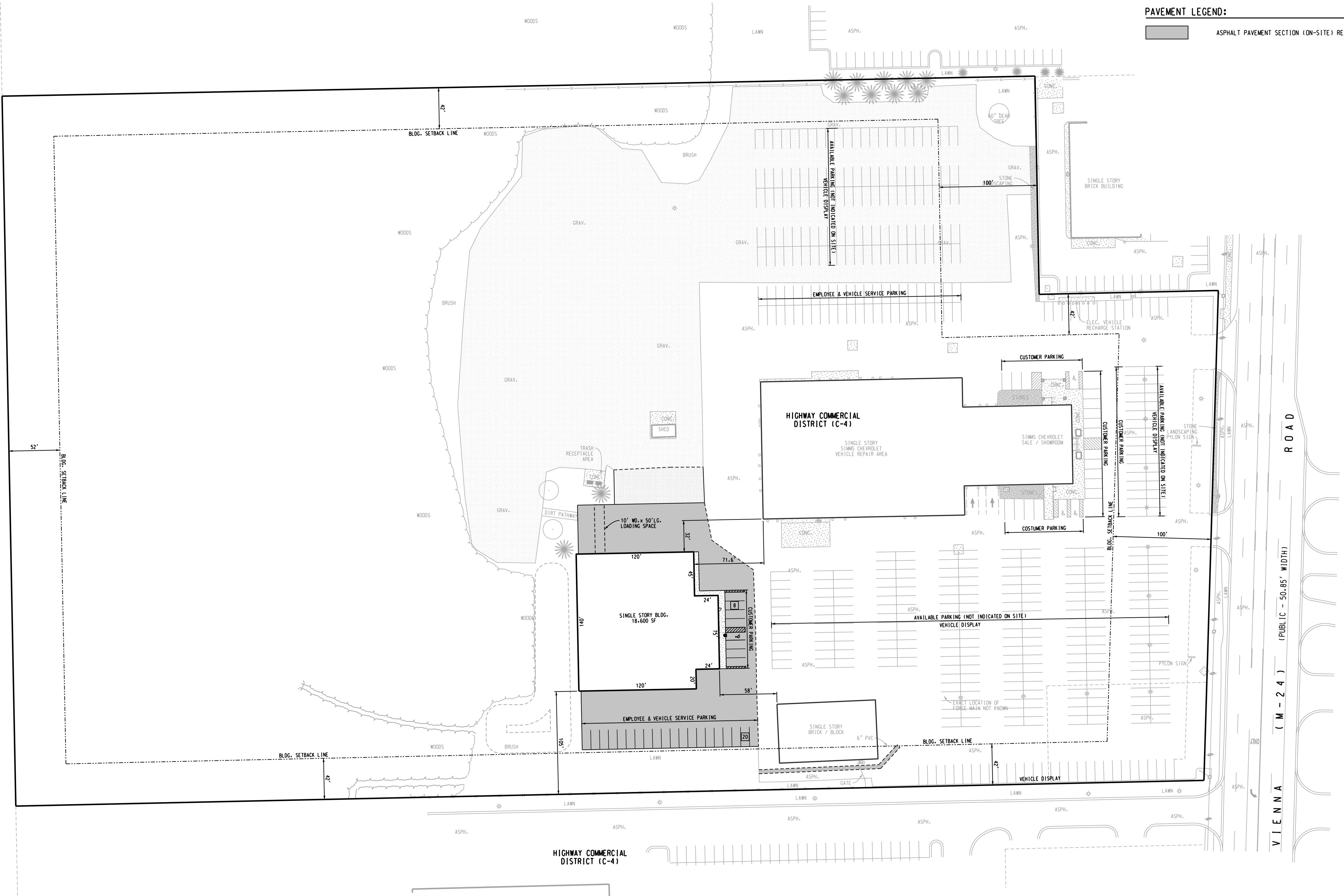
CURRENT ZONING: HIGHWAY COMMERCIAL DISTRICT C-4
PROPOSED ZONING: HIGHWAY COMMERCIAL DISTRICT C-4
CURRENT USE: AUTO DEALERSHIP
PROPOSED USE: AUTO DEALERSHIP
TOTAL SITE AREA: 19.50AC., 849,463 SF
TOTAL BUILDING AREA: 62,490 SF
LOT COVERAGE BY BLDG: 7.4%
YARD SETBACKS: BUILDING
FRONT YARD 100LF
SIDE YARD 42LF
REAR YARD 52LF

NORTH



PAVEMENT LEGEND:

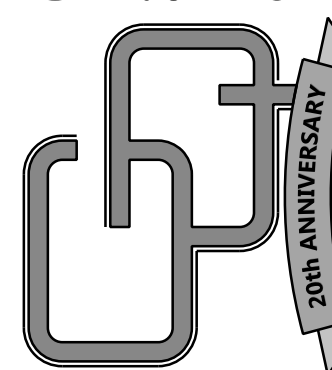
ASPHALT PAVEMENT SECTION (ON-SITE) RE: C200



Griggs Quaderer, Inc.

8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48439
PH: (810) 695-0154
WWW.GQINCORP.COM
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CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING

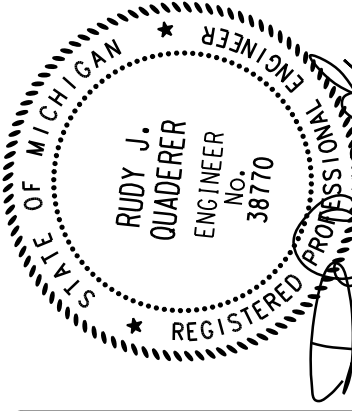


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CLO, MI 48420

DRAWN: BRZEZINSKI
DESIGNED:
CHECKED:
FIELD: CREW TH / KM

OVERALL SITE PLAN

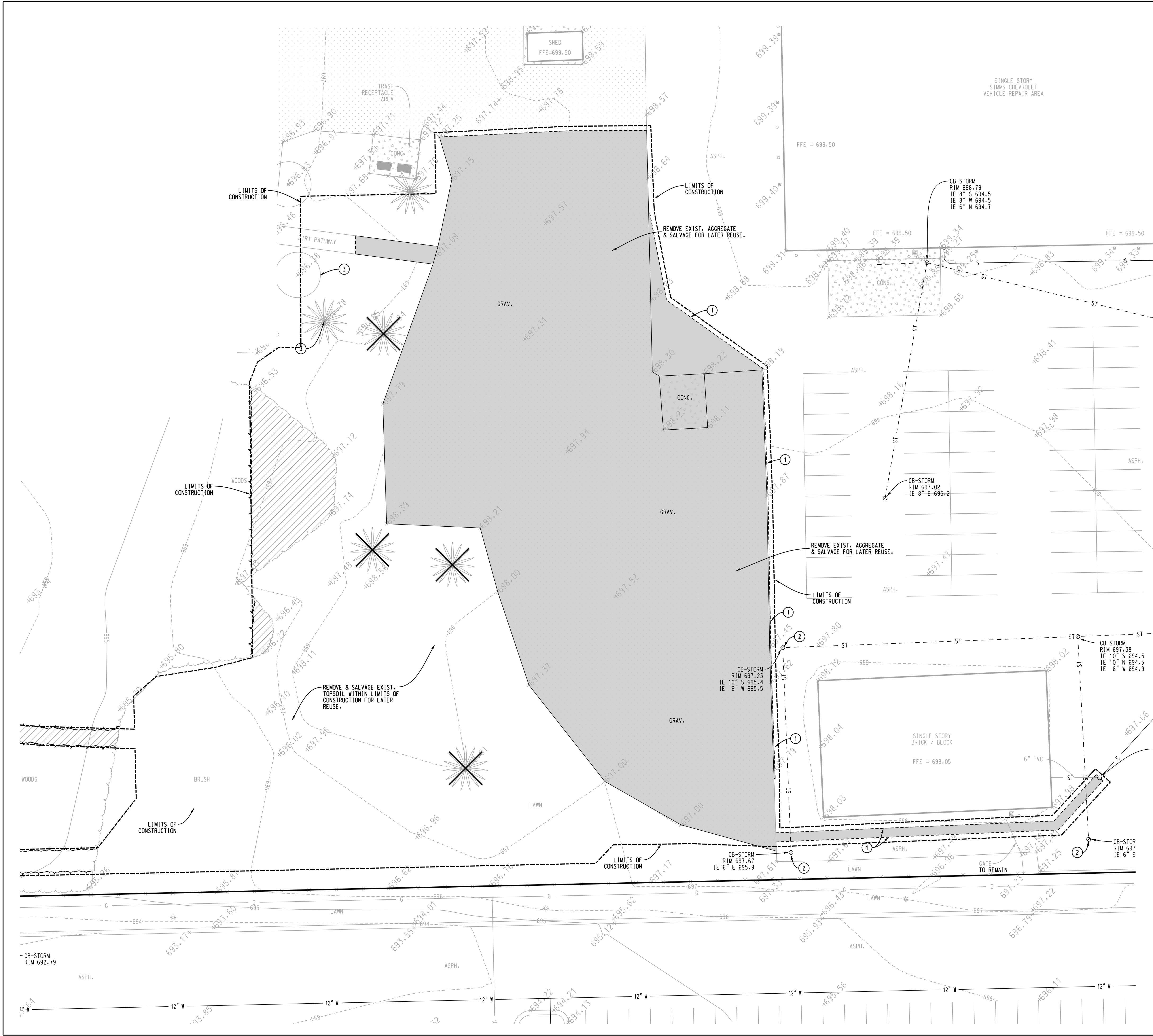
NO.	DATE	SUBJECT
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08-20-24	VIENNA TWP. (SITE PLAN APP.)	



JOB NO.: 240201

PHASE: SPA

C101



DEMOLITION NOTES:

1. PRIOR TO BEGINNING OF ANY DEMOLITION WORK THE CONTRACTOR SHALL NOTIFY THE LOCAL GOVERNING AGENCY TO OBTAIN PERMIT. ALL DEMOLITION WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL GOVERNING AGENCY. ALL DEMOLITION OPERATIONS SHALL COMPLY WITH MDOSHA REGULATIONS.

THE EXISTING FEATURES SHOWN ON THIS PLAN ARE FROM AN ACTUAL TOPOGRAPHIC SURVEY PERFORMED BY GRIGGS QUADERER INC. IN MARCH OF 2024. THE UNDERGROUND UTILITIES SHOWN WERE EITHER VERIFIED BY THIS SURVEY OR WERE OBTAINED FROM THE BEST AVAILABLE DOCUMENT INFORMATION. NO GUARANTEES ARE GIVEN TO THE ACCURACY OF ALL UTILITIES SHOWN OR THAT ALL UTILITIES ARE INDICATED ON THIS DOCUMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS BEFORE COMMENCING WORK AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

THE CONTRACTOR MUST OBTAIN A SOIL EROSION CONTROL PERMIT AND INSTALL EROSION CONTROL MEASURES AS INDICATED ON THESE DOCUMENTS PRIOR TO BEGIN OF DEMOLITION WORK. THESE CONTROL MEASURES SHALL CONFORM IN ALL RESPECT WITH THE MDOE AND LOCAL GOVERNING AGENCY REQUIREMENTS.

CONTACT "MISS DIG" AT (811) A MINIMUM OF 3 WORKING DAYS PRIOR TO BEGIN OF DEMOLITION WORK.

CLEARING, GRUBBING, STUMP REMOVAL, TOPSOIL REMOVAL AND STOCKPILING SHALL BE IN ACCORDANCE WITH THESE DOCUMENTS AND/OR THE PROJECT SPECIFICATIONS.

CONTRACTORS MANNER AND METHOD OF INGRESS AND EGRESS WITH RESPECT TO THE PROJECT AREA SHALL IN NO WAY PROHIBIT OR DISTURB NORMAL PEDESTRIAN OR VEHICULAR TRAFFIC IN THE VICINITY AND IS SUBJECT TO REGULATIONS AND WRITTEN APPROVAL OF APPROPRIATE GOVERNING AGENCIES.

PROVIDE ADEQUATE BARRICADES AT DRIVES, ENTRANCES, AND OTHER OPENINGS TO KEEP OUT UNAUTHORIZED PERSONS, FOR PUBLIC SAFETY, AND TRAFFIC CONTROL. BARRICADES SHALL BE PROVIDED IN ACCORDANCE WITH APPROPRIATE GOVERNING AGENCIES.

NO ATTEMPT IS MADE TO STIPULATE EVERY REQUIRED ITEM OF DEMOLITION EITHER ON THE DRAWINGS AND/OR IN SPECIFICATIONS. CONTRACTOR MUST VISIT AND STUDY PHYSICAL CONDITIONS OF SITE, REVIEW DRAWINGS AND REACH THEIR OWN CONCLUSIONS ON WORK NECESSARY TO ACCOMPLISH INTENDED RESULTS DESCRIBED BY DRAWINGS AND/OR SPECIFICATIONS.

PROVIDE CONSTRUCTION FENCING AROUND DRIP LINE OF TREES TO REMAIN WITHIN CONSTRUCTION AREA.

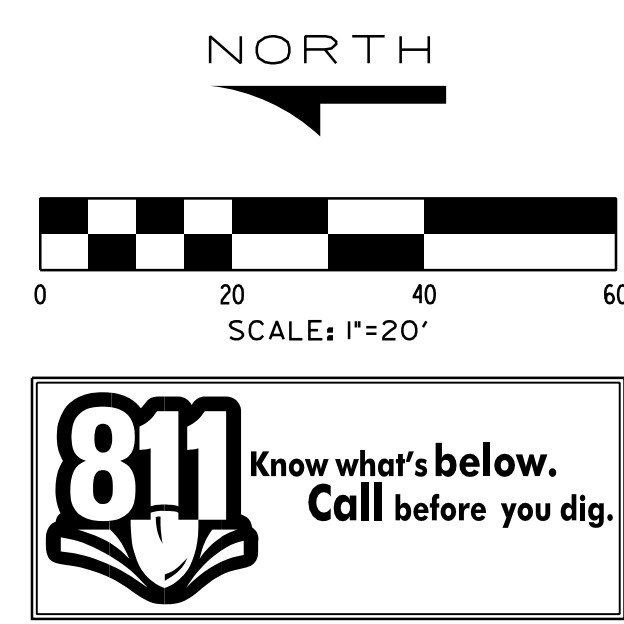
ALL DEMOLITION MATERIAL SHALL BE PROPERLY REMOVED FROM THE SITE AND DISPOSED OF IN A LEGALLY DESIGNATED DISPOSAL AREA. NO ON-SITE BURNING WILL BE ALLOWED. PERMITS AND FEES FOR DISPOSAL OF DEMOLITION MATERIAL SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.

BACK FILL EXCAVATED AREAS WITH CLEAN GRANULAR FILL COMPACTED TO 95% OF THE MATERIAL UNIT WEIGHT BY MODIFIED PROCTOR IN ACCORDANCE WITH THESE DOCUMENTS AND/OR PROJECT SPECIFICATIONS.

COMPLETELY RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITION AND TO THE SATISFACTION OF THE OWNER AND MUNICIPALITY. ALL COSTS FOR CLEAN-UP, RESTORATION WORK AND OTHER IMMEDIATE OPERATIONS SUCH AS, BUT NOT LIMITED TO, CONSTRUCTION SIGNAGE, STREET SWEEPING, AND MAINTAINING EXISTING UTILITIES SHALL BE THE CONTRACTORS RESPONSIBILITY.

AT THE CONCLUSION OF THE DEMOLITION OPERATIONS, THE ENTIRE WORK AREA SHALL BE LEFT IN A CLEAN CONDITION AND ALL PROTECTIVE DEVICES AND BARRIERS SHALL BE REMOVED OFF-SITE.

- DEMOLITION KEY:**
- [Solid Gray Box] ASPHALT, CONCRETE, AND/OR GRAVEL REMOVAL
 - [Hatched Box] WOODS REMOVAL INCLUDING ROOT SYSTEM
 - [Tree with X] REMOVE EXISTING TREE & ROOT SYSTEM IN ITS ENTIRETY
 - ① SAWCUT EXISTING PAVEMENT
 - ② PROTECT EXISTING STORM SEWER STRUCTURE DURING CONSTRUCTION. DO NOT DISTURB.
 - ③ PROTECT EXISTING TREE DURING CONSTRUCTION WITH CONSTRUCTION FENCING PLACED AROUND DRIPLINE OF TREE. DO NOT DISTURB ROOT SYSTEM.



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PHASE: SPA

JOB NO.: 240201

20th Anniversary
2004 - 2024

C102

ISSUED TO VIENNA TWP. 12-15-25

ISSUED TO CONTRACTOR 04-09-25

ISSUED TO GQCC-WWS 02-28-25

ISSUED TO GQCC-WWS 08-20-24

ISSUED TO VIENNA TWP. (SITE PLAN APP.) 08-20-24

BRZEZINSKI

DESIGNED

CHECKED

FIELD CREW TH / KM

NO.

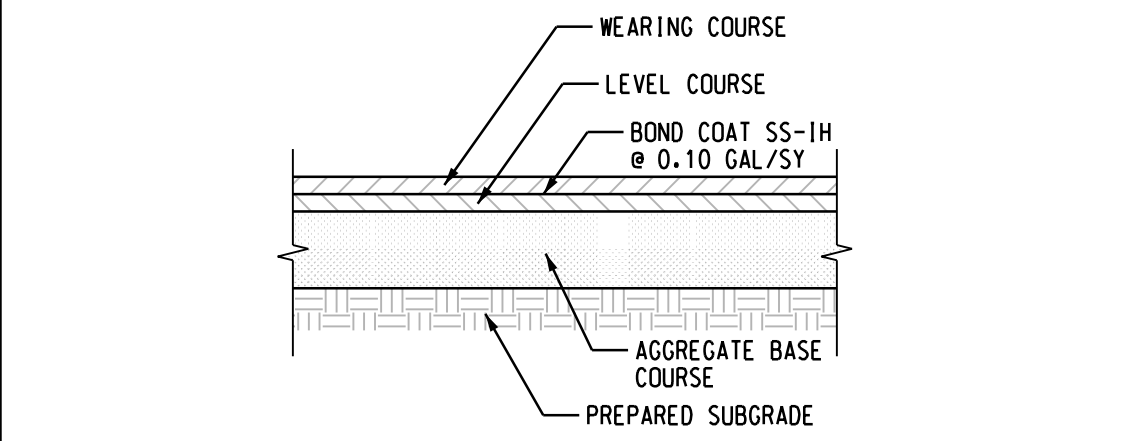
DATE

SUBJECT

REVISION OR ISSUE

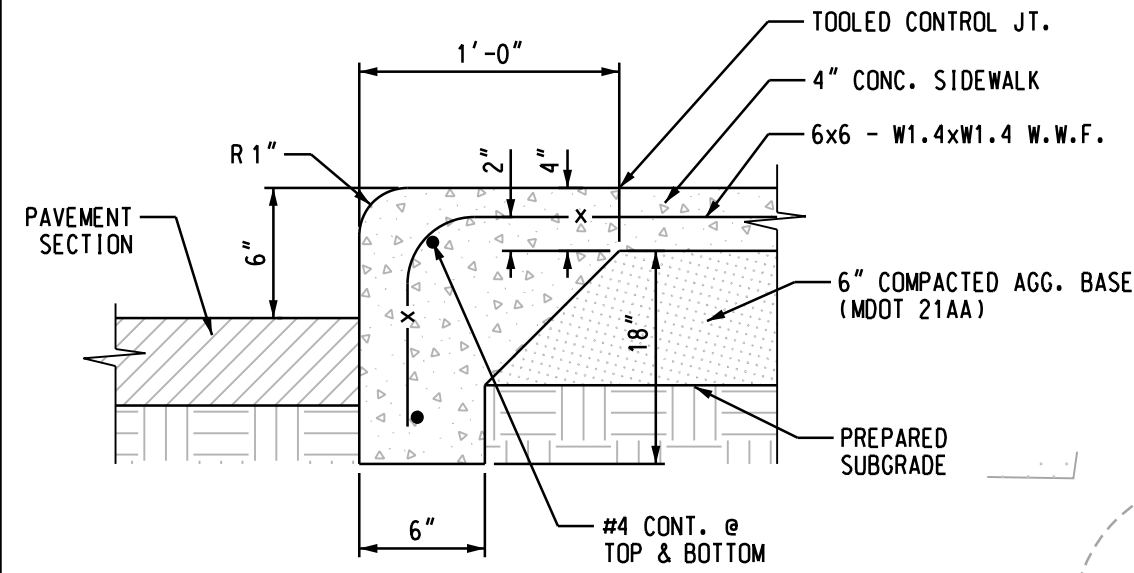
SITE REMOVAL PLAN

4220 W VIENNA ROAD
CLO, MI 48220



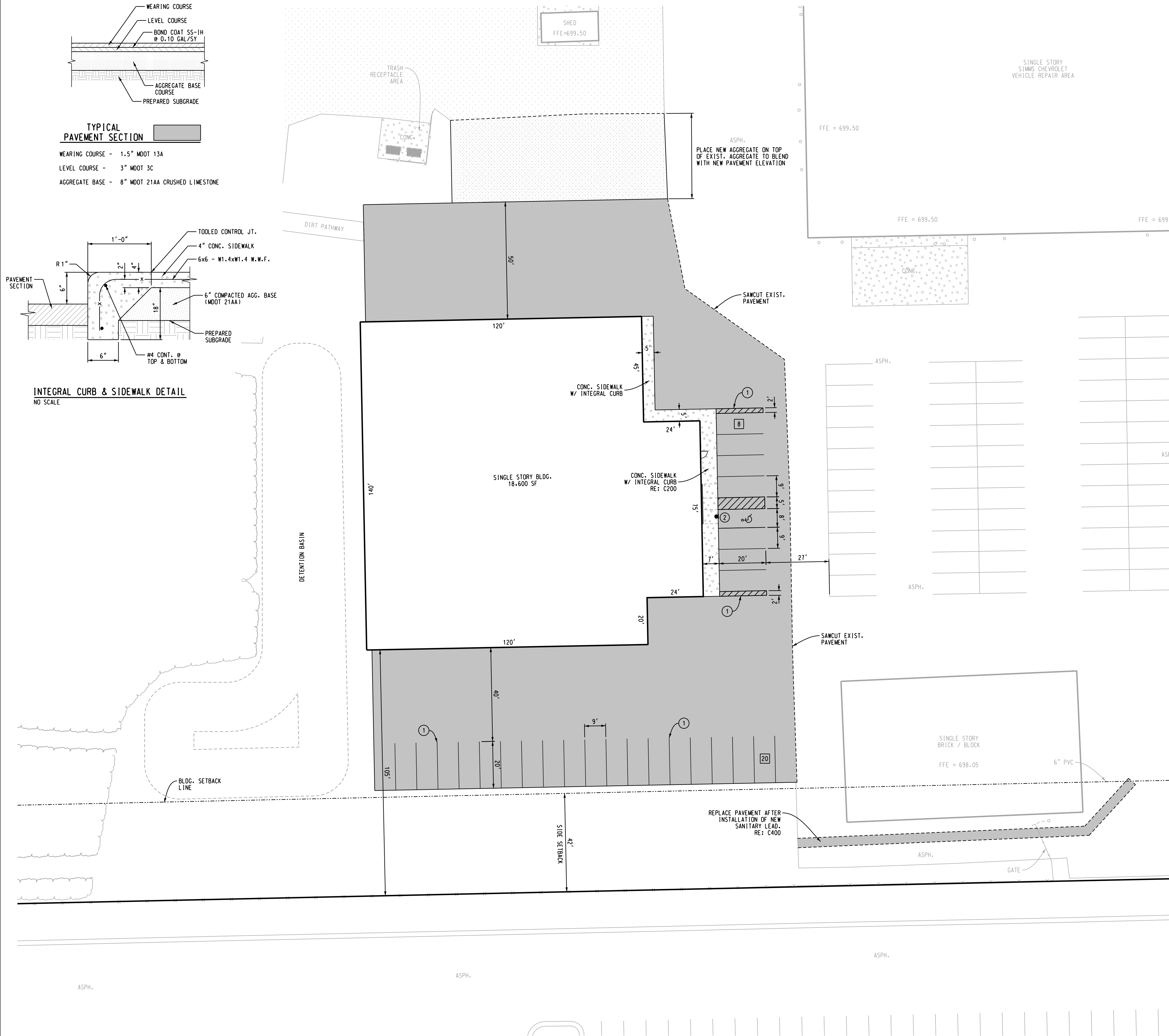
TYPICAL PAVEMENT SECTION

WEARING COURSE - 1.5" MDOT 13A
LEVEL COURSE - 3" MDOT 3C
AGGREGATE BASE - 8" MDOT 21AA CRUSHED LIMESTONE



INTEGRAL CURB & SIDEWALK DETAIL

NO SCALE



GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM WITH THE REQUIREMENTS OF ALL GOVERNING AGENCIES HAVING JURISDICTION (LOCAL, COUNTY, STATE), UNLESS OTHERWISE NOTED. CONSTRUCTION MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE STATE OF MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND PROJECT SPECIFICATIONS. IN CASE OF DISCREPANCIES BETWEEN REQUIREMENTS, THE MOST STRINGENT SHALL APPLY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DENWATERING TO ACCOMPLISH ALL WORK INDICATED ON PLANS AND TO PERFORM REQUIRED COMPACTION OPERATIONS. REFER TO GEOTECHNICAL REPORT FOR RECOMMENDATIONS REGARDING THIS SITE. CONTRACTOR TO PROVIDE TESTING CONSULTANT TO VERIFY DENSITY REQUIREMENTS FOR SUBGRADE (IF REQUIRED).
- PROVIDE ADEQUATE BARRICADES AT DRIVES, ENTRANCES, EXCAVATIONS AND OTHER OPENINGS TO KEEP OUT UNAUTHORIZED PERSONS AND FOR PUBLIC SAFETY AND TRAFFIC CONTROL. SAFETY PROVISIONS OF APPLICABLE LAWS INCLUDING REQUIREMENTS SET FORTH BY OSHA SHALL BE OBSERVED AT ALL TIMES. BARRICADES LEFT IN PLACE AT NIGHT SHALL BE LIGHTED.
- NO EQUIPMENT OR MATERIAL STORAGE IS PERMITTED WITHIN THE ROAD RIGHT-OF-WAY.
- CONTRACTOR'S MANNER AND METHOD OF INGRESS AND EGRESS WITH RESPECT TO THE PROJECT AREA SHALL IN NO WAY PROHIBIT OR DISTURB NORMAL PEDESTRIAN OR VEHICULAR TRAFFIC IN THE VICINITY AND IS SUBJECT TO REGULATION AND WRITTEN APPROVAL OF APPROPRIATE GOVERNING AGENCIES.
- RESTORE ALL STREET SURFACES, DRIVEWAYS, CULVERTS, ROADSIDE DRAINAGE DITCHES, AND OTHER PUBLIC OR PRIVATE STRUCTURES THAT ARE DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS AND TO THE SATISFACTION OF THOSE HAVING JURISDICTION.
- CONTRACTOR SHALL PULL EROSION CONTROL PERMIT FROM GOVERNING AGENCY AND SET TEMPORARY EROSION CONTROL MEASURES AS INDICATED ON THESE DOCUMENTS PRIOR TO BEGIN OF ANY DEMOLITION OR EARTHWORK.
- THE CONTRACTOR SHALL NOTIFY MISS DIG (811) THREE (3) WORKING DAYS PRIOR TO STARTING ANY EXCAVATION WITH POWER EQUIPMENT.
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL CONSTRUCTION LAYOUT AND GRADE ELEVATIONS FOR THEIR WORK IN ACCORDANCE WITH DATA SHOWN ON DOCUMENTS.
- EXCAVATED AREAS WITHIN PROPOSED BUILDING AND PAVEMENT AREAS SHALL BE BACKFILLED TO FINISHED SUBGRADE ELEVATION WITH STRUCTURAL FILL (MDOT CLASS II SAND). THE SAND SHALL BE COMPACTED IN CONTINUOUS LAYERS NOT EXCEEDING 8 INCH LOOSE LIFTS, COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ANSI/ASTM D 1557 MODIFIED PROCTOR.
- COORDINATES AND/OR DIMENSIONS SHOWN ON THIS DOCUMENT ARE TO BACK OF CURB, OUTSIDE FACE OF BUILDING FOUNDATIONS, EDGE OF PAVEMENT, CENTER OF STRUCTURE, CENTERLINE OF STRIPING UNLESS NOTED OTHERWISE.
- NO DIMENSIONS SHALL BE SCALED OFF THE DOCUMENTS. REFER UNCLEAR ITEMS TO THE ENGINEER FOR INTERPRETATION.
- REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS, SLAB AND UNDERBED THICKNESS.

MARKING / SIGNAGE LEGEND:

- ① 4" SINGLE SOLID LINE, WHITE
② ACCESSIBLE SIGN (R7-8)
- NO PARKING / NO DRIVING AREAS
4" WIDE WHITE PAINT STRIPING
2" ON CENTER @ 45". REFER TO PAVEMENT MARKING NOTE #2 FOR BARRIER FREE PARKING

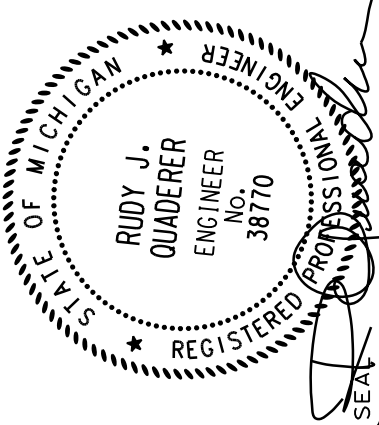
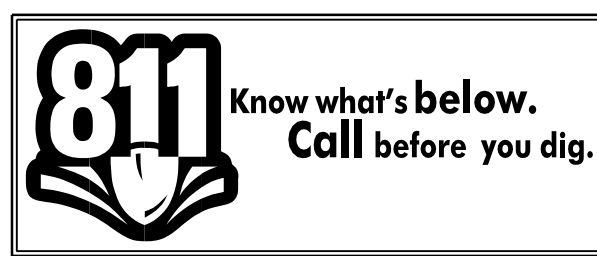
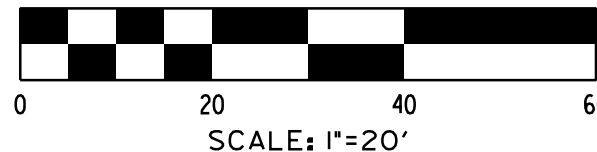
PAVEMENT MARKING & SIGNAGE NOTES:

- PARKING STALL WIDTH DIMENSIONS ARE TO CENTERLINE OF STRIPING.
- ALL PAVEMENT MARKINGS SHALL BE 4" WIDE WHITE PAINT STRIPING UNLESS OTHERWISE INDICATED. ALL BARRIER FREE STRIPING SHALL BE COLORED BLUE AND IN ACCORDANCE WITH THE LATEST ADA STANDARDS FOR ACCESSIBLE DESIGN.
- CONTRACTOR SHALL NOT APPLY TRAFFIC MARKING PAINT ON NEW ASPHALT UNTIL PAVEMENT HAS CURED A MINIMUM OF SEVEN (7) DAYS.
- PAINT SHALL BE APPLIED WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. APPLY IN TWO COATS AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE MINIMUM 10.0 TO 15.0 MILS WET THICKNESS.
- ALL TRAFFIC CONTROL SIGNS SHALL CONFORM WITH ALL REQUIREMENTS AS STIPULATED IN THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ☐ NUMBER OF PARKING SPACES (FOR INFORMATION ONLY)

PAVEMENT LEGEND:

- ASPHALT PAVEMENT SECTION (ON-SITE) RE: C200
CONCRETE PAVEMENT SECTION RE: C200

NORTH



NO.	DATE	SUBJECT
12-15-25	ISSUED TO VIENNA TWP.	
04-09-25	ISSUED TO CONTRACTOR	
02-28-25	ISSUED TO GDC-WWS	
08-20-24	VIENNA TWP. (SITE PLAN APP.)	

DRAWN	BRZEZINSKI
DESIGNED	
CHECKED	
FIELD CREW TH / KM	

SIMMS CHEVROLET
NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY

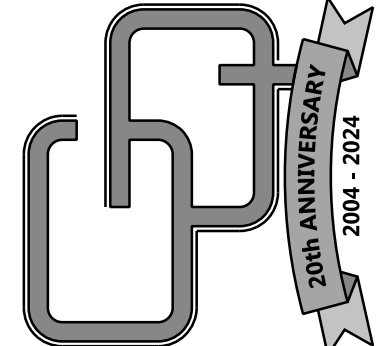
4220 W. VIENNA ROAD
CLO, MI 48220

SITE LAYOUT PLAN

Griggs Quaderer, Inc.

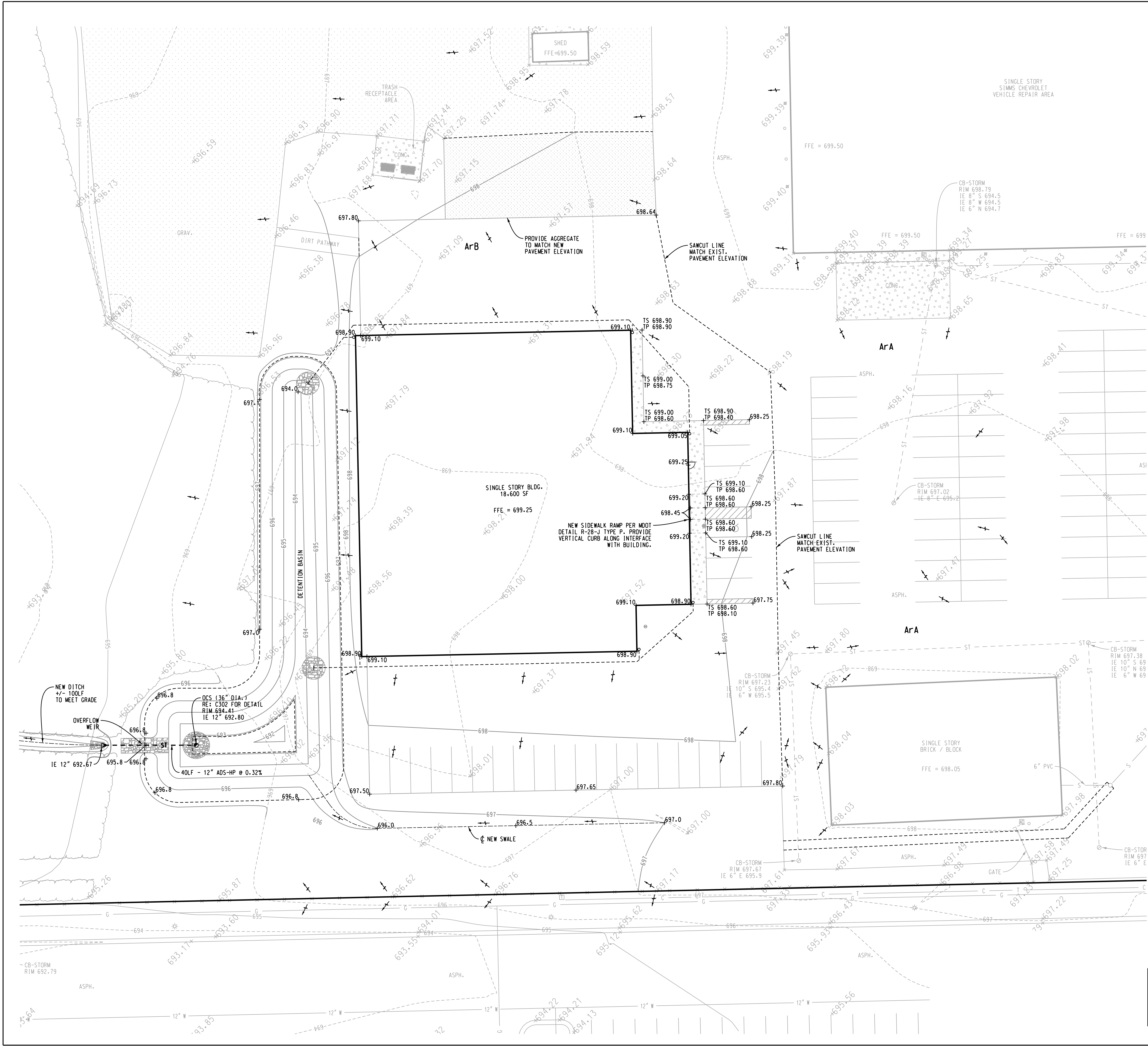
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48409
PH: (810) 695-0154
WWW.GQINCORP.COM
RUDY@GQINCORP.COM
CHRIS@GQINCORP.COM

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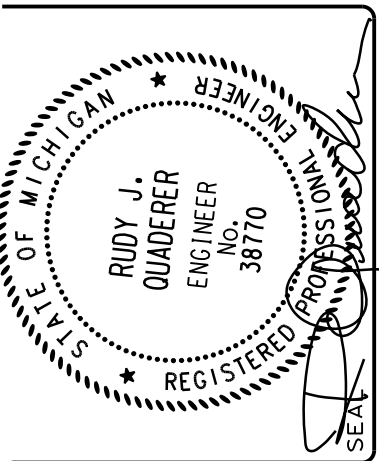
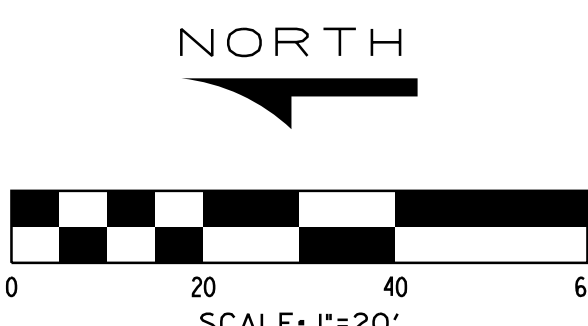


PHASE: SPA
JOB NO.: 240201

C200



- GRADING NOTES:**
1. ALL PROPOSED SPOT ELEVATIONS IN PAVED AREAS ARE TO TOP OF PAVEMENT UNLESS NOTED OTHERWISE.
TS = TOP OF SIDEWALK
TP = TOP OF PAVEMENT
 2. CONTOURS SHOWN ARE FOR REFERENCE ONLY. BASE CONSTRUCTION EFFORTS ON PROPOSED SPOT ELEVATIONS ONLY.
 3. "BARRIER FREE" PARKING AND SIDEWALK RAMPS SHALL CONFORM IN ALL RESPECTS TO THE MICHIGAN ADA (AMERICANS WITH DISABILITIES ACT) REQUIREMENTS.
 4. CONTRACTOR SHALL ADJUST ANY UTILITY ELEMENT/STRUCTURE MEANT TO BE FLUSH WITH GRADE (CLEAN OUT, VALVE BOXES, MANHOLES, CATCH BASINS, INLETS, ETC.) WHICH ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT. NO ADDITIONAL COSTS FOR THIS WORK WILL BE ACCEPTED. THE CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS FOR ADJUSTMENT AT THE CONTRACTOR'S EXPENSE.
 5. CONTRACTOR IS RESPONSIBLE FOR CUT AND FILL QUANTITIES. ADDITIONAL COMPENSATION WILL NOT BE ACCEPTED FOR HAULING OF EXCESS AND BORROW MATERIAL TO AND FROM SITE AS WELL AS LABOR COSTS FOR PLACEMENT AND/OR REMOVAL. OFF-SITE BORROW MATERIAL MUST BE CLEAN COMPACTIBLE STRUCTURAL FILL MATERIAL (NO ORGANIC MATERIAL) WHICH WILL BE INSPECTED PRIOR TO USE FOR ON-SITE FILL MATERIAL.
 6. SITE CONTRACTOR IS RESPONSIBLE TO PROVIDE A STABLE SUBGRADE AT DESIGN ELEVATIONS. ALL PAVED AREAS INCLUDING BUILDING PAD SHALL BE PRODFOLLED & COMPACTED TO MEET 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ANSI/ASTM D1557.
 7. CONTRACTOR SHALL STORE SUFFICIENT TOPSOIL MATERIAL ON-SITE FOR RE-USE IN ALL DISTURBED GREEN AREAS AND NEW LANDSCAPE AREAS.
 8. PROVIDE POSITIVE DRAINAGE AT ALL TIMES TO ENSURE NO STANDING WATER. MAINTAIN A MINIMUM SLOPE OF 1.00% IN ALL NEW BITUMINOUS AREAS.



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DRAWN	BRZEZINSKI
DESIGNED	
CHECKED	
FIELD CREW TH / KM	

SIMMS CHEVROLET
NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY
4220 W VIENNA ROAD
CLO, MI 48220

SITE GRADING & STORM SEWER PLAN

Griggs Quaderer, Inc.
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48439
PH: (610) 695-0154
WWW.GQINCORP.COM
RUDY@GQINCORP.COM
CHRIS@GQINCORP.COM

CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING

20th ANNIVERSARY
2004 - 2024

PHASE: SPA

JOB NO.: 240201

C300

SOIL EROSION CONTROL NOTES:

- THE DEVELOPER IS NOT REQUIRED TO OBTAIN A NPDES STORM WATER DISCHARGE PERMIT THROUGH THE GENESSEE COUNTY DRAIN COMMISSIONER, DIVISION OF WATER AND WASTE SERVICES PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- THE DEVELOPER SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN AND ACT 451 PERMIT INCLUDING PAYMENT OF FEES AND PROVIDING THE NECESSARY BONDS FROM THE GENESSEE COUNTY DRAIN COMMISSIONER, DIVISION OF WATER AND WASTE SERVICES, PRIOR TO ANY EARTH CHANGES.
- CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
- THE CONTRACTOR SHALL USE SPECIAL PRECAUTIONS WHEN USING CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- SITE CLEANUP WILL BE ACCOMPLISHED IN A MANNER TO INSURE THAT TEMPORARY EROSION CONTROL MEASURES ARE NOT DISTURBED.
- THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR WITHIN 24 HOURS OF NOTIFICATION.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE THROUGH SWALES OR OVERLAND SHEET FLOW OF THE ENTIRE SITE. SOIL SEDIMENT SHALL BE INTERCEPTED AND REMOVED PRIOR TO STORM WATER DISCHARGING FROM LIMITS OF CONSTRUCTION. NO STANDING WATER SHALL BE PERMITTED ON SITE.
- ALL GREEN AREAS DISTURBED SHALL BE PERMANENTLY STABILIZED (TOPSOIL, SEED & MULCH) IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION TO MINIMIZE SOIL EROSION AND THE POTENTIAL OF SEDIMENT LEAVING SITE.

SESC MAINTENANCE SCHEDULE NOTES:

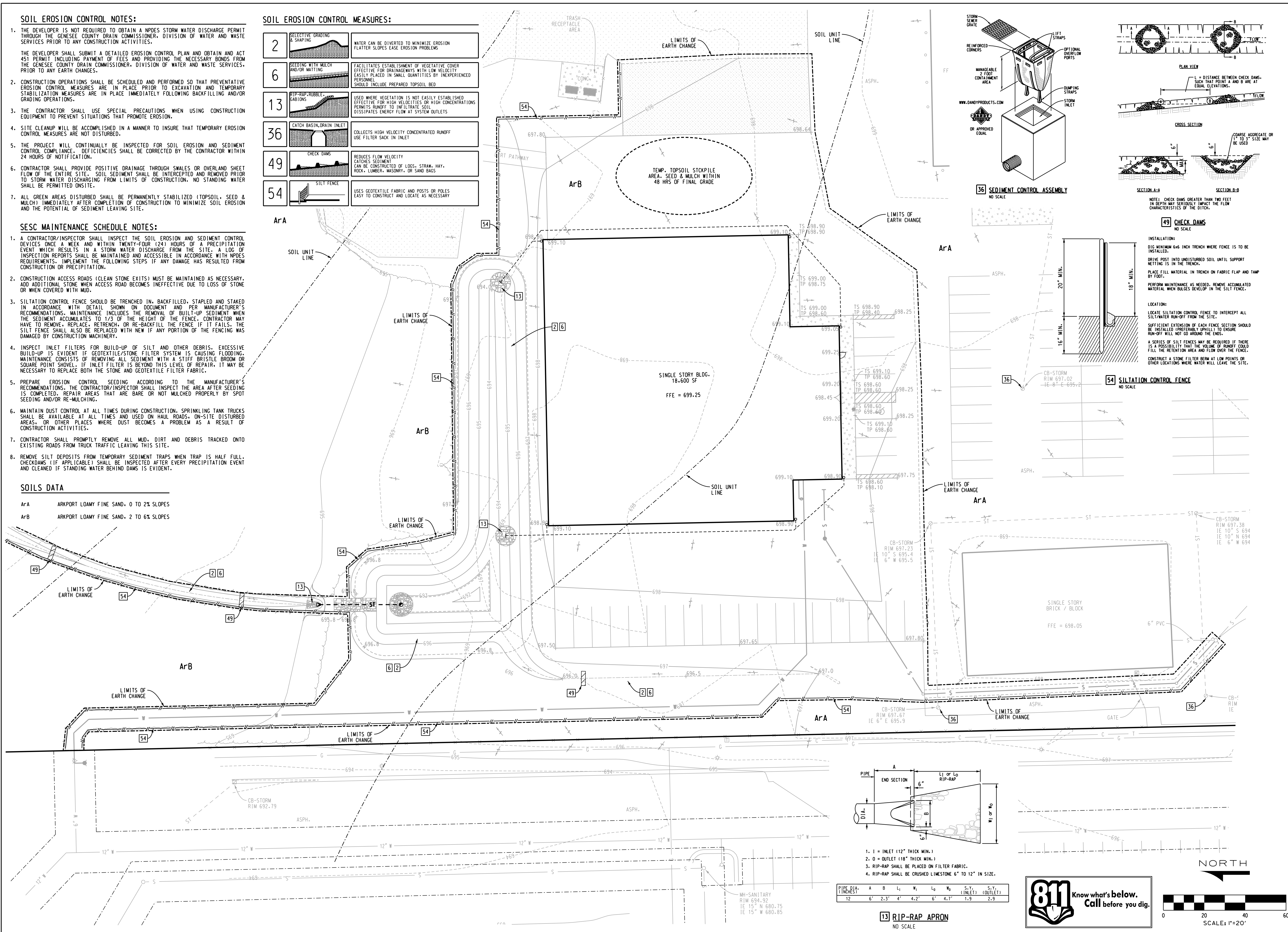
- A CONTRACTOR/INSPECTOR SHALL INSPECT THE SOIL EROSION AND SEDIMENT CONTROL DEVICES ONCE A WEEK AND WITHIN TWENTY-FOUR (24) HOURS OF A PRECIPITATION EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. A LOG OF INSPECTION REPORTS SHALL BE MAINTAINED AND ACCESSIBLE IN ACCORDANCE WITH NPDES REQUIREMENTS. IMPLEMENT THE FOLLOWING STEPS IF ANY DAMAGE HAS RESULTED FROM CONSTRUCTION OR PRECIPITATION.
- CONSTRUCTION ACCESS ROADS (CLEAN STONE EXITS) MUST BE MAINTAINED AS NECESSARY. ADD ADDITIONAL STONE WHEN ACCESS ROAD BECOMES INEFFECTIVE DUE TO LOSS OF STONE OR WHEN COVERED WITH MUD.
- SILTATION CONTROL FENCE SHOULD BE TRENCHED IN, BACKFILLED, STAPLED AND STAKED IN ACCORDANCE WITH DETAIL SHOWN ON DOCUMENT AND PER MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE INCLUDES THE REMOVAL OF BUILT-UP SEDIMENT WHEN THE SEDIMENT ACCUMULATES TO 1/3 OF THE HEIGHT OF THE FENCE. CONTRACTOR MAY HAVE TO REMOVE, REPLACE, RETRENCH, OR RE-BACKFILL THE FENCE IF IT FAILS. THE SILT FENCE SHALL ALSO BE REPLACED WITH NEW IF ANY PORTION OF THE FENCING WAS DAMAGED BY CONSTRUCTION MACHINERY.
- INSPECT INLET FILTERS FOR BUILD-UP OF SILT AND OTHER DEBRIS. EXCESSIVE BUILD-UP IS EVIDENT IF FILTER SYSTEM IS CAUSING FLOODING. MAINTENANCE CONSISTS OF REMOVING ALL SEDIMENT WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF INLET FILTER IS BEYOND THIS LEVEL OF REPAIR, IT MAY BE NECESSARY TO REPLACE BOTH THE STONE AND GEOTEXTILE FILTER FABRIC.
- PREPARE EROSION CONTROL SEEDING ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR/INSPECTOR SHALL INSPECT THE AREA AFTER SEEDING IS COMPLETED. REPAIR AREAS THAT ARE BARE OR NOT MULCHED PROPERLY BY SPOT SEEDING AND/OR RE-MULCHING.
- MAINTAIN DUST CONTROL AT ALL TIMES DURING CONSTRUCTION. SPRINKLING TANK TRUCKS SHALL BE AVAILABLE AT ALL TIMES AND USED ON HAUL ROADS, ON-SITE DISTURBED AREAS, OR OTHER PLACES WHERE DUST BECOMES A PROBLEM AS A RESULT OF CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL PROMPTLY REMOVE ALL MUD, DIRT AND DEBRIS TRACKED ONTO EXISTING ROADS FROM TRUCK TRAFFIC LEAVING THIS SITE.
- REMOVE SILT DEPOSITS FROM TEMPORARY SEDIMENT TRAPS WHEN TRAP IS HALF FULL. CHECKDAMS (IF APPLICABLE) SHALL BE INSPECTED AFTER EVERY PRECIPITATION EVENT AND CLEANED IF STANDING WATER BEHIND DAMS IS EVIDENT.

SOILS DATA

ArA ARKPORT LOAMY FINE SAND, 0 TO 2% SLOPES
ArB ARKPORT LOAMY FINE SAND, 2 TO 6% SLOPES

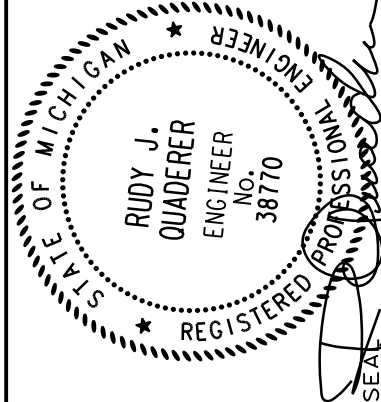
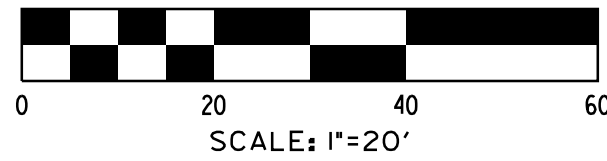
SOIL EROSION CONTROL MEASURES:

2		WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES EASE EROSION PROBLEMS.
6		FACILITATES ESTABLISHMENT OF VEGETATIVE COVER. EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY. EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL. SHOULD INCLUDE PREPARED TOPSOIL BED.
13		USED WHERE VEGETATION IS NOT EASILY ESTABLISHED. EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS. PERMITS RUNOFF TO INFILTRATE. SOIL DISSIPATES ENERGY FLOW AT SYSTEM OUTLETS.
36		COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. USE FILTER SACK IN INLET.
49		REDUCES FLOW VELOCITY. CATCHES SEDIMENT. CAN BE CONSTRUCTED OF LOGS, STRAW, HAY, ROCK, LUMBER, MASONRY, OR SAND BAGS.
54		USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.



PIPE DIA. (INCHES)	A	B	L ₁	W ₁	L ₂	W ₂	S.V. (INLET)	S.V. (OUTLET)
12	6'	2.3'	4'	4.2'	6'	4.7'	1.9	2.9

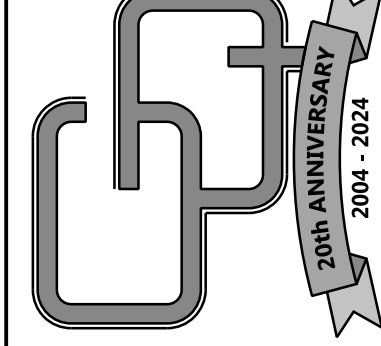
13 RIP-RAP APRON
NO SCALE



DRAWN	BRZEZINSKI
DESIGNED	
CHECKED	
FIELD CREW TH / KM	

SIMMS CHEVROLET
NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY
4220 W VIENNA ROAD
CLO, MI 48220

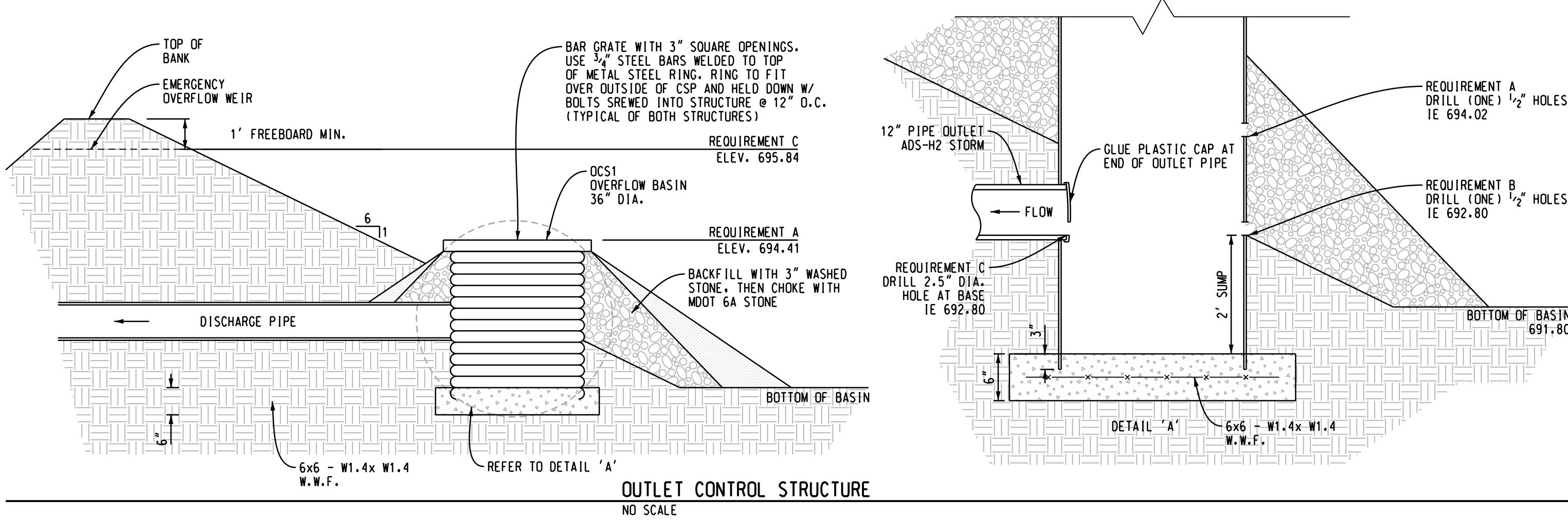
Griggs Quaderer, Inc.
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48499
PH: 810 695-0154
WWW.GQINCORP.COM
RUDY@GQINCORP.COM
CHRIS@GQINCORP.COM
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PHASE: SPA
JOB NO.: 240201
C301

SOIL EROSION CONTROL PLAN

Runoff Coefficient Calculations													
Drainage Area	Pervious			Impervious			Roof Top			Runoff			Drainage Area
	Area (ft²)	Area (Acre)	C	Area (ft²)	Area (Acre)	C	Area (ft²)	Area (Acre)	C	Area (ft²)	Area (Acre)	C	
A	0.0	0.00	0.30	0.0	0.00	0.95	900.0	0.02	0.95	900.0	0.02	0.95	A
B	0.0	0.00	0.30	0.0	0.00	0.95	4200.0	0.10	0.95	4200.0	0.10	0.95	B
C	0.0	0.00	0.30	0.0	0.00	0.95	4200.0	0.10	0.95	4200.0	0.10	0.95	C
D	0.0	0.00	0.30	0.0	0.00	0.95	900.0	0.02	0.95	900.0	0.02	0.95	D
E	0.0	0.00	0.30	0.0	0.00	0.95	4200.0	0.10	0.95	4200.0	0.10	0.95	E
F	0.0	0.00	0.30	0.0	0.00	0.95	4200.0	0.10	0.95	4200.0	0.10	0.95	F
G	24227.0	0.56	0.30	15260.0	0.35	0.95	0.0	0.00	0.95	39487.0	0.91	0.55	G
Total	24227.0	0.56	0.30	15260.0	0.35	0.95	18600.0	0.43	0.95	58087.0	1.33	0.68	Total



Requirement A - Storage

Using the 90% exceedance storm as defined by State of Michigan and U.S. Environmental Protection Agency (and noted below)

Site Information

Site Area (A _s) =	1.33	acre
Flat Roof (A _{fr}) =	0.43	acre
Flat Roof Coefficient (C _{fr}) =	0.84	
Parking Lot & Pavement (A _p) =	0.35	acre
Pavement Coefficient (C _p) =	0.97	
Open Space (A _{os}) =	0.56	acre
Open Space Coefficient (C _{os}) =	0.11	

$$R_p = \frac{(A_{fr} \cdot C_{fr}) + (A_p \cdot C_p) + (A_{os} \cdot C_{os})}{A_t}$$
$$R_p = 0.570 \quad (\text{weighted volume})$$
$$W/QV = P \cdot R_p \quad (\text{Water Quality Volume})$$

$$P = 1.0 \quad \text{inches}$$
$$W/QV = 0.570 \quad \text{watershed (in / ft³)}$$
$$W/QV = 2758 \quad \text{ft³}$$

Requirement B - Storage

Total Site Disturbed Area: 1.33 acres

2-Year, 24-Hour Rainfall: 2.26 in (See Rainfall Tab for regional rainfall value or site specific rainfall event may be substituted with DNR approval)

Pre-Development Conditions

Cover Type	Soil Type	Area (sf)	Area (ac)	CN (from TR-55)	S	Q Runoff (in)	Runoff Volume* (ft³)
Woods	C	9,321	0.21	70	4.3	0.346	269
Meadow	C	0	0.00	71	4.1	0.377	0
Open Space	C	25,482	0.58	74	3.5	0.478	1,015
Impervious	N/A	23,304	0.53	98	0.20	2.032	3,947
TOTAL:	N/A	58,087	1.33	N/A	N/A	N/A	5,230

Post-Development Conditions

Cover Type	Soil Type	Area (sf)	Area (ac)	CN*	S	Q Runoff* (in)	Runoff Volume* (ft³)
Impervious	N/A	33,880	0.78	98	0.2	2.032	5,734
Open Space	C	24,227	0.56	74	3.5	0.478	966
Woods	C	0	0.00	70	4.3	0.346	0
TOTAL:	N/A	58,087	1.33	N/A	N/A	N/A	6,700

Runoff Volume Increase (ft³): 1,470

Runoff Volume Increase = (Post-Dev. Runoff Volume) MINUS (Pre-Dev. Runoff Volume)

Detention Capacity

Average End Method

Contour	Area (ft²)	Volume (ft³)	Total Volume (ft³)
692.8	0.0		0
Average	266.0	53	
693	532.0		53
Average	1357.0	1357	
694	2182.0		1410
Average	3278.0	3278	
695	4374.0		4688
Average	5760.0	5760	
696	7146.0		10448
Average	8113.8	6491	
696.8	9081.6		16939

Total Detention Capacity 16939

Requirement A (Volume)	2758
Requirement A (Elevation)	694.41
Requirement B (Volume)	1470
Requirement B (Elevation)	694.02
Requirement C (Volume)	9520
Requirement C (Elevation)	695.84

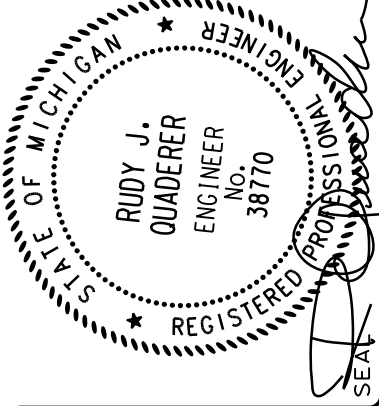
Requirement C - Storage

Site Information

Design Return Period =	100	yrs
Proposed Site Area =	1.33	acre
Cw =	0.68	
Allowable Outlet =	0.20	cfs/acre
Allowable Outlet =	0.27	cfs
Peak Storage =	9520	ft³

Required Pond Capacity

Storm Duration Tc (min)	Storm Intensity 100 yrs (in/hr)	Cw x A	Inflow Rate Qin (cfs)	Outflow Rate Qout (cfs)	Storage Rate Qin - Qout (cfs)	Required Storage Volume (cfs)	Peak Storage
5	7.60	0.91	6.88	0.27	6.61	1984	
10	5.77	0.91	5.22	0.27	4.96	2974	
15	5.15	0.91	4.66	0.27	4.40	3956	
20	4.60	0.91	4.16	0.27	3.90	4677	
30	3.90	0.91	3.53	0.27	3.26	5875	
40	3.40	0.91	3.08	0.27	2.81	6747	
50	3.00	0.91	2.72	0.27	2.45	7348	
60	2.70	0.91	2.44	0.27	2.18	7839	
70	2.50	0.91	2.26	0.27	2.00	8386	
80	2.30	0.91	2.08	0.27	1.82	8714	
90	2.10	0.91	1.90	0.27	1.63	8826	
100	1.93	0.91	1.75	0.27	1.48	8883	
110	1.80	0.91	1.63	0.27	1.36	8995	
120	1.70	0.91	1.54	0.27	1.27	9161	
130	1.60	0.91	1.45	0.27	1.18	9218	
140	1.52	0.91	1.38	0.27	1.11	9319	
150	1.45	0.91	1.31	0.27	1.05	9414	
160	1.39	0.91	1.26	0.27	0.99	9520	PEAK
170	1.31	0.91	1.19	0.27	0.92	9376	
180	1.24	0.91	1.12	0.27	0.86	9244	
190	1.18	0.91	1.07	0.27	0.80	9138	
200	1.13	0.91	1.02	0.27	0.76	9076	
210	1.07	0.91	0.97	0.27	0.70	8845	
220	1.00	0.91	0.91	0.27	0.64	8430	
230	0.95	0.91	0.86	0.27	0.59	8188	
240	0.90	0.91	0.81	0.27	0.55	7892	



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NO.	SUBJECT
DATE	REVISION OR ISSUE

DRAWN	BRZEZINSKI
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FIELD CREW TH / KM	

SIMMS CHEVROLET

NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY

4220 W VIENNA ROAD

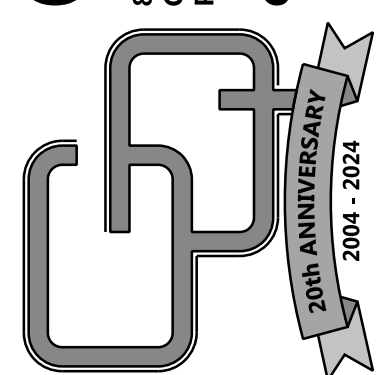
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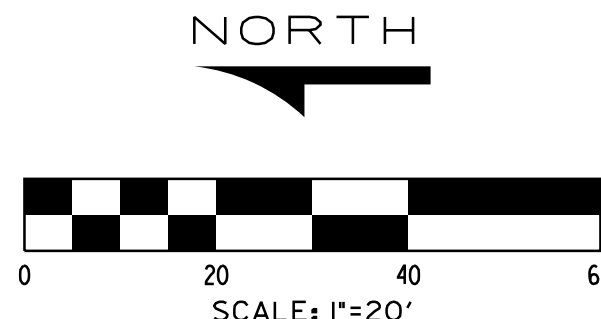
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GRAND BLANC, MI 48439
PH: 610 695-0154

WWW.GQINCORP.COM
RUDY@GQINCORP.COM
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JOB NO.:	240201
C302	



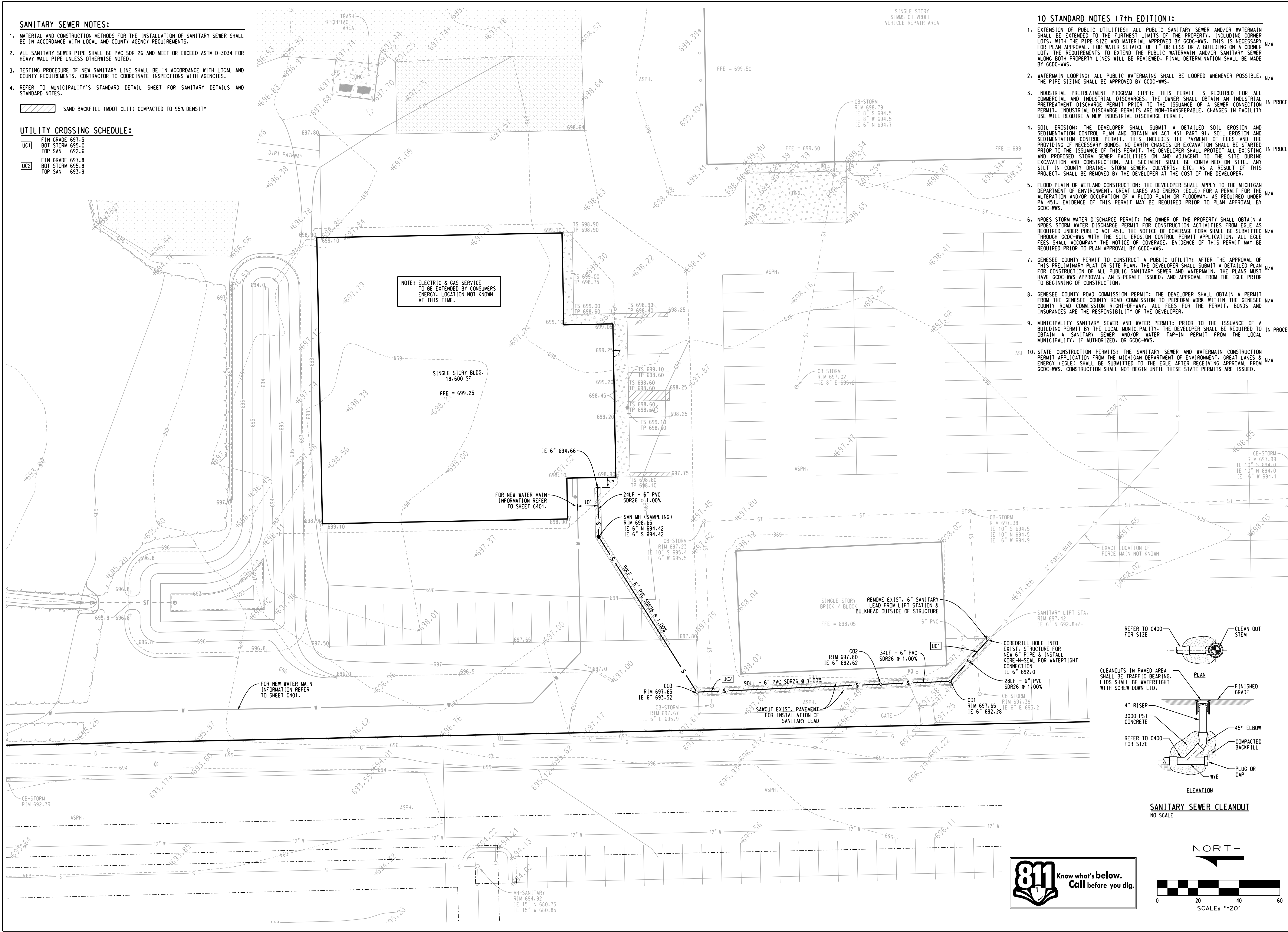
SANITARY SEWER NOTES:

1. MATERIAL AND CONSTRUCTION METHODS FOR THE INSTALLATION OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH LOCAL AND COUNTY AGENCY REQUIREMENTS.
2. ALL SANITARY SEWER PIPE SHALL BE PVC DOR 26 AND MEET OR EXCEED ASTM D-3034 FOR HEAVY WALL PIPE UNLESS OTHERWISE NOTED.
3. TESTING PROCEDURE OF NEW SANITARY LINE SHALL BE IN ACCORDANCE WITH LOCAL AND COUNTY REQUIREMENTS. CONTRACTOR TO COORDINATE INSPECTIONS WITH AGENCIES.
4. REFER TO MUNICIPALITY'S STANDARD DETAIL SHEET FOR SANITARY DETAILS AND STANDARD NOTES.

SAND BACKFILL (MOOT CL11) COMPACTED TO 95% DENSITY

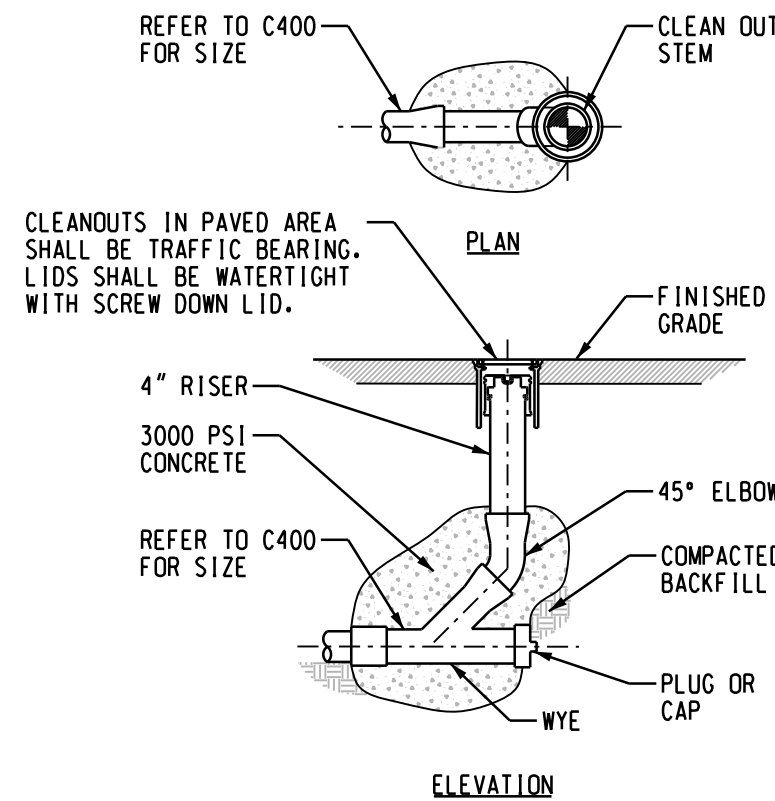
UTILITY CROSSING SCHEDULE:

UC1	FIN GRADE 697.5 BOT STORM 695.0 TOP SAN 692.6
UC2	FIN GRADE 697.8 BOT STORM 695.8 TOP SAN 693.9



10 STANDARD NOTES (7th EDITION):

1. EXTENSION OF PUBLIC UTILITIES: ALL PUBLIC SANITARY SEWER AND/OR WATERMAIN SHALL BE EXTENDED TO THE FURTHEST LIMITS OF THE PROPERTY, INCLUDING CORNER LOTS, WITH THE PIPE SIZE AND MATERIAL APPROVED BY CDC-WWS. THIS IS NECESSARY FOR PLAN APPROVAL. FOR WATER SERVICE OF 1" OR LESS OR A BUILDING ON A CORNER LOT, THE REQUIREMENTS TO EXTEND THE PUBLIC WATERMAIN AND/OR SANITARY SEWER ALONG BOTH PROPERTY LINES WILL BE REVIEWED. FINAL DETERMINATION SHALL BE MADE BY CDC-WWS.
2. WATERMAIN LOOPING: ALL PUBLIC WATERMAINS SHALL BE LOOPED WHENEVER POSSIBLE. THE PIPE SIZING SHALL BE APPROVED BY CDC-WWS.
3. INDUSTRIAL PRETREATMENT PROGRAM (IPP): THIS PERMIT IS REQUIRED FOR ALL COMMERCIAL AND INDUSTRIAL DISCHARGES. THE OWNER SHALL OBTAIN AN INDUSTRIAL PRETREATMENT DISCHARGE PERMIT PRIOR TO THE ISSUANCE OF A SEWER CONNECTION PERMIT. INDUSTRIAL DISCHARGE PERMITS ARE NON-TRANSFERABLE. CHANGES IN FACILITY USE WILL REQUIRE A NEW INDUSTRIAL DISCHARGE PERMIT.
4. SOIL EROSION: THE DEVELOPER SHALL SUBMIT A DETAILED SOIL EROSION AND SEDIMENTATION CONTROL PLAN AND OBTAIN AN ACT 451 PART 91. SOIL EROSION AND SEDIMENTATION CONTROL PERMIT. THIS INCLUDES THE PAYMENT OF FEES AND THE PROVIDING OF NECESSARY BONDS. NO EARTH CHANGES OR EXCAVATION SHALL BE STARTED PRIOR TO THE ISSUANCE OF THIS PERMIT. THE DEVELOPER SHALL PROTECT ALL EXISTING AND PROPOSED STORM SEWER FACILITIES ON AND ADJACENT TO THE SITE DURING EXCAVATION AND CONSTRUCTION. ALL SEDIMENT SHALL BE CONTAINED ON SITE. ANY SILT IN COUNTY DRAINS, STORM SEWER, CULVERTS, ETC. AS A RESULT OF THIS PROJECT, SHALL BE REMOVED BY THE DEVELOPER AT THE COST OF THE DEVELOPER.
5. FLOOD PLAIN OR WETLAND CONSTRUCTION: THE DEVELOPER SHALL APPLY TO THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY (EGLE) FOR A PERMIT FOR THE ALTERATION AND/OR OCCUPATION OF A FLOOD PLAIN OR FLOODWAY, AS REQUIRED UNDER PA 451. EVIDENCE OF THIS PERMIT MAY BE REQUIRED PRIOR TO PLAN APPROVAL BY CDC-WWS.
6. NPDES STORM WATER DISCHARGE PERMIT: THE OWNER OF THE PROPERTY SHALL OBTAIN A NPDES STORM WATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES FROM EGLE AS REQUIRED UNDER PUBLIC ACT 451. THE NOTICE OF COVERAGE FORM SHALL BE SUBMITTED THROUGH CDC-WWS WITH THE SOIL EROSION CONTROL PERMIT APPLICATION. ALL EGLE FEES SHALL ACCOMPANY THE NOTICE OF COVERAGE. EVIDENCE OF THIS PERMIT MAY BE REQUIRED PRIOR TO PLAN APPROVAL BY CDC-WWS.
7. GENESEE COUNTY PERMIT TO CONSTRUCT A PUBLIC UTILITY: AFTER THE APPROVAL OF THIS PRELIMINARY PLAT OR SITE PLAN, THE DEVELOPER SHALL SUBMIT A DETAILED PLAN FOR CONSTRUCTION OF ALL PUBLIC SANITARY SEWER AND WATERMAIN. THE PLANS MUST HAVE CDC-WWS APPROVAL, AN S-PERMIT ISSUED, AND APPROVAL FROM THE EGLE PRIOR TO BEGINNING OF CONSTRUCTION.
8. GENESEE COUNTY ROAD COMMISSION PERMIT: THE DEVELOPER SHALL OBTAIN A PERMIT FROM THE GENESEE COUNTY ROAD COMMISSION TO PERFORM WORK WITHIN THE GENESEE COUNTY ROAD COMMISSION RIGHT-OF-WAY. ALL FEES FOR THE PERMIT, BONDS AND INSURANCES ARE THE RESPONSIBILITY OF THE DEVELOPER.
9. MUNICIPALITY SANITARY SEWER AND WATER PERMITS: PRIOR TO THE ISSUANCE OF A BUILDING PERMIT BY THE LOCAL MUNICIPALITY, THE DEVELOPER SHALL BE REQUIRED TO OBTAIN A SANITARY SEWER AND/OR WATER TAP-IN PERMIT FROM THE LOCAL MUNICIPALITY, IF AUTHORIZED, OR CDC-WWS.
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SANITARY SEWER CLEANOUT
NO SCALE



SIMMS CHEVROLET
NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY

4220 W VIENNA ROAD
CLO, MI 48220

Griggs Quaderer, Inc.

8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48409
PH: 610 695-0154

WWW.GQINCORP.COM
RUDY@GQINCORP.COM
CHRIS@GQINCORP.COM

CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING



JOB NO.: 240201

PHASE: SPA

C400

DRAWN: BRZEZINSKI

DESIGNED

CHECKED

FIELD: CREW TH / KM

12-15-25 ISSUED TO VIENNA TWP.

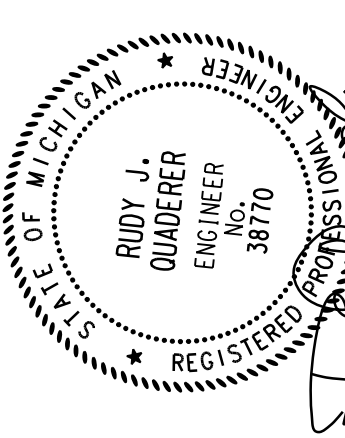
04-09-25 ISSUED TO CONTRACTOR

02-28-25 ISSUED TO CDC-WWS

08-20-24 VIENNA TWP. (SITE PLAN APP.)

NO. DATE

REVISION OR ISSUE



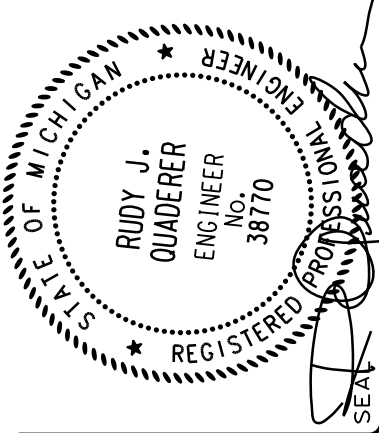
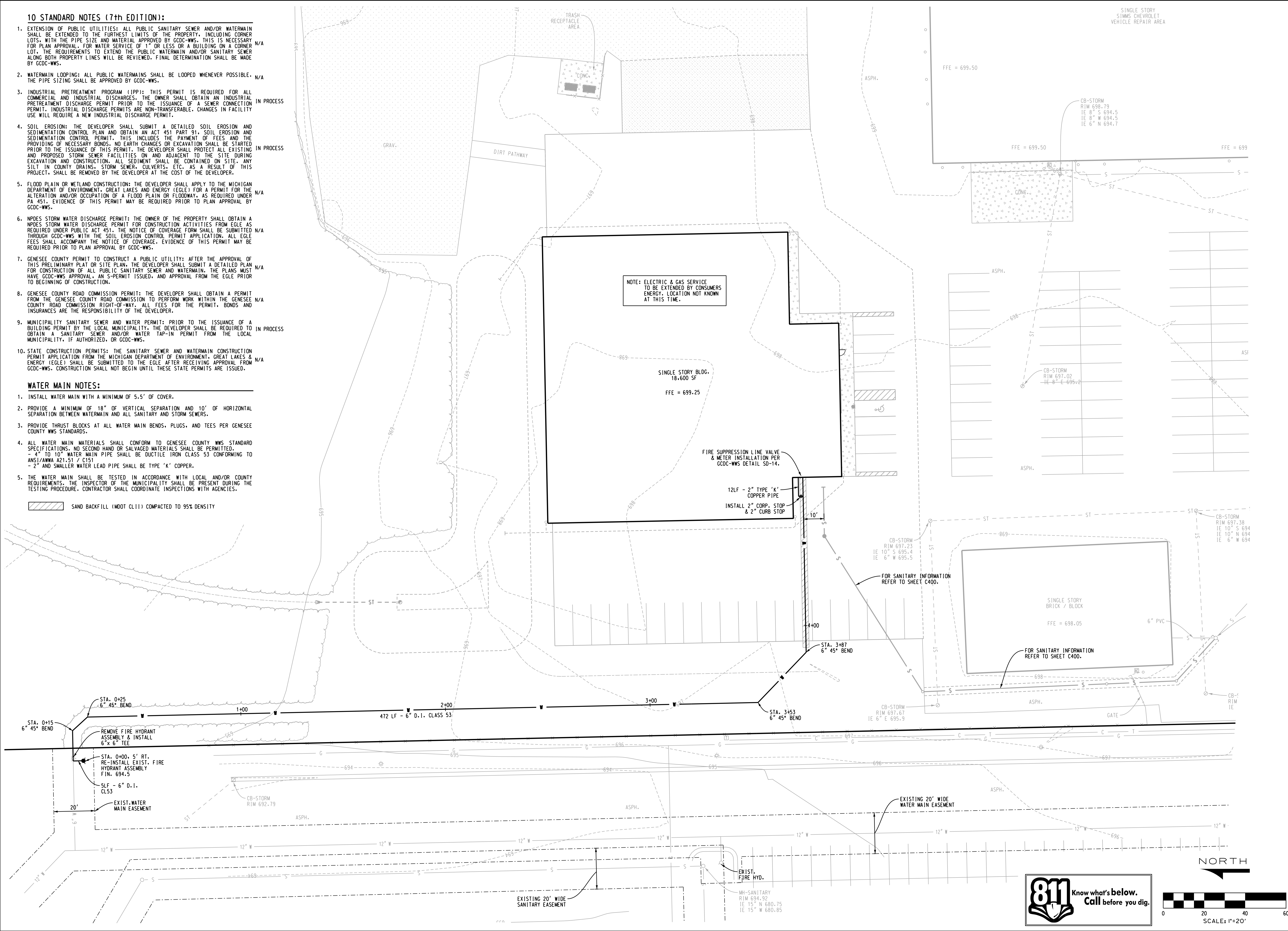
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WATER MAIN NOTES:

- INSTALL WATER MAIN WITH A MINIMUM OF 5.5' OF COVER.
- PROVIDE A MINIMUM OF 18" OF VERTICAL SEPARATION AND 10' OF HORIZONTAL SEPARATION BETWEEN WATERMAIN AND ALL SANITARY AND STORM SEWERS.
- PROVIDE THRUST BLOCKS AT ALL WATER MAIN BENDS, PLUGS, AND TEES PER GENESEE COUNTY WWS STANDARDS.
- ALL WATER MAIN MATERIALS SHALL CONFORM TO GENESEE COUNTY WWS STANDARD SPECIFICATIONS. NO SECOND HAND OR SALVAGED MATERIALS SHALL BE PERMITTED.
 - 4" TO 10" WATER MAIN PIPE SHALL BE DUCTILE IRON CLASS 53 CONFORMING TO ANSI/AWWA A21.51 / C151
 - 2" AND SMALLER WATER LEAD PIPE SHALL BE TYPE 'K' COPPER.
- THE WATER MAIN SHALL BE TESTED IN ACCORDANCE WITH LOCAL AND/OR COUNTY REQUIREMENTS. THE INSPECTOR OF THE MUNICIPALITY SHALL BE PRESENT DURING THE TESTING PROCEDURE. CONTRACTOR SHALL COORDINATE INSPECTIONS WITH AGENCIES.

 SAND BACKFILL (MOOT CL11) COMPACTED TO 95% DENSITY



NO.	DATE	SUBJECT
12-15-25	ISSUED TO VIENNA TWP.	
04-09-25	ISSUED TO CONTRACTOR	
02-28-25	ISSUED TO GCDC-WWS	
08-20-24	VIENNA TWP. (SITE PLAN APP.)	

DRAWN	BRZEZINSKI
DESIGNED	
CHECKED	
FIELD	CREW TH / KM

SIMMS CHEVROLET
NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY

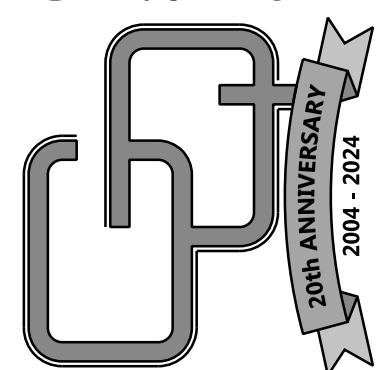
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CLO, MI 48220

NEW WATER MAIN PLAN

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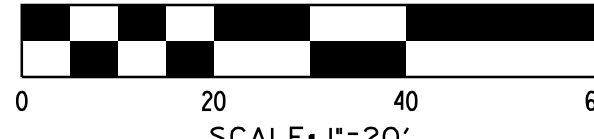
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GRAND BLANC, MI 48499
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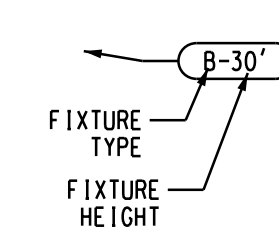
CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING



PHASE: SPA
JOB NO.: 240201

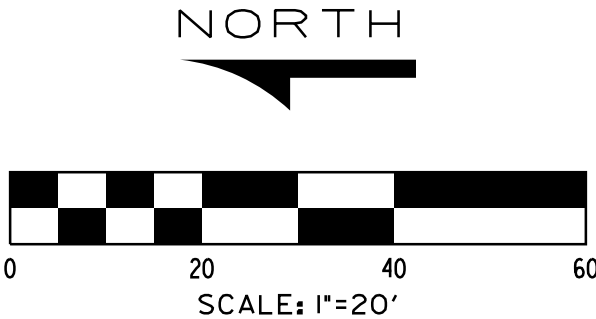
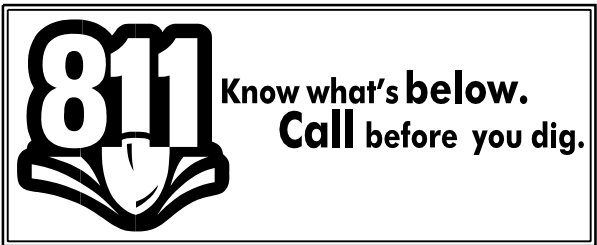
C401





STATISTICAL AREA SUMMARY				
AVG	MAX	MIN	AVG/MIN	MAX/MIN
0.5	1.5	0.1	5.0 / 1	15.0 / 1

LUMINAIRE SCHEDULE							
QTY	LABEL	ARRANGEMENT	MANUFACTURER	CATALOG NO.	DESCRIPTION	LAMP	WATTAGE
7	A	SINGLE 	LITHONIA	DSXW1 LED 10C 700 30K TFTM MVOLT	DW-SERIES AREA SIZE 1, WALL MOUNTED, SINGLE (ONE) LIGHT FIXTURE	LED	26.2



Griggs Quaderer, Inc.

8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48439
PH: (810) 695-0154

WWW.GQINCORP.COM
RUDY@GQINCORP.COM
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**CIVIL ENGINEERING · LAND SURVEYING
SITE PLANNING**



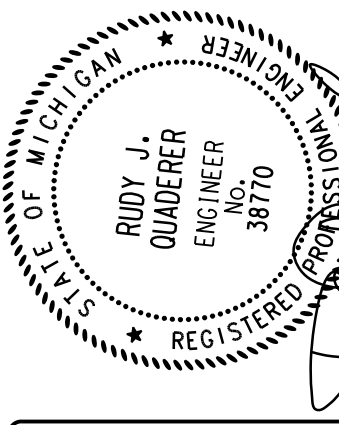
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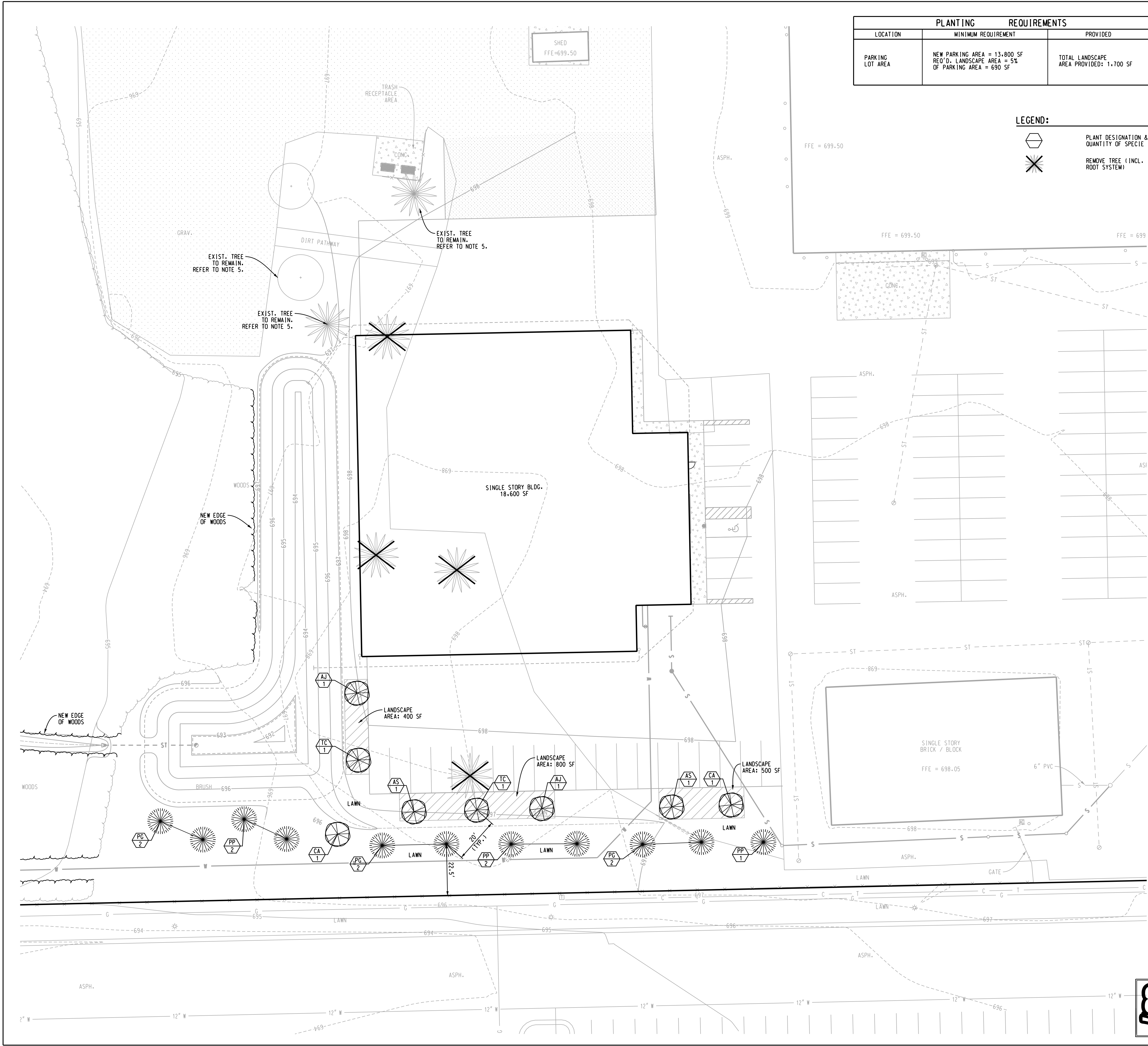
SIMMS CHEVROLET
NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY
4220 W. VIENNA ROAD

SITE PHOTOMETRIC DI AND

DRAWN	BRZEZINSKI
DESIGNED	
CHECKED	
FIELD CREW TH / KM	

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	NO.	DATE	SUBJECT





PLANTING REQUIREMENTS		
LOCATION	MINIMUM REQUIREMENT	PROVIDED
PARKING LOT AREA	NEW PARKING AREA = 13,800 SF REQ'D. LANDSCAPE AREA = 5% OF PARKING AREA = 690 SF	TOTAL LANDSCAPE AREA PROVIDED: 1,700 SF

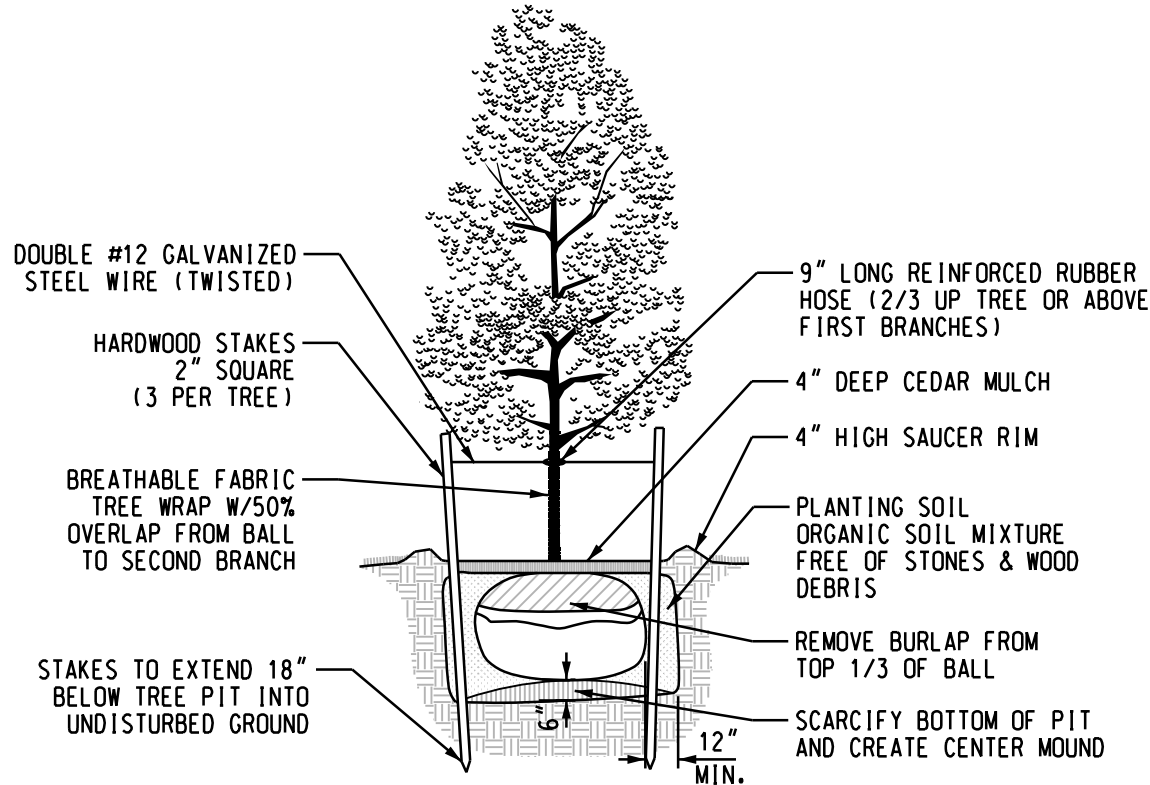
LEGEND:

PLANT DESIGNATION &
QUANTITY OF SPECIE

REMOVE TREE (INCL.
ROOT SYSTEM)

- LANDSCAPING NOTES:**
1. INSTALLATION OF PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS LATEST EDITION.
 2. PRIOR TO BEGIN OF LANDSCAPE WORK, CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES. CONTRACTOR SHALL CONTACT MISS DIG (811) FOR LOCATIONS OF ALL PRIVATE UTILITIES. ANY DAMAGE OR INTERRUPTIONS OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE WORK CONDITIONS TO OWNER PRIOR TO COMMENCING WORK.
 3. NUMERICAL VALUE OF PLANT MATERIAL SHOWN SHALL TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. VERIFY AND REPORT ANY DISCREPANCIES WITH LANDSCAPE ARCHITECT.
 4. SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY THE MUNICIPALITY AND/OR GOVERNING AGENCY PRIOR TO COMMENCING.
 5. PROTECT EXISTING TREES TO REMAIN WITH TEMPORARY FENCING PLACED AT THE DRIP LINE. NO GROUND DISTURBANCE OR STORAGE OF MATERIAL SHALL OCCUR WITHIN THE DRIP LINE LIMITS.
 6. COORDINATE PLACEMENT OF PLANTS WITH UNDERGROUND UTILITY LOCATIONS. MAKE ADJUSTMENTS AS REQUIRED TO AVOID PLANTING OVER THE UTILITIES. DO NOT PLANT SHADE OR EVERGREEN TREES BELOW OVERHEAD WIRES. IF CONFLICT OCCURS, CONTACT LANDSCAPE ARCHITECT TO ADJUST LOCATION OF TREES.
 7. PLACE 4" THICK BY 4' DIAMETER SHREDDED CEDAR OR CYPRESS BARK MULCH RING AT THE BASE OF ALL NEW TREES IN LAWN AREA. CUT LAWN AREA IN A SMOOTH UNIFORM CIRCULAR LINE.
 8. ALL GREEN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE GRADED AND TOPPED WITH MINIMUM 4" DEEP TOPSOIL AND SEEDED & MULCHED. REFER TO PLAN FOR SEED MIXTURE AND APPLICATION RATE.
 9. ALL EXISTING TREES AND SHRUBS NOTED TO REMAIN SHALL BE PROPERLY PRUNED, TRIMMED, THINNED AND SHAPED BY A QUALIFIED NURSERYMAN OF ARBORIST. ALL DEAD LIMBS AND BRANCHES SHALL BE REMOVED FROM SITE.
 10. ALL LANDSCAPING SHALL BE COMPLETED WITHIN 6 MONTHS OF COMPLETION OF BUILDING.
 11. ALL STAKING MATERIALS AND WRAPPING SHALL BE REMOVED OFF SITE WITHIN ONE YEAR AFTER INSTALLATION.
 12. ALL PLANT MATERIALS INCLUDING LAWN AREAS SHALL BE WATERED, FERTILIZED, TRIMMED, MOWED AND GENERALLY MAINTAINED BY THE CONTRACTOR IN A HEALTHY GROWING CONDITION FOR A PERIOD OF 30 DAYS AFTER FINAL COMPLETION AND AFTER LAWN IS CUT FOR FIRST TIME. CONTRACTOR SHALL SUBMIT A ONE (1) YEAR WARRANTY FROM COMPLETION DATE AND BE RESPONSIBLE TO REPLACE ANY DISEASED OR DEAD PLANT MATERIAL WITHIN THAT PERIOD OF TIME WITHOUT ANY COST TO THE OWNER.

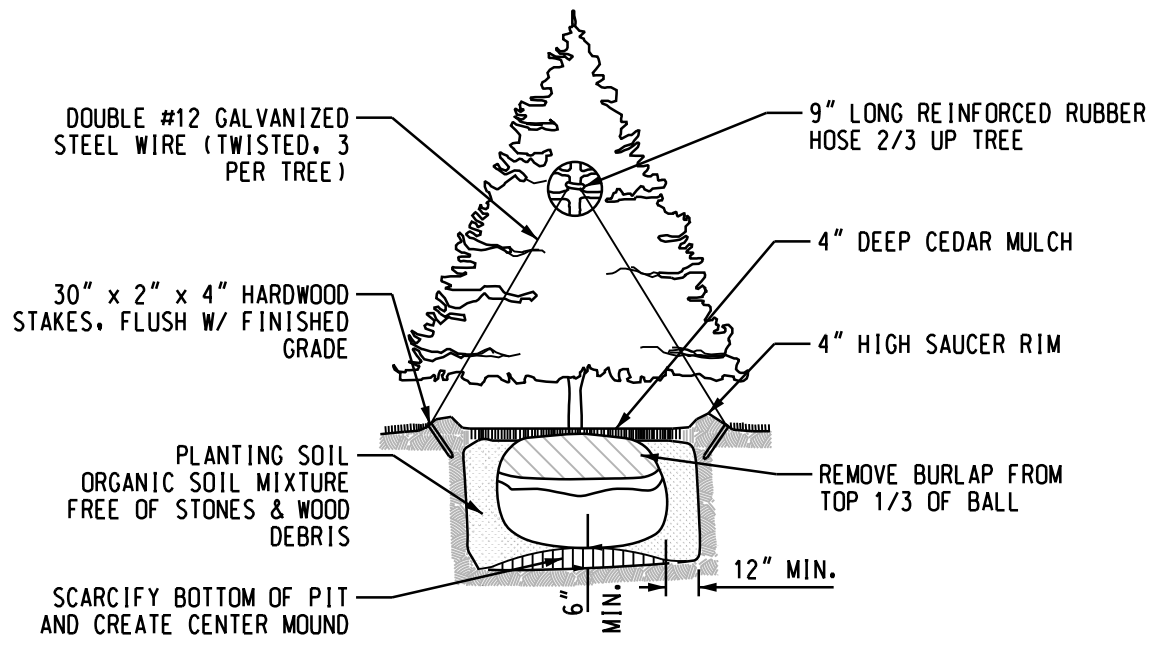
TREE SCHEDULE				
KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
AJ	ACER X FREEMANII JEFFERSRED	AUTUMN BLAZE MAPLE	2.5" CAL	2
AS	ACER SACCHARUM "COMMEMORATION"	COMMEMORATION SUGAR MAPLE	2.5" CAL	2
CA	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2.5" CAL	2
PG	PICEA GLAUCA	WHITE SPRUCE	6'-8' HT	6
PP	PICEA PUNGENS	COLORADO SPRUCE	6'-8' HT	5
TC	TILIA CORDATA "GREENSPIRE"	GREENSPIRE LINDEN	2.5" CAL	2



NOTE: TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE. RAISE ROOT BALL 1/3 HIGHER IN CLAY SOILS - BACKFILL & COVER ENTIRE BALL W/ TOPSOIL & MULCH.

TREE PLANTING DETAIL

NO SCALE



NOTE: TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE. RAISE ROOT BALL 1/3 HIGHER IN CLAY SOILS - BACKFILL & COVER ENTIRE BALL W/ TOPSOIL & MULCH.

EVERGREEN TREE DETAIL

NO SCALE

Know what's below.
Call before you dig.

SCALE: 1"=20'

DRAWN	BRZEZINSKI
DESIGNED	
CHECKED	
FIELD CREW TH / KM	

SIMMS CHEVROLET

NEW BODY SHOP / AUTOMOBILE REPAIR FACILITY

4220 W VIENNA ROAD
CLO, MI 48220

DATE: 08-20-24

NO. 240201

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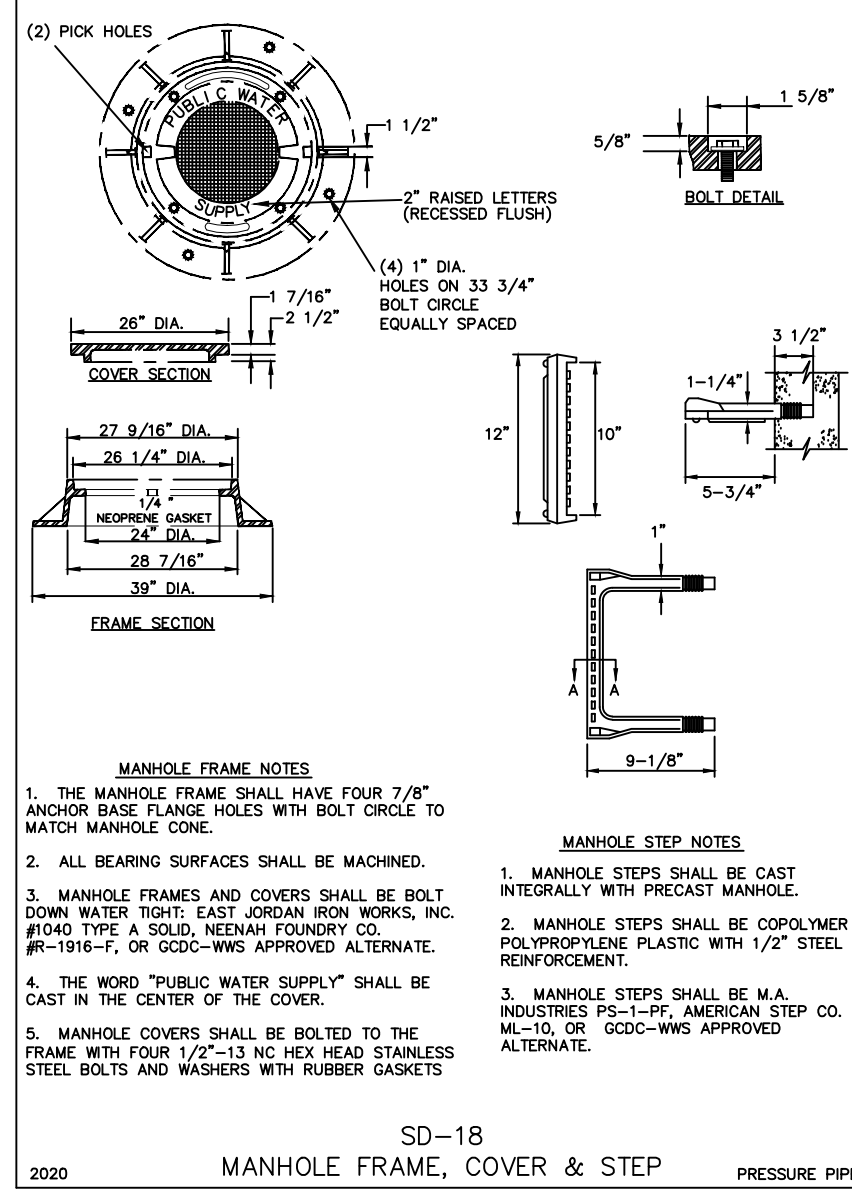
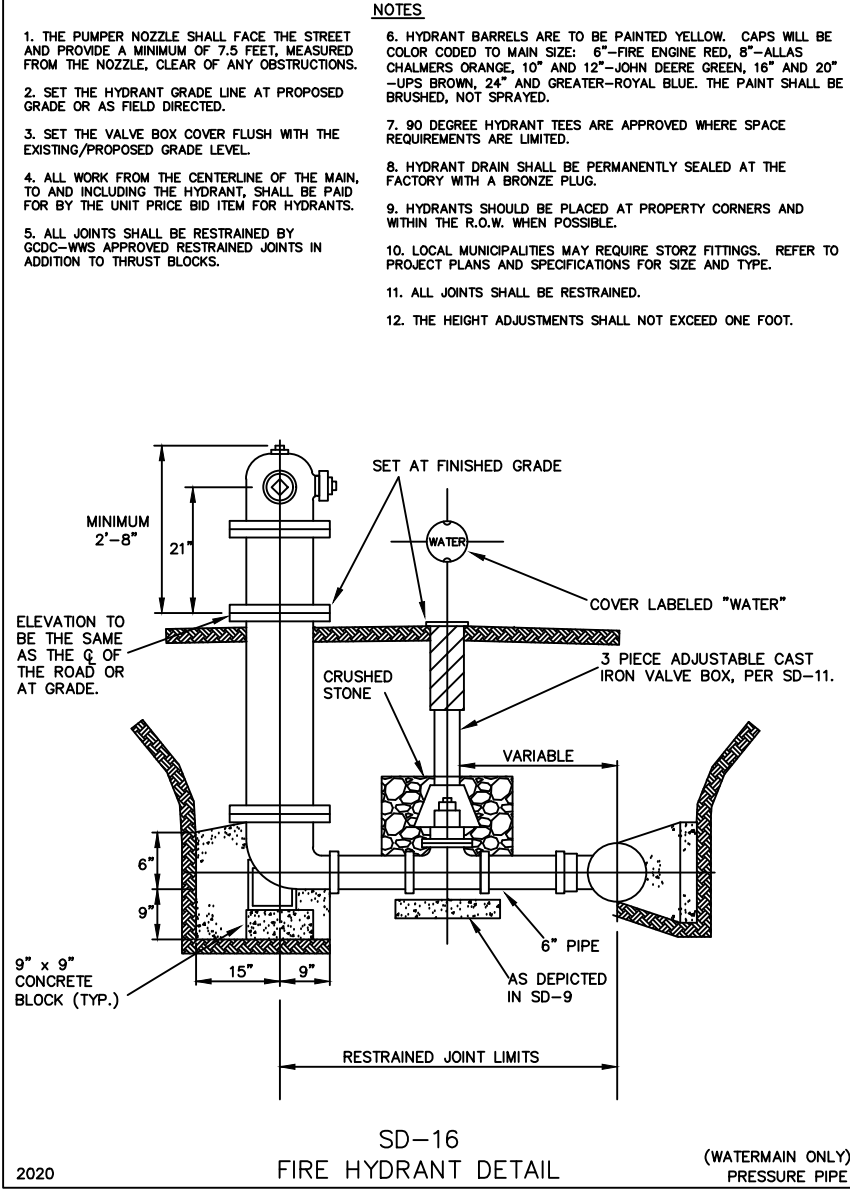
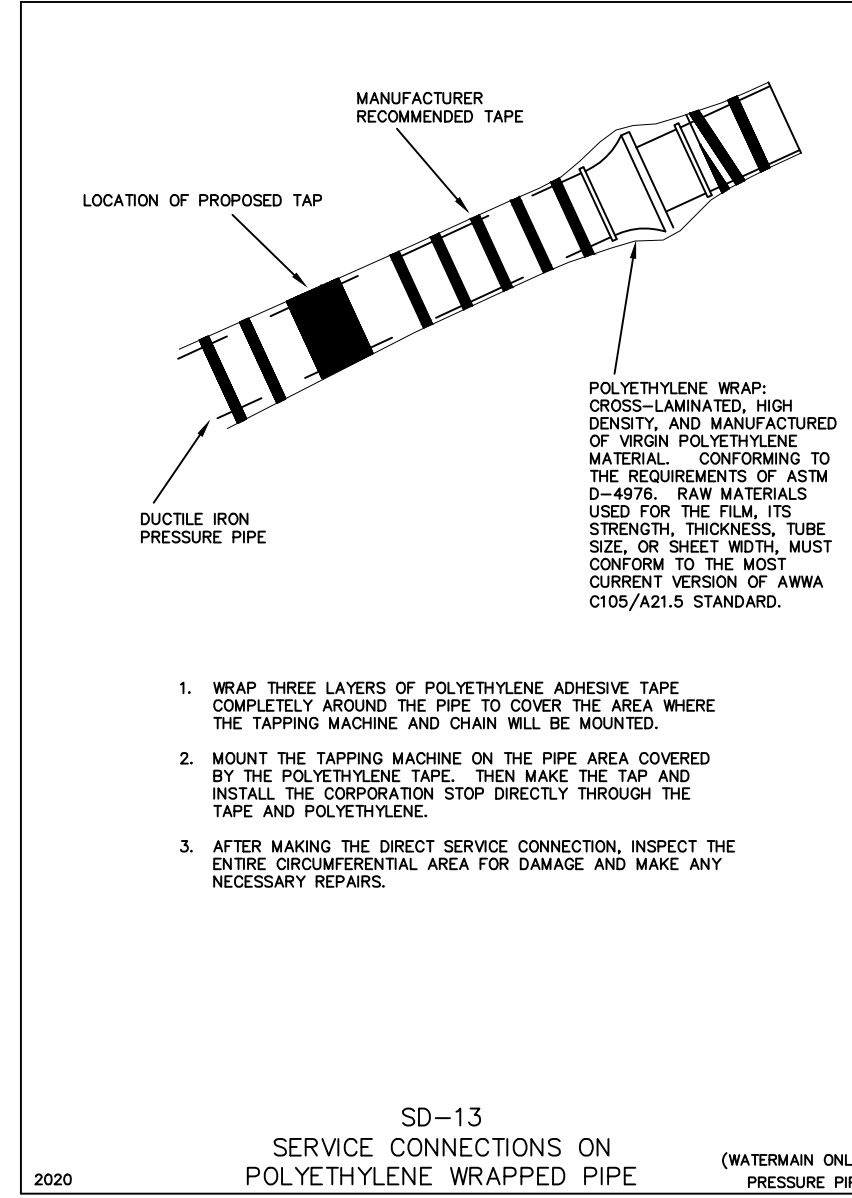
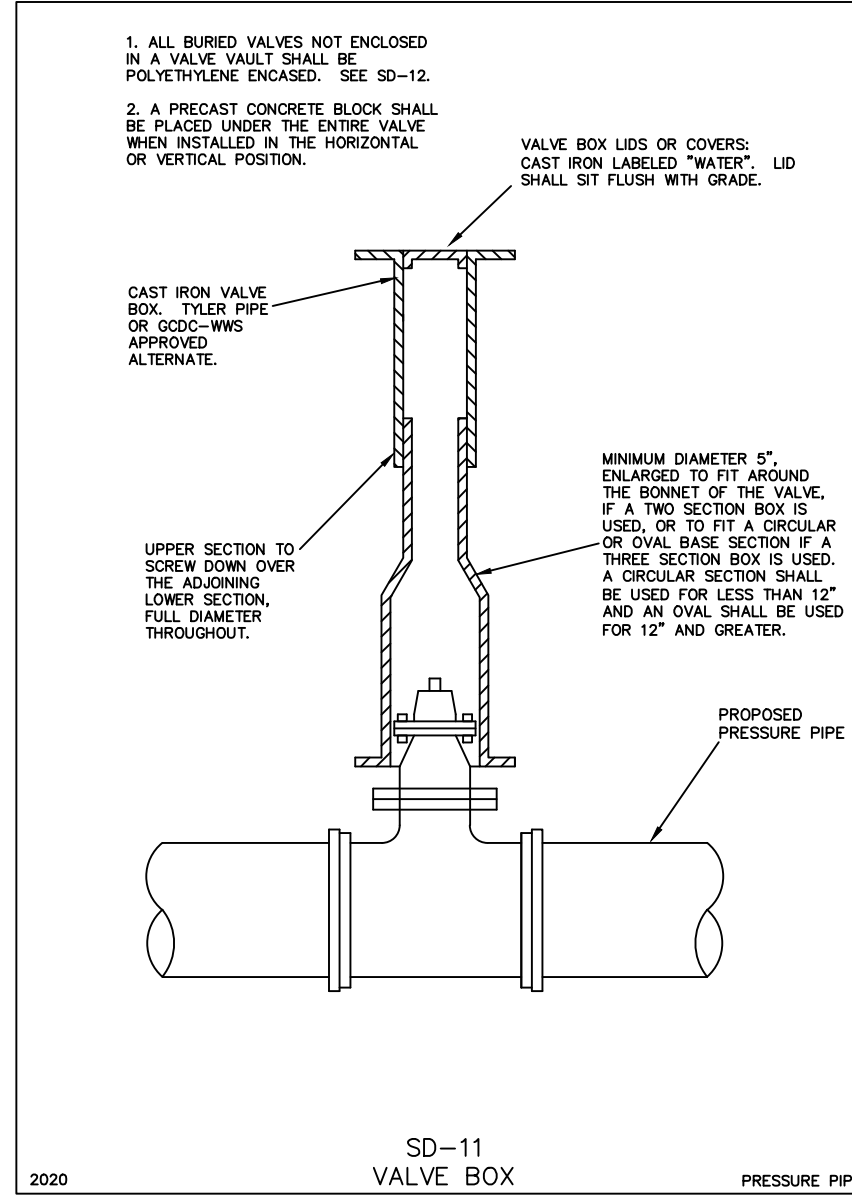
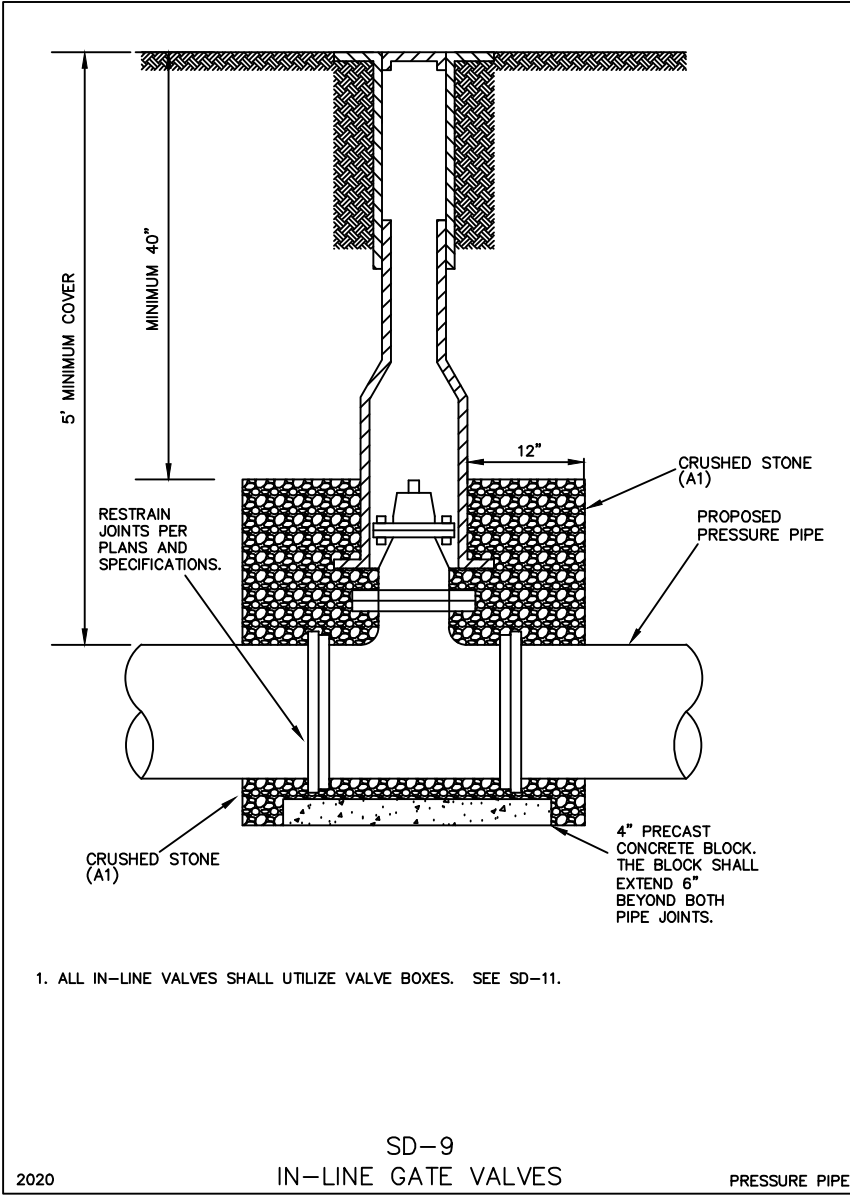
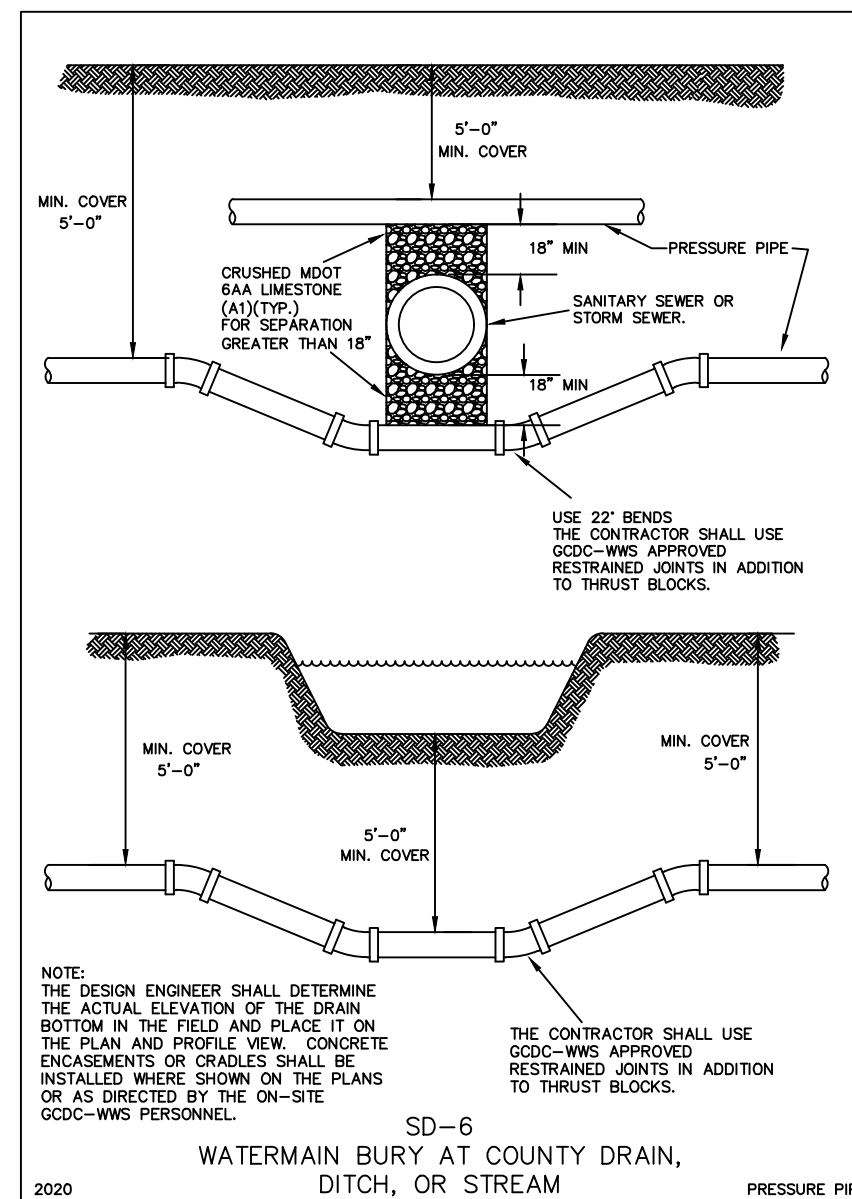
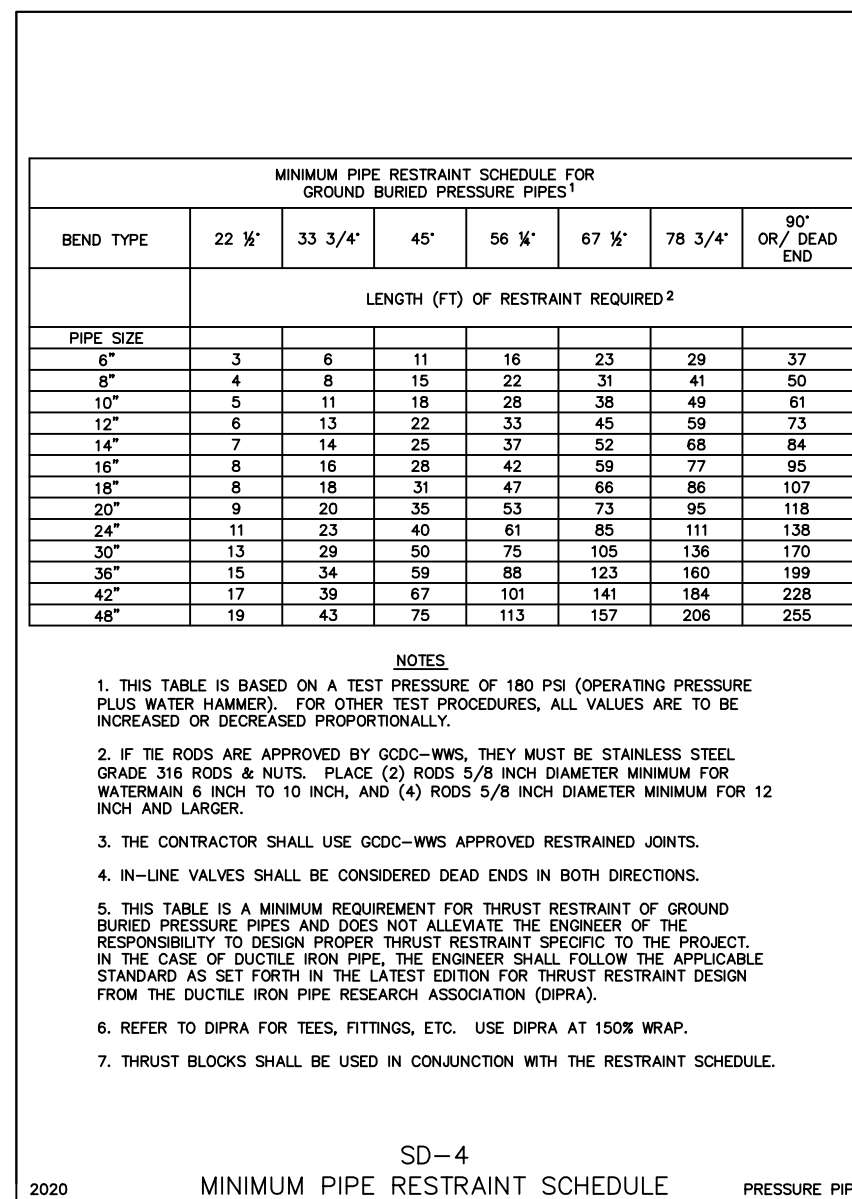
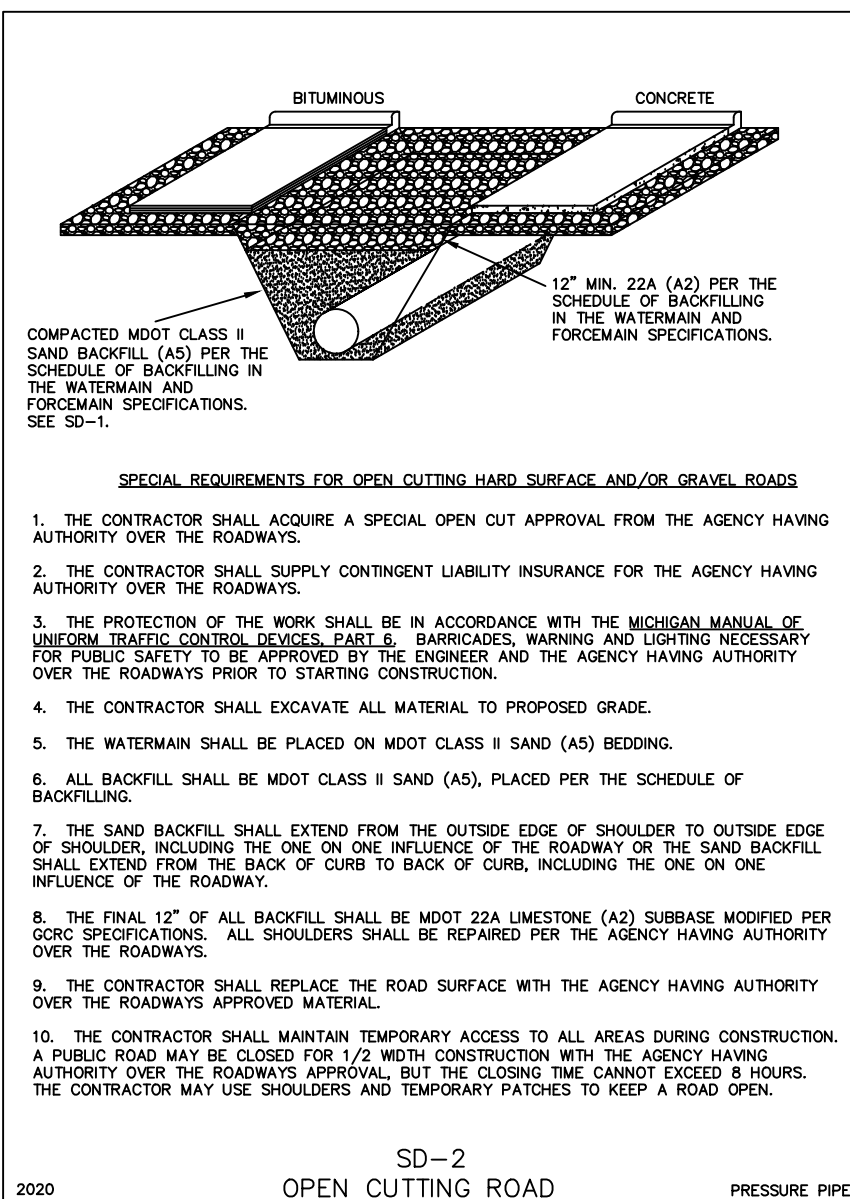
20th ANNIVERSARY
2004 - 2024

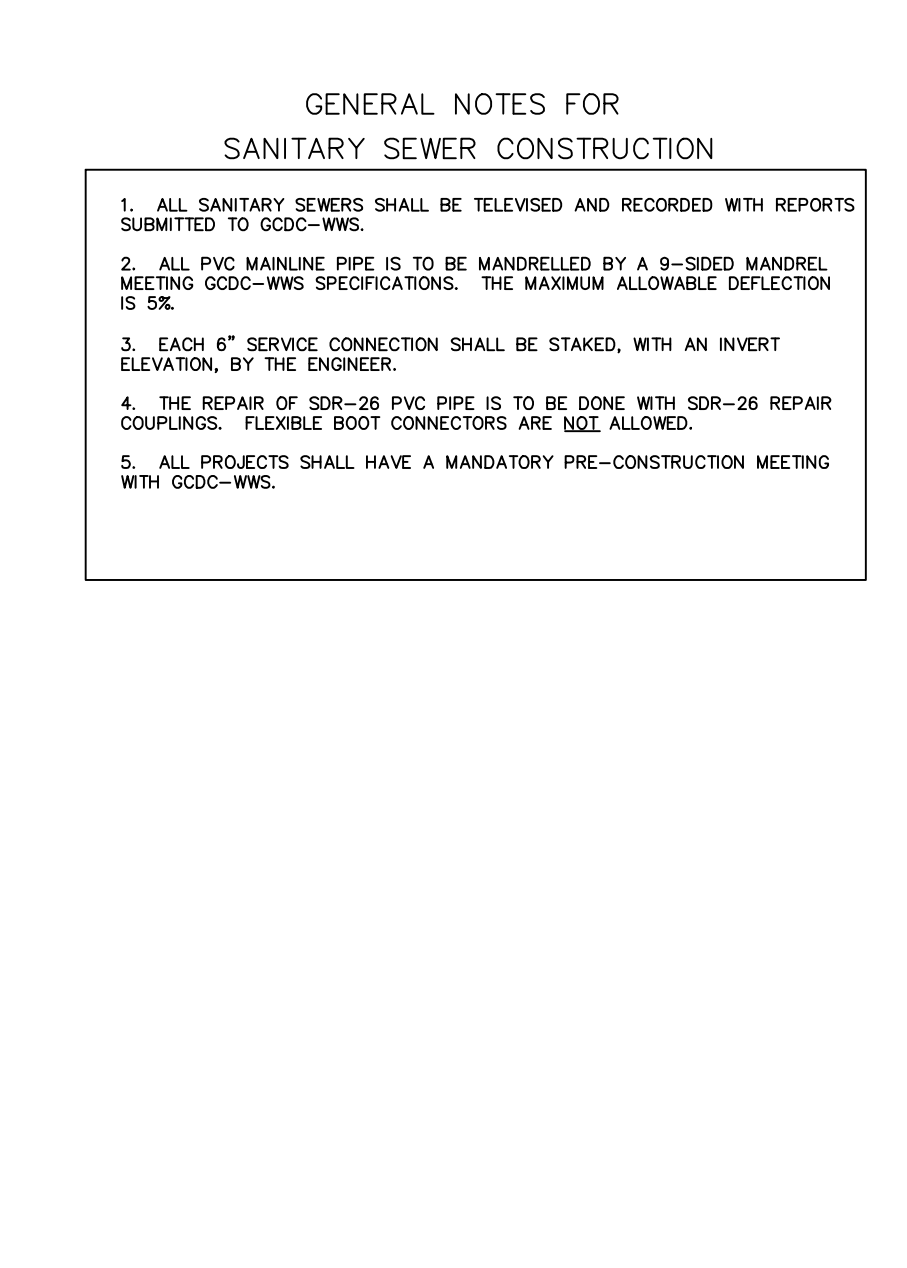
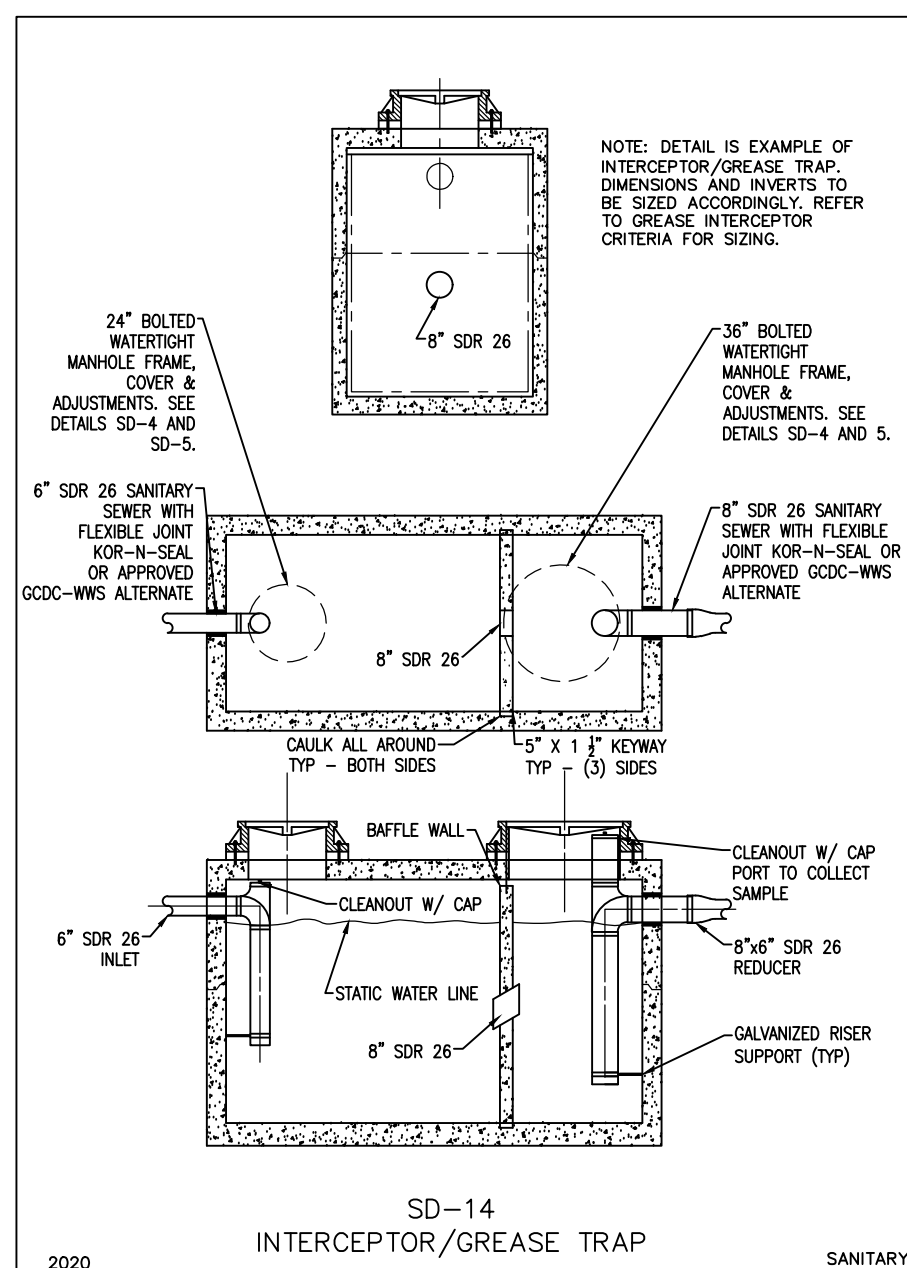
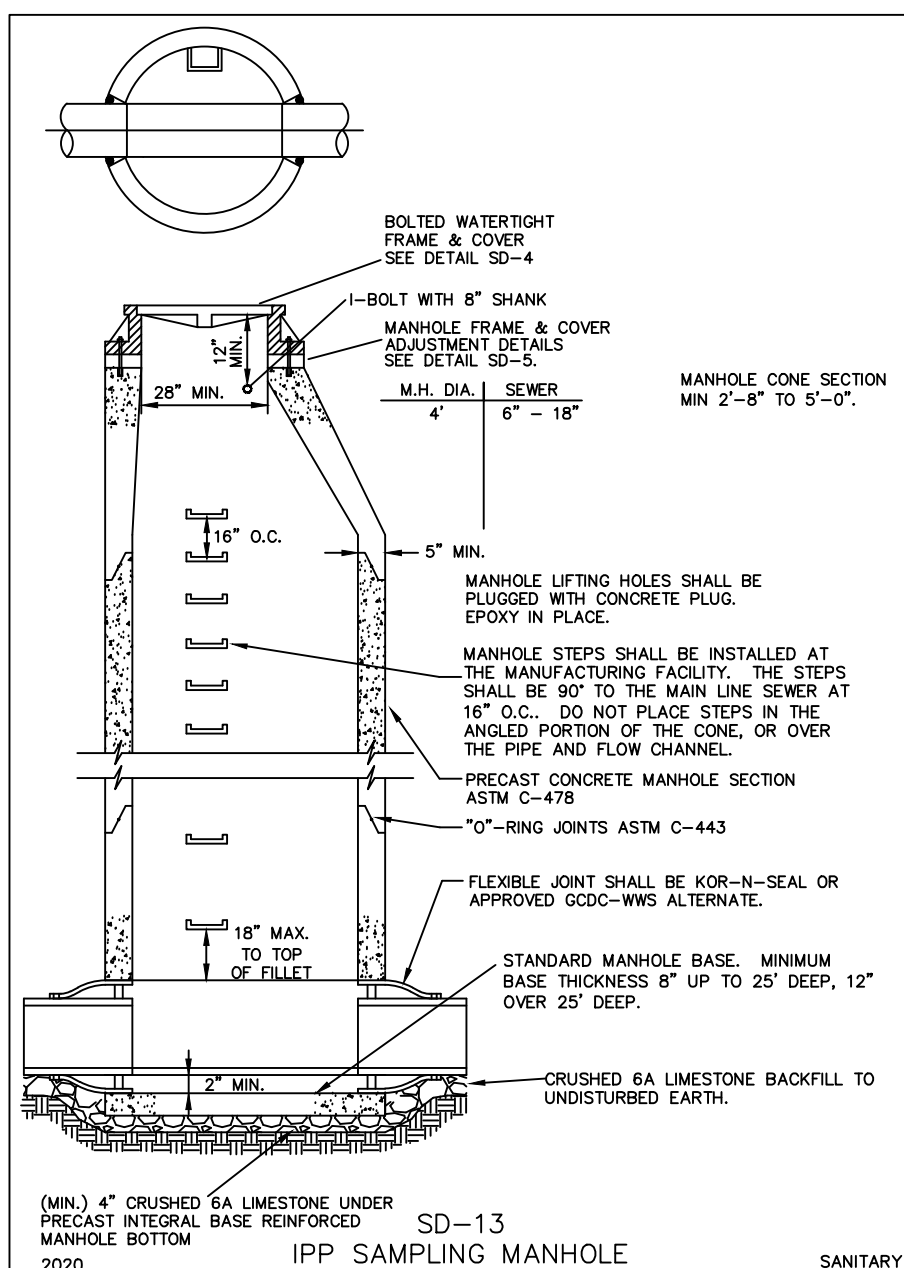
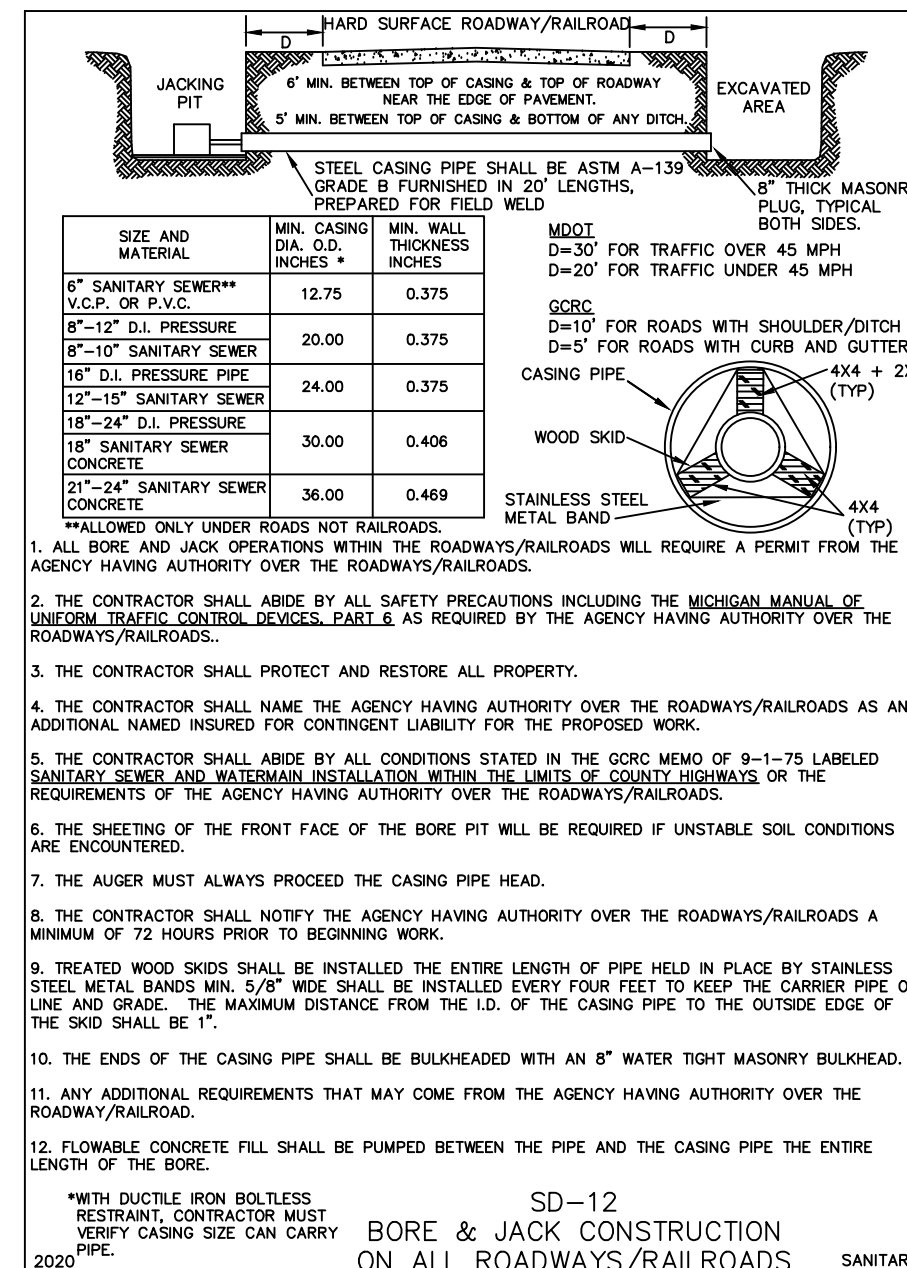
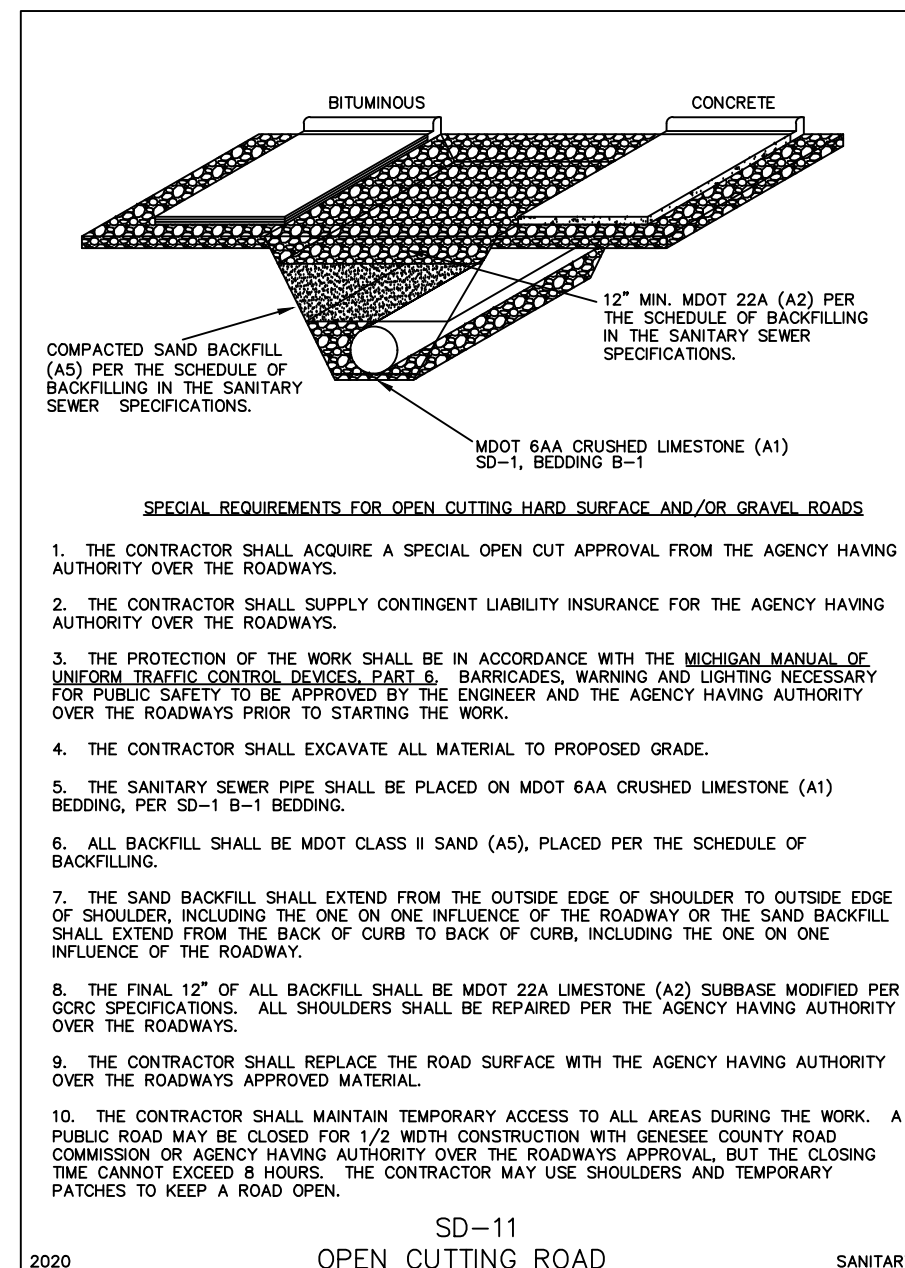
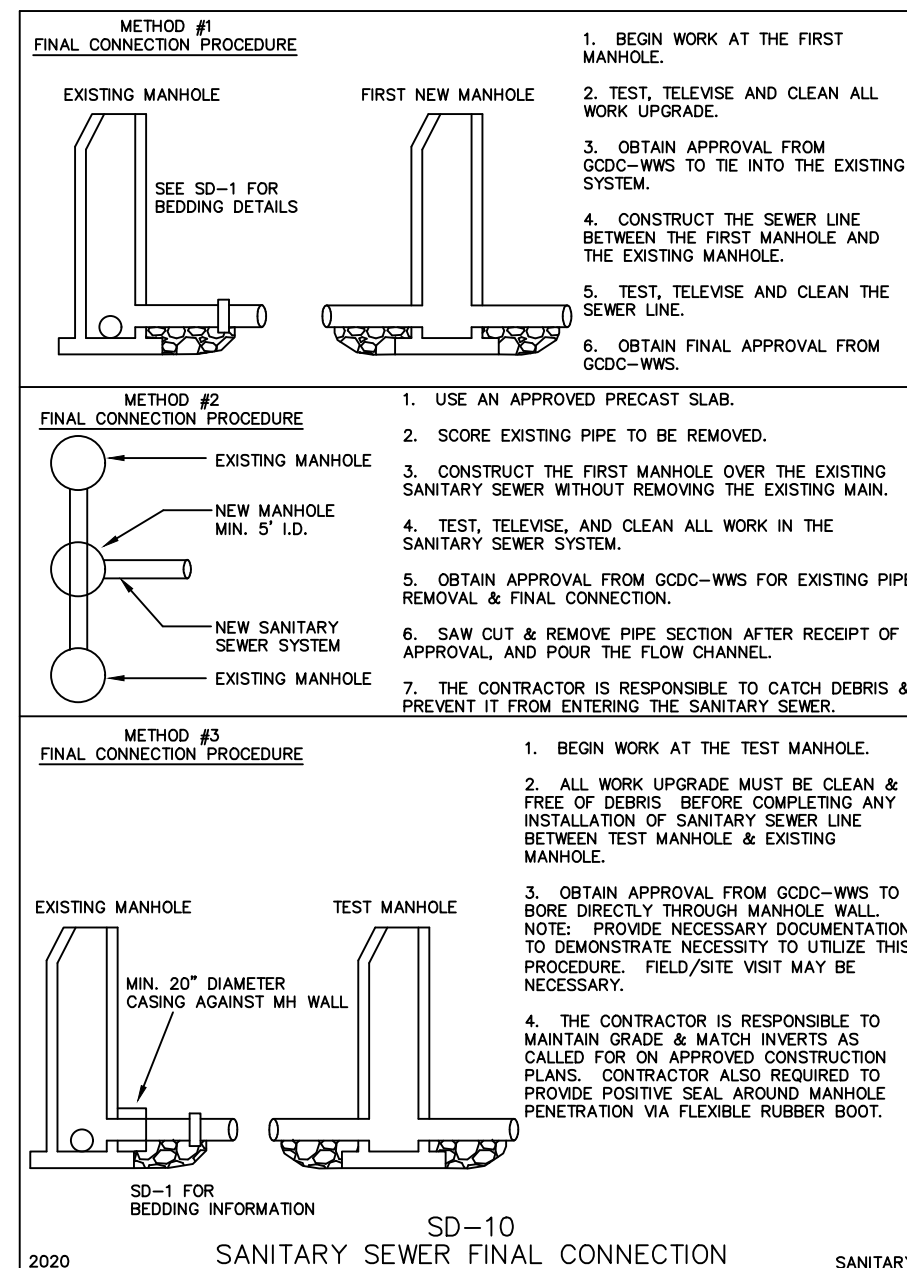
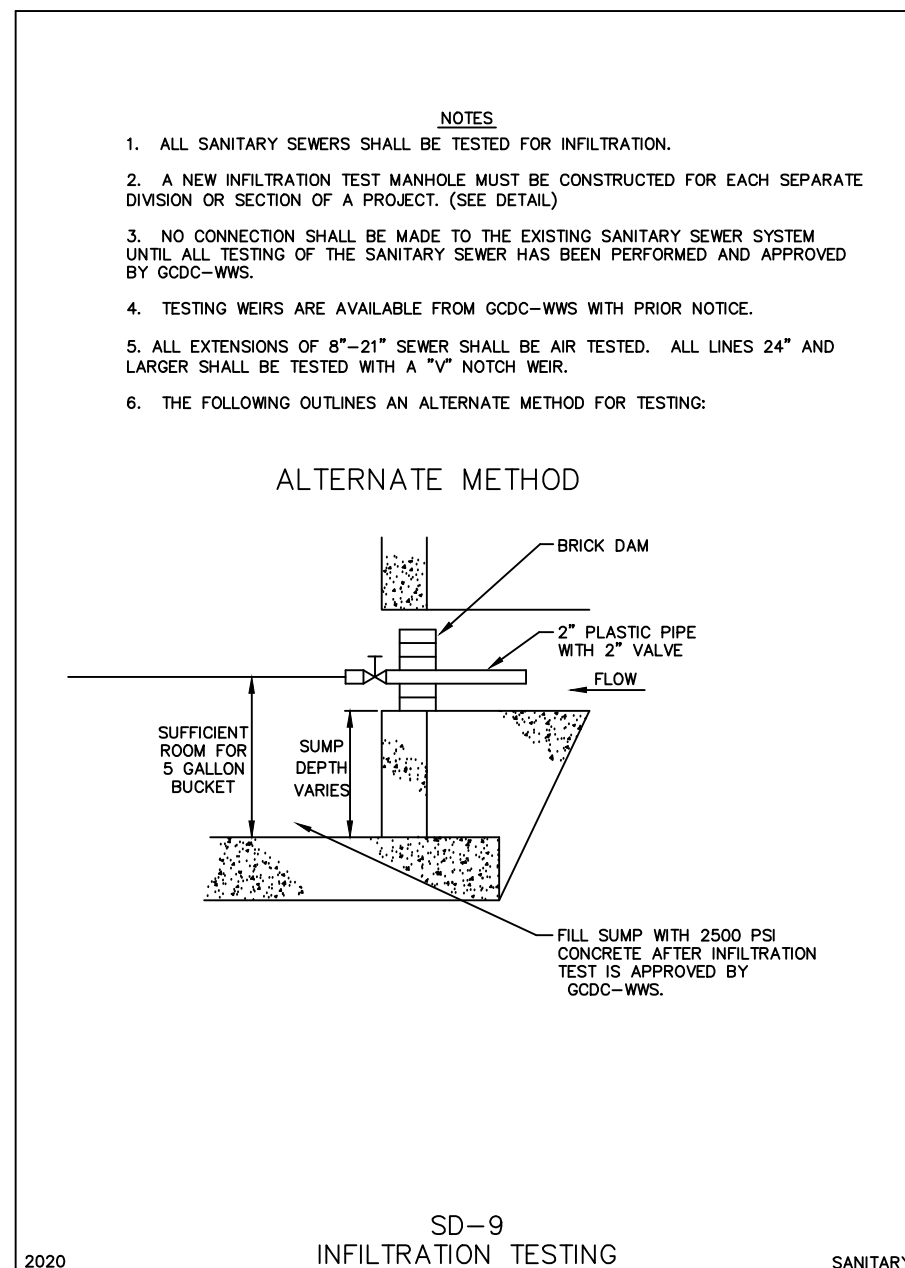
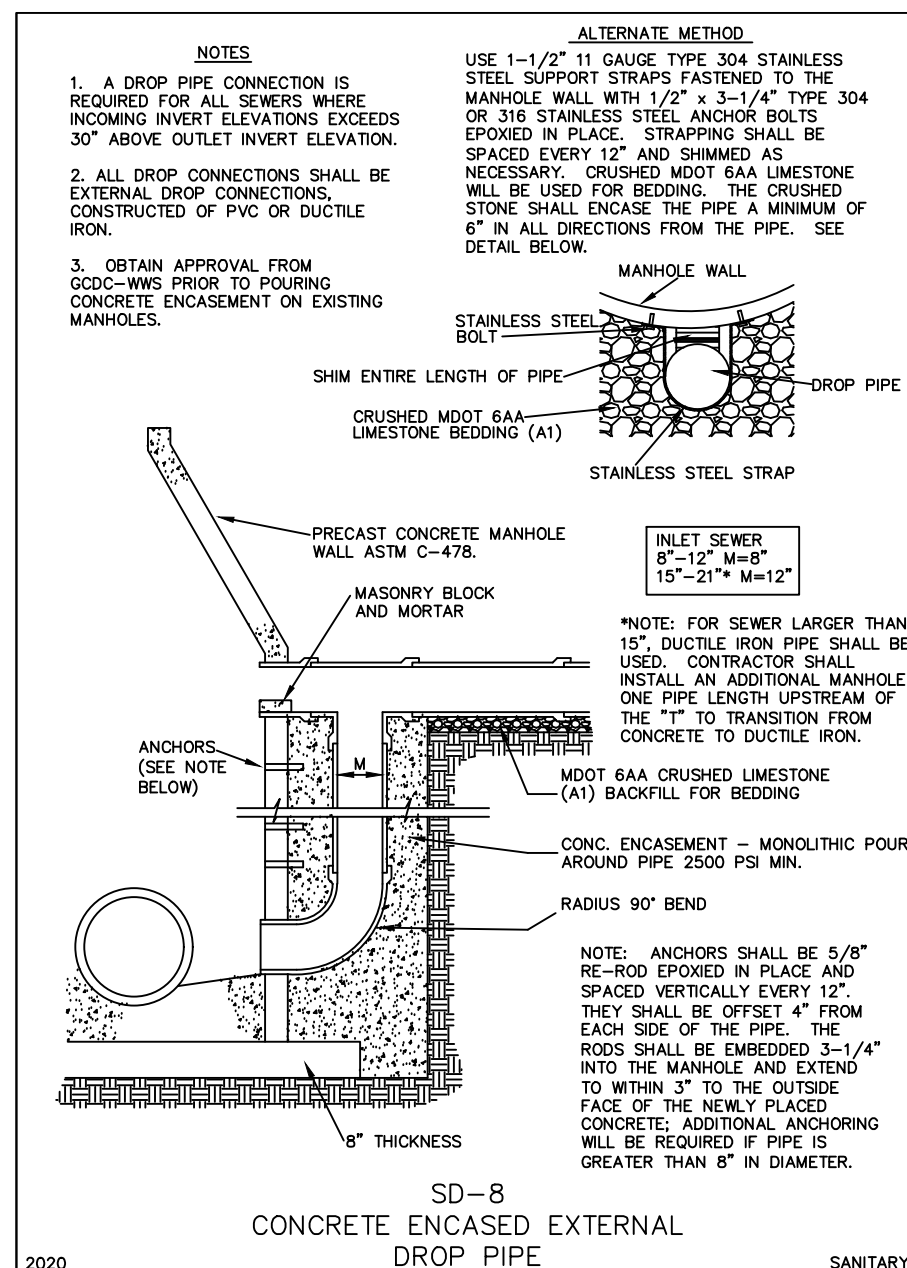
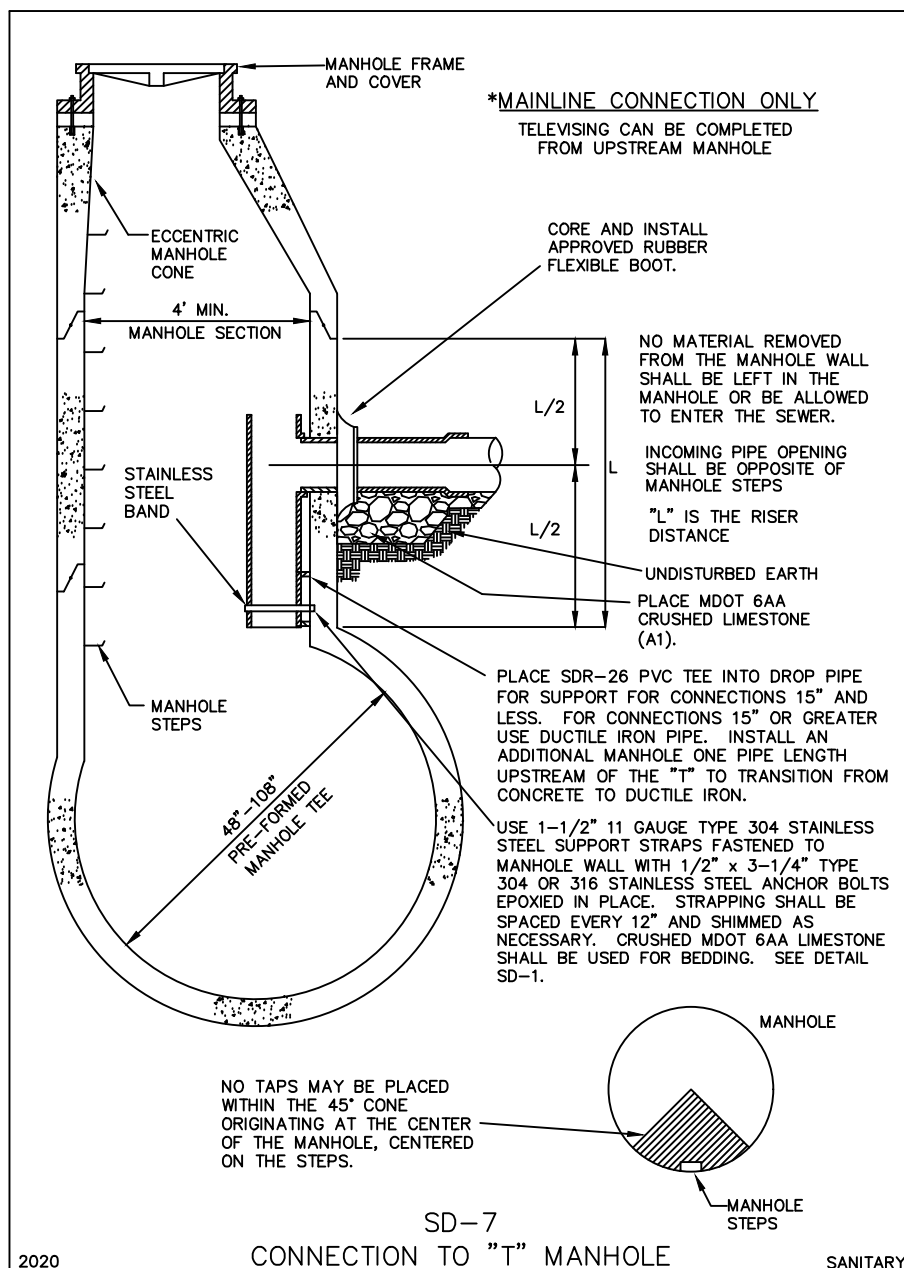
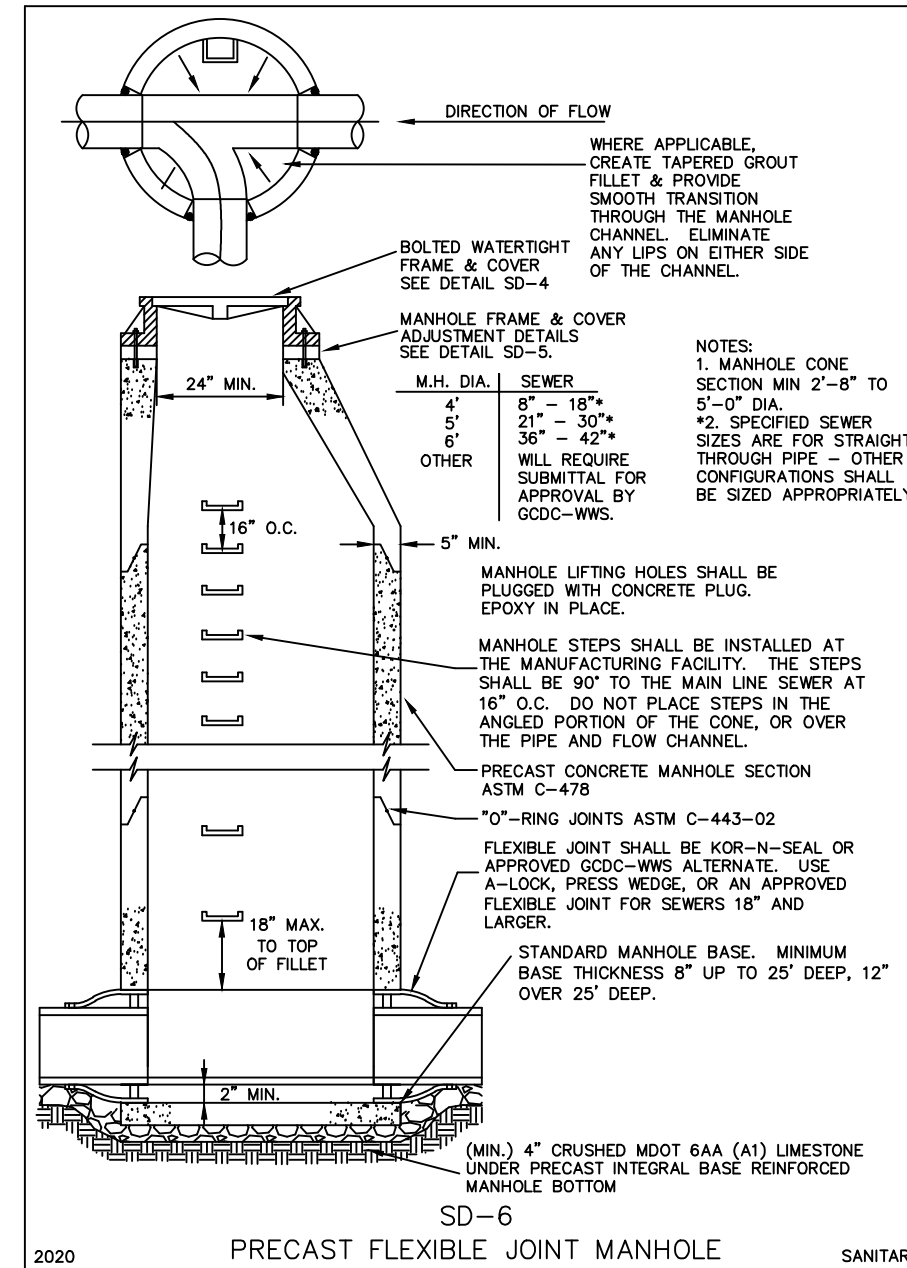
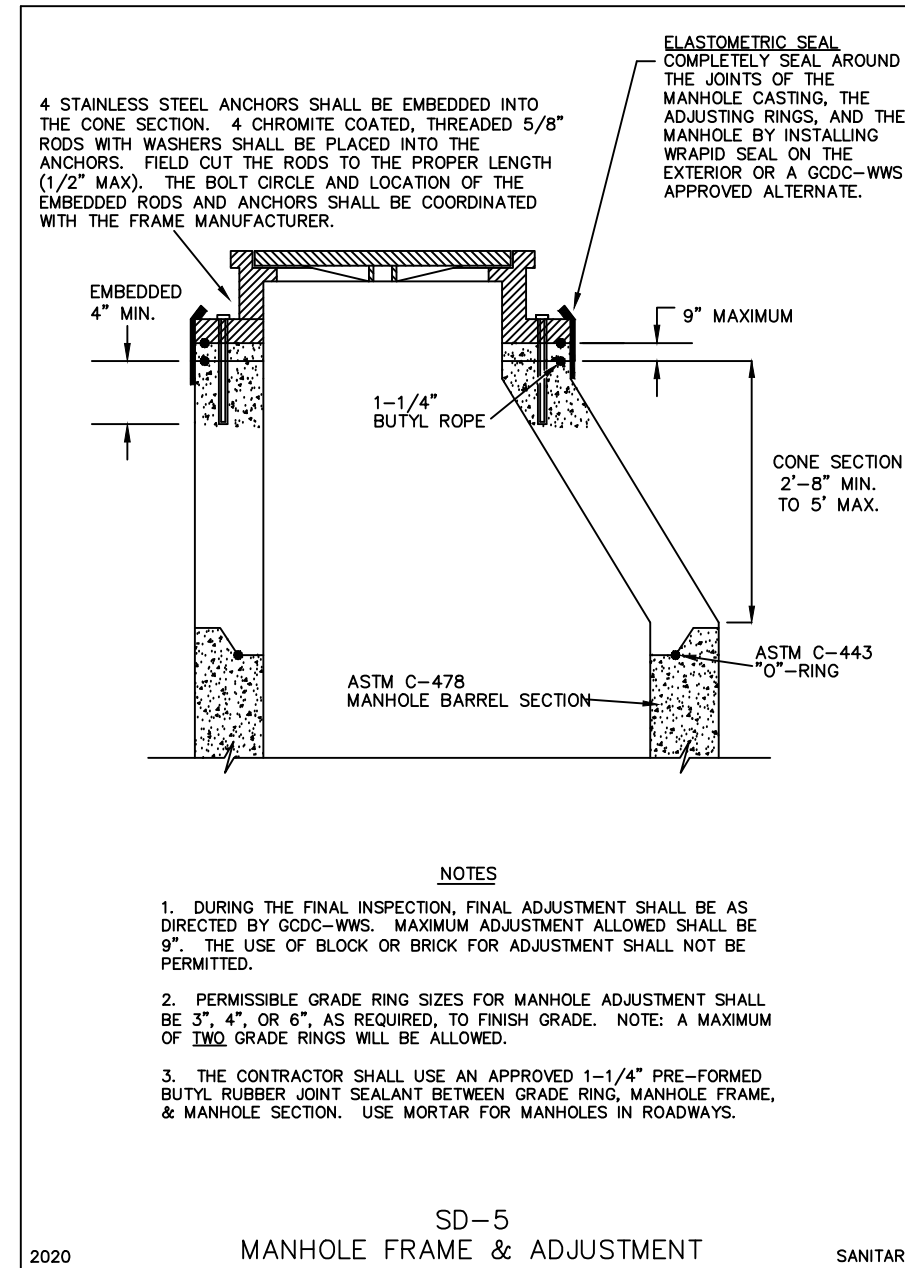
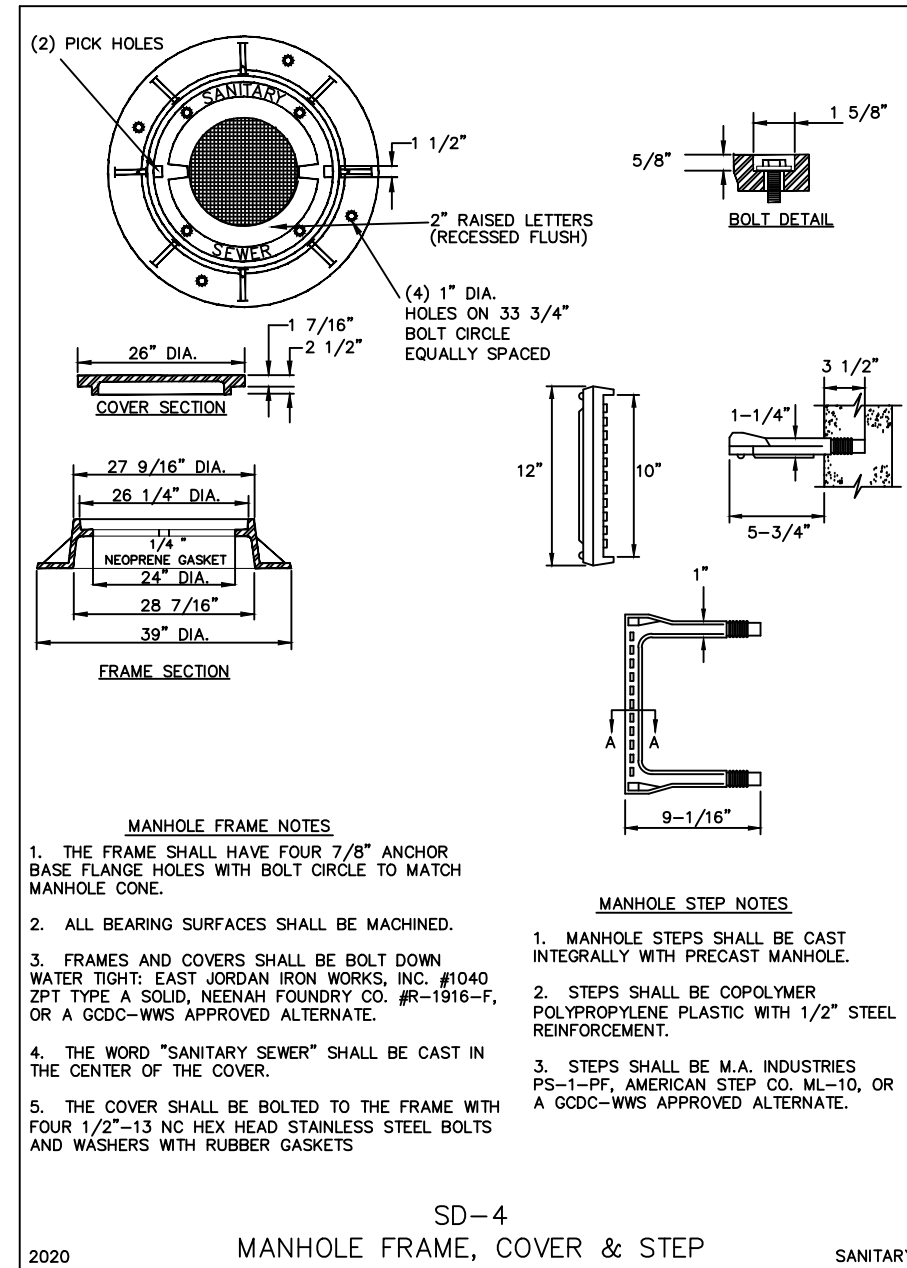
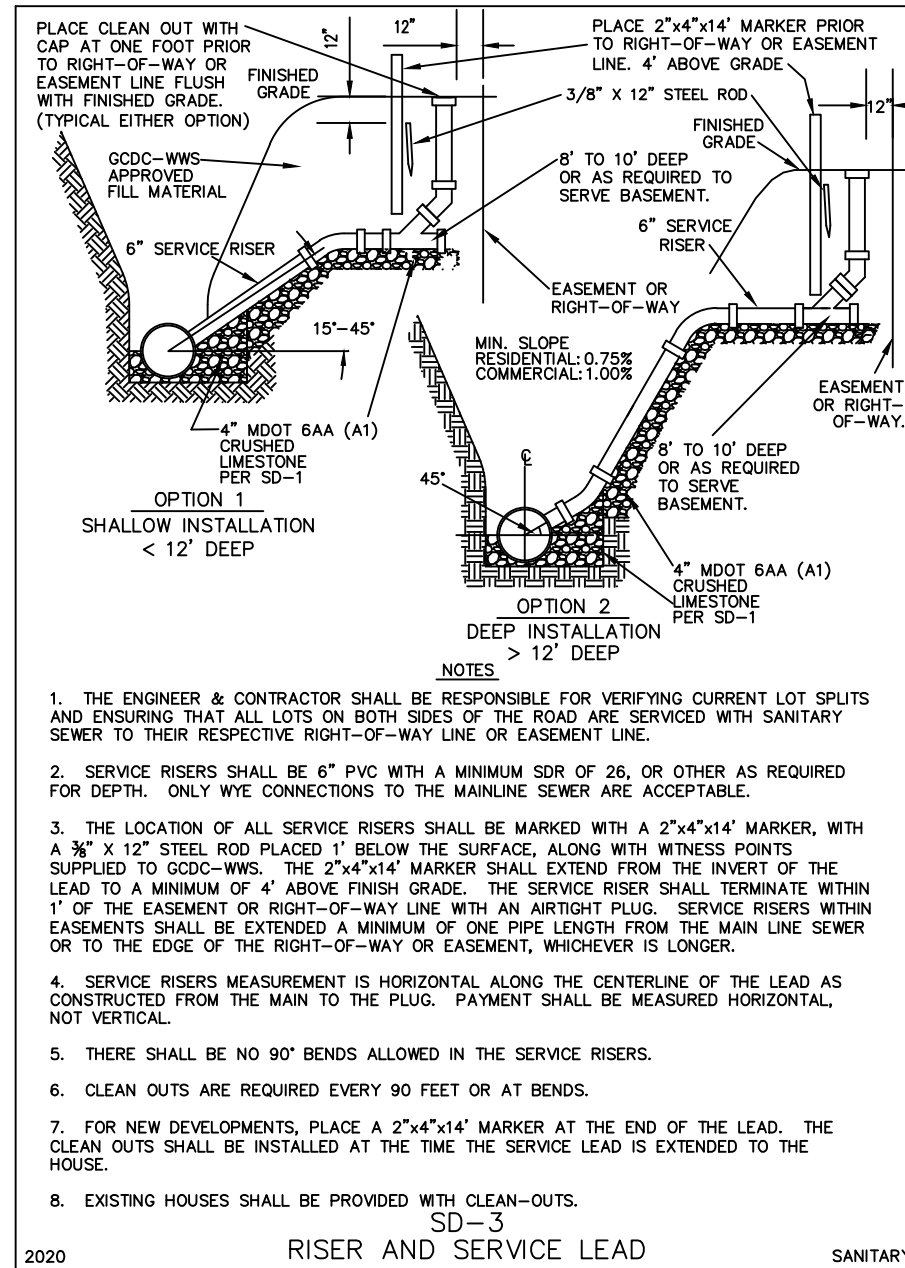
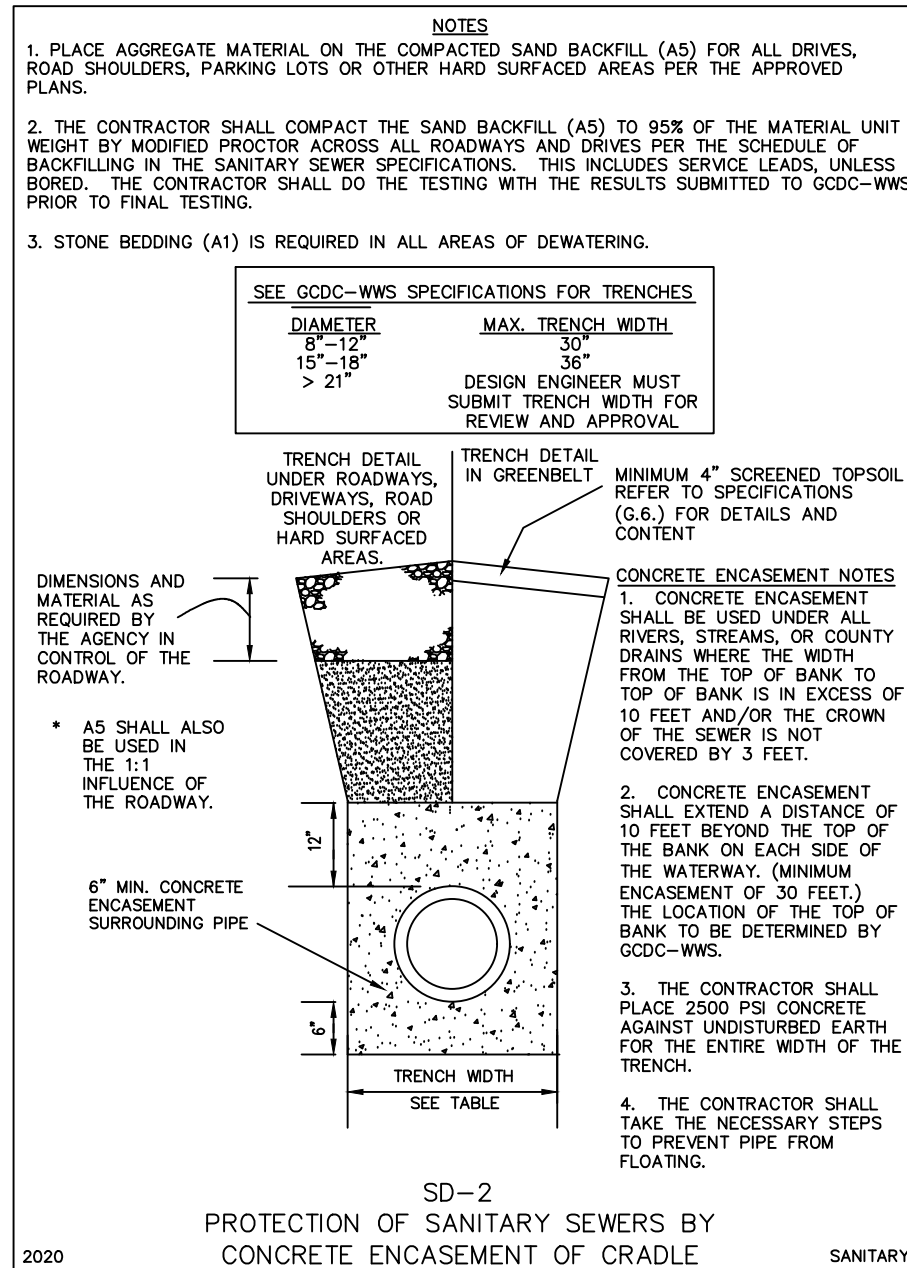
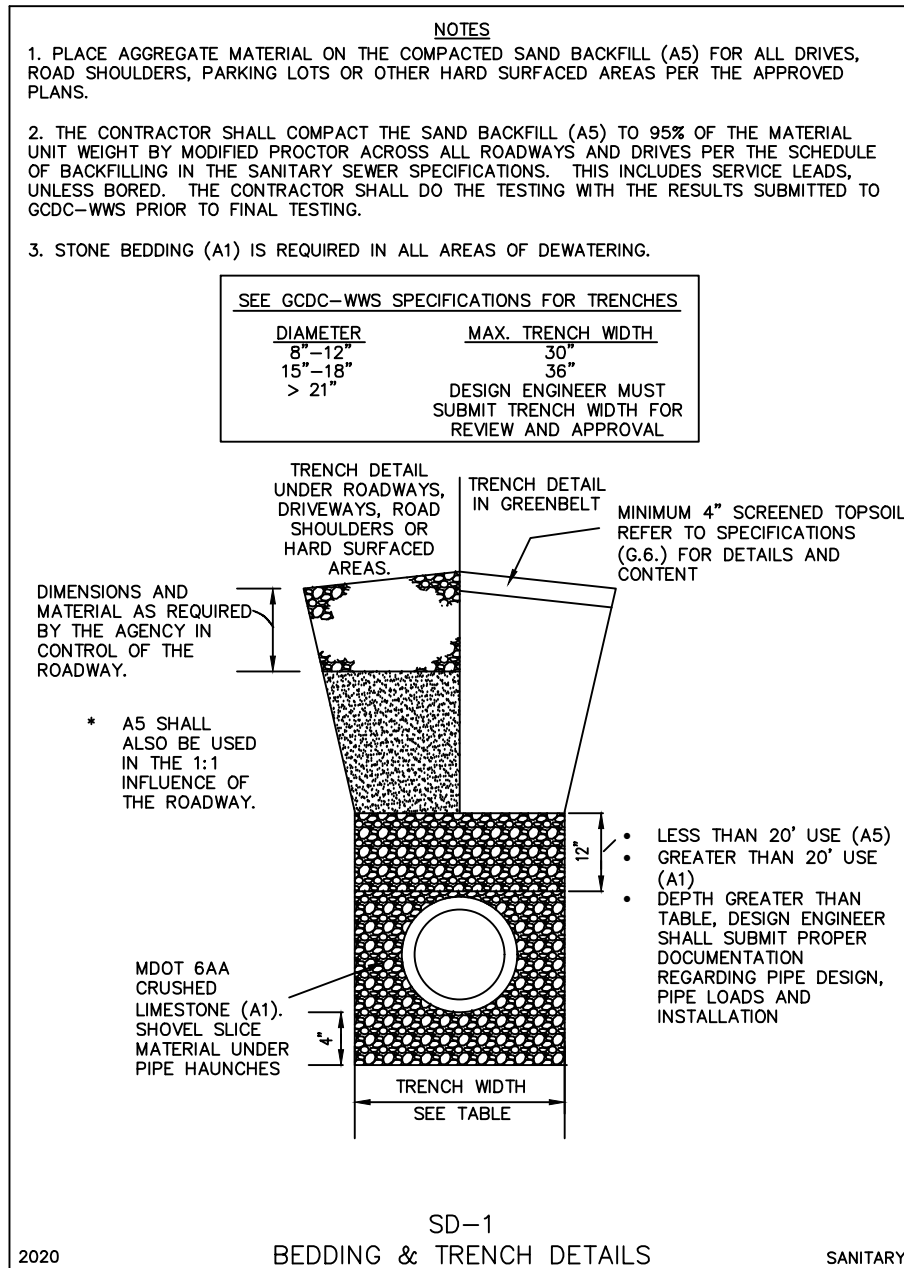
CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING

PHASE: SPA

JOB NO.: 240201

C500





NO.	DATE	DESCRIPTION
1	2020	EIGHTH EDITION

DIVISION OF WATER & WASTE SERVICES

SANITARY SEWER CONSTRUCTION

STANDARD DETAILS

For the Construction of Sanitary Sewers & Watermain in Genesee County

GENERAL CONSTRUCTION NOTES			SANITARY CONSTRUCTION NOTES			PRESSURE PIPE CONSTRUCTION NOTES		
1. STANDARD SPECIFICATIONS & DETAILS ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST GENEESE COUNTY STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR SANITARY SEWER, PRESSURE PIPE, AND PUMP STATION CONSTRUCTION. ANY DEVIATIONS FROM THE GDCG-WWS APPROVED PLANS WILL NOT BE PERMITTED. IF IT BECOMES NECESSARY TO REVISE THE PLAN, THEY SHALL BE RESUBMITTED TO GDCG-WWS FOR APPROVAL. 2. PRE-CONSTRUCTION MEETING A PRE-CONSTRUCTION MEETING SHALL BE HELD AT THE GDCG-WWS OFFICE PRIOR TO BEGINNING THE WORK. NO PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO OBTAINING THE STATE CONSTRUCTION PERMITS. THE MEETING'S TIME, PLACE, AND ATTENDEES SHALL BE ARRANGED BY THE ENGINEER FOR THE PROJECT. GDCG-WWS, GDCG-SWM, THE MUNICIPALITY, THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS, PROJECT OWNER, CONTRACTOR, AND ANY AFFECTED UTILITIES SHALL BE INVITED, AS A MINIMUM, TO THE PRE-CONSTRUCTION MEETING. 3. MISS DIG 811 UTILITY ALERT THREE (3) WORKING DAYS PRIOR TO BEGINNING THE WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT MISS DIG 811 UTILITY PROTECTION SERVICE (1-800-482-7171 OR 811) TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE PROPERLY REPAIRED IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. 4. FIELD LOCATION OF UTILITIES PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL BE REQUIRED TO EXPOSE ALL EXISTING UTILITIES THAT CROSS THE PROPOSED CONSTRUCTION, SO THE ENGINEER MAY DETERMINE IF A VERTICAL CONFLICT EXISTS BETWEEN AN EXISTING UTILITY AND THE PROPOSED WORK. ALL LABOR REQUIRED TO UNCOVER THE EXISTING UTILITY SHALL BE CONSIDERED INCLUDED IN THE LINEAL FEET OF PRESSURE PIPE OR SANITARY SEWER PIPE INSTALLED. THE CONTRACTOR SHALL VERIFY THE DEPTH AND HORIZONTAL LOCATIONS OF ALL UTILITIES IN SUFFICIENT TIME SUCH THAT ANY CONFLICTS CAN BE RESOLVED BEFORE WORK IS STARTED IN THAT PORTION OF THE PROJECT. THE CONTRACTOR SHALL ARRANGE FOR THE VARIOUS UTILITY OWNERS TO LOCATE, REMOVE, AND REPLACE, OR RELOCATE THEIR FACILITIES. ALL COSTS FOR THIS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PROJECT. 5. SUBSURFACE SOIL CONDITIONS PRIOR TO BIDDING, THE CONTRACTOR AND SUBCONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF THE SITE AND EXISTING SURFACE AND SUBSURFACE CONDITIONS. THE CONTRACTOR SHALL ACQUAINT ITSELF WITH CONDITIONS OF THE WORK AREA. THE CONTRACTOR IS ADVISED TO DETERMINE THE SUBSURFACE SOIL AND GROUND WATER CONDITIONS. DEWATERING, IF DETERMINED NECESSARY BY THE CONTRACTOR AND IF NOT SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS, WILL BE INCIDENTAL TO THE COST OF INSTALLATION. 6. PERMITS AND FEES THE CONTRACTOR/DEVELOPER SHALL OBTAIN ALL PERMITS, INCLUDING THE PAYMENT OF ANY FEES OR BONDS, REQUIRED BY ANY FEDERAL, STATE, COUNTY, LOCAL, OR PRIVATE ORGANIZATIONS PRIOR TO COMMENCING WORK. 7. GDCG-WWS INSPECTION FEES THE DEVELOPER SHALL PAY FOR ALL SANITARY SEWER AND PRESSURE PIPE INSPECTION FEES AND WATER USAGE FEES PRIOR TO THE PRE-CONSTRUCTION MEETING. 8. SOIL EROSION CONTROL, PART 91 OF P.A. 451 OF 1994 THE CONTRACTOR/DEVELOPER SHALL COMPLY WITH ALL PROVISIONS OF PART 91, ACT 451 OF P.A. 1994 FOR SOIL EROSION AND SEDIMENTATION CONTROL AND WILL BE RESPONSIBLE FOR ALL MAINTENANCE UNTIL THE FINAL ACCEPTANCE OF THE PERMANENT CONTROL MEASURES BY GDCG-WWS. THE CONTRACTOR/DEVELOPER IS REQUIRED BY GDCG-WWS TO PREPARE AND SUBMIT A SOIL EROSION AND SEDIMENTATION CONTROL PLAN IN ORDER TO OBTAIN THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT AND TO PAY ANY APPLICATION FEES AND BOND FEES NECESSARY TO OBTAIN THE PERMIT. 9. STATE CONSTRUCTIONS PERMITS THE CONSTRUCTION OF PUBLIC SANITARY SEWERS OR PRESSURE PIPES SHALL NOT BEGIN UNTIL THE REQUIRED STATE CONSTRUCTION PERMITS HAVE BEEN OBTAINED. NOTE: SOIL EROSION AND CONSTRUCTION PLAN APPROVAL ARE SEPARATE APPROVALS AT GDCG-WWS. 10. ROADWAY PERMITS A PERMIT FROM THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS IS REQUIRED FOR ALL CONSTRUCTION WITHIN ANY ROAD RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL NECESSARY PERMITS, POST ALL NECESSARY BONDS, PAY ALL FEES, AND OBTAIN ANY REQUIRED INSURANCES IN CONNECTION THERE WITH. 11. WORK OBSERVATION ALL WORK SHALL BE PERFORMED UNDER THE OBSERVATION OF A CONSTRUCTION OBSERVER FROM GDCG-WWS OR LOCAL MUNICIPALITY HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OBSERVING AGENCIES THREE (3) WORKING DAYS OR 72 HOURS PRIOR TO STARTING CONSTRUCTION TO ARRANGE FOR ON-SITE OBSERVATION AND TESTING. CUT SHEETS FOR ALL PIPE INSTALLATION AND REDITCHING SHALL BE PROVIDED TO THE GDCG-WWS CONSTRUCTION OPERATION'S SUPERVISOR A MINIMUM OF 24 HOURS PRIOR TO STARTING THE WORK WITH RESPECT TO THAT UTILITY. GDCG-WWS OR THE LOCAL MUNICIPALITY HAVING JURISDICTION SHALL BE NOTIFIED FOR A FINAL INSPECTION. 12. CONTRACTOR'S MINIMUM WAGE & USE OF IN-COUNTY LABOR THE CONTRACTOR SHALL EMPLOY COMPETENT AND SKILLED WORKERS THROUGHOUT THE COURSE OF THE PROJECT. THE CONTRACTOR SHALL STRIVE TO USE GENEESE COUNTY RESIDENTS WHEN FEASIBLE. THE CONTRACTOR SHALL BE REQUIRED TO PAY THE PREVAILING WAGE RATES AS ESTABLISHED BY THE BUILDING AND CONSTRUCTION TRADES DEPARTMENT OF THE AMERICAN FEDERATION OF LABOR WHICH APPLIES TO THE COUNTY OF GENEESE. THESE RATES CAN BE OBTAINED BY CONTACTING THE MICHIGAN DEPARTMENT OF CONSUMER AND INDUSTRIAL SERVICES. 13. MIOSHA SAFETY REQUIREMENTS ALL WORK, WORK PRACTICE, AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL SAFETY GUIDELINES, OCCUPATION, HEALTH AND ENVIRONMENTAL REGULATIONS, AND ALSO NFPA AND ANSI CODES AS APPLICABLE. ALL WORK INSIDE A CONFINED SPACE, SUCH AS MANHOLES OR OTHER UNDERGROUND STRUCTURES, SHALL BE COORDINATED WITH THE UTILITY OWNER, AND ALL WORKER SAFETY REQUIREMENTS STRICTLY ENFORCED. THE CONTRACTOR SHALL HAVE ITS SAFETY PLAN ON FILE WITH GDCG-WWS AND ONE COPY ON SITE AT ALL TIMES. 14. ROADWAY REQUIREMENTS FOR UTILITY CONSTRUCTION THE CONTRACTOR SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF THE GCRG OR LOCAL MUNICIPALITY REGARDING THE CONSTRUCTION OF PRESSURE PIPE AND SEWER MAINS, MAINTAINING TRAFFIC, BARRICADING, BORING, BACKFILLING AND RESTORATION WITHIN THE ROAD RIGHT-OF-WAY. 15. OPEN CUTTING OF COUNTY/LOCAL ROADS WHEN OPEN CUTTING OF GRAVEL OR HARD SURFACED ROADS ARE INCORPORATED INTO THE PROJECT, THE CONTRACTOR SHALL OBTAIN THE APPROVAL AND COMPLY WITH ALL OF THE REQUIREMENTS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS, AND BY THE SPECIFICATIONS OF GDCG-WWS. 16. GRAVEL ROAD CONTAMINATION BY THE WORK IF IT IS DETERMINED BY THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS THAT GRAVEL ROADS HAVE BECOME CONTAMINATED DURING THE WORK, THE ROAD MUST BE REPAIRED PER THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. WHERE THE EXISTING ROAD GRAVEL IS REMOVED BECAUSE OF THE WORK, ALL WORK AND MATERIALS SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. 17. RESTORATION OF GRAVEL SHOULDERS IF IT IS DETERMINED BY THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS THAT GRAVEL SHOULDERS HAVE BEEN CONTAMINATED BY THE WORK, THE CONTRACTOR SHALL RE-GRAVEL PER THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. ALL WORK AND MATERIALS SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. 18. COMPACTED GRANULAR BACKFILL FOR ROADWAYS, DRIVES, ETC. ALL TRENCH EXCAVATION WITHIN A ONE-ON-ONE INFLUENCE OF A ROADWAY, DRIVEWAY, CROSSINGS, PARKING LOTS, OR OTHERWISE SHOWN ON THE PLANS SHALL BE BACKFILLED WITH COMPACTED SAND MDOT CLASS II (A5) PER THE SCHEDULE OF BACKFILLING, FOUND IN THE SPECIFICATIONS. IN ADDITION, SEE THE SPECIFICATIONS FOR THE REQUIREMENTS FOR THE COMPACTION PLAN. THIS STANDARD ALSO INCLUDES SERVICE LEADS UNLESS BORED. 19. SURFACE RESTORATION ALL DISTURBED AREAS SHALL BE COMPLETELY RESTORED IN STRICT COMPLIANCE WITH THE SOIL EROSION AND SEDIMENTATION SPECIFICATIONS AND TO THE SATISFACTION OF GDCG-WWS, GDCG-SWM, GCRG, MDOT, THE LOCAL MUNICIPALITY, AND THE PROPERTY OWNER. ALL COSTS FOR THE CLEANUP, RESTORATION WORK, AND OTHER INTERMEDIATE OPERATIONS INCLUDING BUT NOT LIMITED TO, CONSTRUCTION SIGNAGE, STREET SWEEPING, AND MAINTAINING EXISTING UTILITIES, SHALL BE CONSIDERED INCLUSIVE AND AT NO ADDITIONAL COST TO GDCG-WWS. AREAS DISTURBED DURING THE WORK SHALL RECEIVE A 4" APPLICATION OF SCREENED TOPSOIL, FERTILIZED AND SEEDED. ALL EXCESS MATERIALS, DEBRIS, AND SIMILAR ITEMS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH THE LAW. ALL GROUND SURFACES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER PRIOR TO FINAL APPROVAL. 20. TRAFFIC CONTROL THE CONTRACTOR SHALL EXECUTE THE WORK IN A MANNER SUCH THAT TRAFFIC IS MAINTAINED AND ACCESS IS PROVIDED TO ALL RESIDENCES, BUSINESSES, AND COMMERCIAL ESTABLISHMENTS. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS AND THE LATEST EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 6, AND THE REQUIREMENTS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS, OR AS DIRECTED BY THE ENGINEER. 21. SIGNING AND BARRICADING SIGNING AND BARRICADING SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE DETAILS ON THE PLANS, THE LATEST EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 6, AND THE REQUIREMENTS OF THE AGENCY HAVING AUTHORITY OVER THE ROADWAYS. SIGNS AND BARRICADES LEFT IN PLACE AFTER DARK SHALL BE LIGHTED. 22. PROTECTION OF HAZARDOUS AREAS EXCAVATION AND HAZARDOUS AREAS SHALL BE PROTECTED BY BARRICADES, SNOW FENCE, OR OTHER APPROPRIATE MEANS. BARRICADES LEFT IN PLACE AFTER DARK SHALL BE LIGHTED. 23. STORM WATER DRAINAGE DURING THE WORK THE CONTRACTOR/DEVELOPER SHALL OBTAIN THE SERVICES OF A CERTIFIED STORM WATER OPERATOR AND COMPLY WITH THE PROVISIONS OF THE NPDES AND SESC PERMITS. THE CONTRACTOR SHALL MAINTAIN DITCH DRAINAGE DURING CONSTRUCTION AND SHALL NOT OBSTRUCT SUMP PUMP LEADS DISCHARGING INTO THE DITCH. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL STORM SEWER FACILITIES, SUCH AS CATCH BASINS AND CULVERTS, DURING THE WORK. CULVERTS AND CATCH BASINS CONTAMINATED DURING THE WORK SHALL BE CLEANED. 24. UTILITY INFORMATION UTILITY INFORMATION IS DELINEATED IN ACCORDANCE WITH THE LOCATIONS PROVIDED BY UTILITY OWNERS. THE ENGINEER IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION OR THE LOCATION AT WHICH THESE SERVICES EXIST. DIFFERING FIELD CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND GDCG-WWS. 25. EXISTING UTILITIES THE CONTRACTOR SHALL MAINTAIN ALL EXISTING SANITARY SEWER, PRESSURE PIPE, OR STORM SEWER CONNECTIONS IN SERVICE THROUGHOUT THE WORK. THE CONTRACTOR SHALL PROVIDE OR ARRANGE FOR THE TEMPORARY SUPPORT OF GAS MAIN, TELEPHONE, FIBER OPTIC, CABLE, PRESSURE PIPE, SANITARY SEWER, STORM SEWER, AND UTILITY POLES WHERE NEEDED. ALL STORM SEWERS DAMAGED OR REMOVED, OR RELOCATED BY THE CONTRACTOR, SHALL BE REPLACED WITH THE SAME SIZE AND QUALITY PIPE BY THE CONTRACTOR AT CONTRACTOR'S SOLE EXPENSE. ALL UTILITIES UNDERMINED BY THE EXCAVATION SHALL HAVE COMPACTED SAND BACKFILL PLACED UNDER THEM, UNLESS MDOT 6AA CRUSHED LIMESTONE (A1) OR MDOT 22A GRAVEL (A2) IS SHOWN ON THE CONSTRUCTION PLANS. ALL WORK, INCLUDING THE REBORING OF SANITARY SEWER SERVICE LEADS AND WATERMAIN LEADS TO ACCOMMODATE CONSTRUCTION TO CLEAR EXISTING SERVICES, SHALL BE INCLUSIVE TO THE PROJECT. 26. SHOP DRAWINGS PRIOR TO THE START OF THE WORK, THE CONTRACTOR SHALL FURNISH TO GDCG-WWS SHOP DRAWINGS AND/OR CATALOG CUTS FOR ALL MATERIALS AND EQUIPMENT ITEMS PER THE STANDARD SPECIFICATIONS. 27. MATERIAL CERTIFICATIONS PRIOR TO THE START OF THE WORK, THE CONTRACTOR SHALL FURNISH TO GDCG-WWS MATERIALS CERTIFICATES FOR ALL MATERIALS USED DURING THE WORK. 28. NON-STOPPAGE CLAUSE THE CONTRACTOR SHALL BE REQUIRED TO COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP THE WORK FOR EXTENDED PERIODS ONCE THE WORK HAS BEGUN WITHOUT WRITTEN APPROVAL OF GDCG-WWS. 29. DISPOSAL OF EXCESS EXCAVATED MATERIAL ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR, WITH ALL PERMITS, PERMISSIONS, AND LOCATIONS PROVIDED BY THE CONTRACTOR. ADJACENT PROPERTY OWNERS SHALL BE GIVEN PREFERENCE FOR DISPOSAL SITES. WRITTEN PERMISSION FOR DISPOSAL ON ADJACENT PROPERTY OWNERS SHALL BE PROVIDED TO GDCG-WWS. 30. CONSTRUCTION STAKING THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, PROVIDE A PROFESSIONAL LAND SURVEYOR, LICENSED IN THE STATE OF MICHIGAN, TO PROVIDE ALIGNMENT AND GRADE STAKES, AND CUT SHEETS. THE SURVEYOR SHALL PROVIDE GRADE STAKES AND CUT SHEETS AT ALL STRUCTURES AND AT A MAXIMUM OF 50' INTERVALS BETWEEN STRUCTURES. 31. FINAL ELEVATIONS OF SURFACE UTILITIES ALL FINAL ELEVATIONS OF MANHOLE CASTINGS, HYDRANTS, VALVES, AND VALVE BOXES SHALL BE APPROVED BY THE GDCG-WWS REPRESENTATIVE IN THE FIELD. ANY ADJUSTMENTS THAT ARE MADE SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE. 32. PROJECT RECORD DOCUMENTS UPON COMPLETION OF THE WORK AND PRIOR TO FINAL APPROVAL FROM GDCG-WWS, THE OWNER/DEVELOPER SHALL FURNISH GDCG-WWS WITH ONE COMPLETE SET OF PROJECT RECORD DOCUMENTS. THESE PROJECT RECORD DOCUMENTS ARE COMPRISED OF DRAWINGS ON MYLAR AND AN ELECTRONIC DATA SET. THE MYLAR PROJECT RECORD DOCUMENTS SHALL BE SUBMITTED TO GDCG-WWS ON 4 MIL MYLAR FOR THE REVIEW AND APPROVAL OF GDCG-WWS. THE MYLAR PROJECT RECORD DOCUMENTS SHALL INCLUDE BUT NOT BE LIMITED TO: INVERT OF PIPES, LOCATION OF MANHOLES, PIPE LENGTHS, SLOPES OF PIPE, LOCATION OF SERVICE LEADS, LOCATION OF MAINLINE VALVES, LOCATION OF BENDS, TEES, CROSSES, AND LOCATION OF CURB BOXES. THIS INFORMATION SHALL BE GATHERED BY THE OWNER/DEVELOPER AT ITS SOLE EXPENSE. THESE PROJECT RECORD DOCUMENTS SHALL ALSO INCLUDE ANY ADDITIONAL INFORMATION COLLECTED BY THE GDCG-WWS OR MUNICIPAL CONSTRUCTION OBSERVER.			1. ALL MATERIAL AND WORK SHALL COMPLY WITH THE LATEST GDCG-WWS SPECIFICATIONS AND STANDARD DETAILS. 2. NO CONNECTION TO AN EXISTING SANITARY SEWER SHALL BE MADE WITHOUT THE PRIOR APPROVAL OF GDCG-WWS. GDCG-WWS SHALL HAVE FINAL INSPECTION AUTHORITY AND APPROVAL FOR UNDERGROUND SANITARY SEWER FACILITIES. 3. THE MATERIAL FOR THE SANITARY SEWER SHALL BE SPECIFIED ON THE CONSTRUCTION DRAWINGS. THE FOLLOWING MATERIALS ARE ACCEPTABLE TO GDCG-WWS: A. 8" TO 15", PVC WITH A MINIMUM SDR OF 26 CONFORMING TO ASTM D-3034-00 GASKETED SEWER PIPE. B. LARGER THAN 15", REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76-03. JOINTS SHALL BE MODIFIED TONGUE & GROOVE TYPE WITH SOLID RUBBER GASKETS CONFORMING TO ASTM C-443-02. MINIMUM SIZE SHALL BE CLASS III, WALL B AS RECOMMENDED BY THE ENGINEER. 4. ALL SANITARY SEWER SERVICE RISERS SHALL BE 6" INTERNAL DIAMETER SDR-26 PVC OR LOWER CONFORMING TO ASTM D-3034-00. JOINTS SHALL BE RUBBER GASKET JOINTS OR SOLVENT WELD BELL JOINTS. RISERS SHALL BE LEFT AT 8-10' DEEP AT THE RIGHT-OF-WAY OR EASEMENT LINE, OR AS DEEP TO SERVICE BASEMENTS. SERVICE RISERS WITHIN EASEMENTS SHALL BE EXTENDED A MINIMUM OF ONE PIPE LENGTH FROM THE MAINLINE SEWER OR TO THE EDGE OF THE EASEMENT, WHICH EVER IS LONGER. WEEP TILE, PERIMETER DRAINS, DOWN SPOUTS, OR ANY OTHER SOURCE OF WATER, SHALL NOT BE CONNECTED TO THE SANITARY SEWER. 5. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C-478-03 WITH RUBBER JOINTS CONFORMING TO ASTM C-443-02. ALL FINAL ELEVATIONS OF MANHOLE CASTINGS SHALL BE DETERMINED BY GDCG-WWS. MANHOLE FRAMES AND COVERS SHALL BE BOLT-DOWN, WATERTIGHT EAST JORDAN 1040 ZPT, NEEHAW FOUNDRY COMPANY R-1916F, OR GDCG-WWS APPROVED ALTERNATE. STEPS SHALL BE M.A. INDUSTRIES PS-1-PF, AMERICAN STEP CO. ML-10, OR A GDCG-WWS APPROVED ALTERNATE. 6. ALL SANITARY SEWERS SHALL BE INSTALLED PURSUANT TO THE SANITARY SEWER STANDARD DETAILS. DEEPER SEWERS, EXCESSIVE TRENCH WIDTH, AND WHERE NOTED, THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SPECIFIED. 7. WHERE MANHOLE ADJUSTMENT IS REQUIRED, THE MAXIMUM AMOUNT OF ADJUSTMENT BETWEEN THE CASTING AND THE CONE SHALL BE 9". A MAXIMUM OF TWO ADJUSTMENT RINGS ARE ALLOWED. ONLY 3", 4", OR 6" CONCRETE ADJUSTMENT RINGS SHALL BE USED. THE MANHOLE SHALL BE WRAPPED PER SD-5 OF THE SANITARY SEWER DETAILS. 8. ALL SANITARY SEWERS 8" THROUGH 21" DIAMETER, INCLUDING SERVICE LEADS CONSTRUCTED AS PART OF WORK, SHALL UNDERGO A LOW PRESSURE AIR TEST AND AN INFILTRATION TEST, IN CONFORMANCE WITH ASTM C-924-02 OR C-989-02, PRIOR TO FINAL ACCEPTANCE. SANITARY SEWER SYSTEMS LARGER THAN 21" SHALL UNDERGO AN INFILTRATION TEST. THE MAXIMUM ALLOWABLE INFILTRATION FOR PVC SYSTEMS SHALL BE 0 GALLONS PER INCH DIAMETER, PER MILE, PER 24 HOURS, AND CONCRETE SYSTEMS SHALL BE 100 GALLONS PER INCH DIAMETER, PER MILE. 9. ALL PUBLIC SANITARY SEWERS 8" OR LARGER SHALL BE INTERNALLY TELEVIEWED (PAN/TILT) BY THE CONTRACTOR. THE TELEVIEWED REPORT, INCLUDING THE DVD, SHALL BE GIVEN TO GDCG-WWS PRIOR TO A REQUEST FOR FINAL INSPECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING (JET/VAC) THE LINE AND ASSURING ALL DIRT AND DEBRIS HAS BEEN REMOVED PRIOR TO TELEVIEWING. PRIOR TO TELEVIEWING THE LINE, WATER SHALL BE PLACED IN THE MAIN FROM THE UPSTREAM MANHOLE UNTIL IT COMES OUT OF THE DOWNSTREAM MANHOLE. THE TELEVIEWED REPORT SHALL LIST THE DISTANCE A HOUSE LEAD IS LOCATED FROM A MANHOLE, ALL SHEAR BREAKS IN THE MAIN OR SERVICE LEADS, ALL LONGITUDINAL CRACKS, BROKEN PIPE, DIPS, OR HIGH POINTS IN THE LINE, ETC. THE CONTRACTOR SHALL REPAIR DAMAGED PIPE BY EXCAVATING THE PIPE AND REPLACING THE LENGTH OF PIPE IN AN APPROVED METHOD. LEAKING JOINTS SHALL BE REPAIRED BY THE CONTRACTOR BY GROUTING. A LEAKING JOINT IS DEFINED AS HAVING SUFFICIENT INFILTRATION TO WET THE INTERIOR OF THE JOINT. GDCG-WWS SHALL BE NOTIFIED WHEN THE LINE IS TO BE TELEVIEWED AND SHALL BE PRESENT TO INSPECT REPAIRS. 10. SANITARY MANHOLES SHALL BE PLACED CLOSEST TO PROPERTY CORNERS WHEN FEASIBLE. 11. PRIOR TO PERFORMING ANY TESTING, THE CONTRACTOR SHALL BE REQUIRED TO DO THE FOLLOWING: A. CONDUCT PRELIMINARY TESTS ON THE SYSTEM. B. PROVIDE THE RESULTS FROM THE PRELIMINARY TESTS ON THE SYSTEM. C. PROVIDE RESULTS OF DENSITY CHECKS ON COMPACTED SAND BACKFILL FROM A CERTIFIED TESTING AGENCY. D. FURNISH A COMPLETED TWO-YEAR MAINTENANCE & GUARANTEE BOND. E. COMPLETE FINAL ADJUSTMENTS ON ANY SANITARY SEWER STRUCTURES. 12. PRIOR TO FINAL APPROVAL, THE FOLLOWING ITEMS MUST BE COMPLETED BY THE CONTRACTOR: A. THE FINAL TESTING SHALL CONSIST OF VISUAL INSPECTION OF MANHOLES, TELEVIEWING OF SANITARY MAIN, LOW PRESSURE AIR TEST, AND/OR INFILTRATION TEST DEPENDENT ON THE SIZE OF THE SANITARY MAIN (SEE #8 ABOVE), AND PASSING AN APPROPRIATE SIZED MANDREL 30 DAYS AFTER THE MAIN HAS BEEN INSTALLED. B. PROVIDE MATERIAL CERTIFICATES. C. PROVIDE RECORDED COPIES OF ALL EASEMENTS FOR THE MASTER DEED REFLECTING FINAL PROJECT RECORD DOCUMENT LOCATIONS.			1. ALL MATERIAL AND WORK SHALL COMPLY WITH THE LATEST GDCG-WWS SPECIFICATIONS AND STANDARD DETAILS. 2. ALL PUBLIC PRESSURE PIPE SHALL BE DUCTILE IRON. THE PIPE SHALL BE BELL AND SPIGOT OR RESTRAINED JOINT FITTINGS FITTED WITH A RUBBER GASKET. FITTINGS MAY BE GRAY IRON OR DUCTILE IRON MEETING CLASS 350 PSI RATING. FOR 3" OR SMALLER SANITARY SEWER FORCEMAIN, SDR-21 PVC MAY BE UTILIZED. 3. ALL PIPES, VALVES, AND FITTINGS SHALL BE POLYWRAPPED, EXCEPT IN MANHOLES. CIRCUMFERENTIAL WRAPS OF MANUFACTURER RECOMMENDED TAPE SHALL BE PLACED AT NO GREATER THAN 4' INTERVALS ALONG THE BARRRE OF THE PIPE, WITH THE EXCESS FOLDED OVER THE TOP TO TAKE OUT EXCESS SLACK, HELPING TO MINIMIZE THE SPACE BETWEEN THE POLYETHYLENE AND THE PIPE. COMPLETE THE INSTALLATION BY OVERLAPPING THE POLYETHYLENE TUBE WRAP AT EACH END AND SEAL ENDS PER THE MOST CURRENT VERSION OF AWWA C105/A21.5 STANDARD. WRAPPING PVC PIPE IS NOT REQUIRED. 4. WHERE SANITARY SERVICE LEADS OR OTHER UTILITIES ARE ENCOUNTERED, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO PROVIDE CONTINUOUS SERVICE TO PROPERTIES ALONG THE ROUTE OF CONSTRUCTION. ALL WORK, INCLUDING THE REBORING OF SANITARY SEWER SERVICE RISERS TO ACCOMMODATE CONSTRUCTION, OR ADJUSTING PRESSURE PIPE INSTALLATION TO CLEAR EXISTING SERVICES, SHALL BE INCLUSIVE TO CONSTRUCTION. 5. ALL PRESSURE PIPES SHALL HAVE A MINIMUM COVER OVER THE TOP OF THE PIPE OF 5' FROM FINISHED GRADE, 5' CLEARANCE UNDER DRAINS, 5' CLEARANCE BELOW EXISTING DITCHES, AND/OR A MINIMUM 5' BELOW THE EXISTING ROAD. THE STANDARD LAYING CONDITIONS FOR PRESSURE PIPE SHALL BE A 30" TRENCH WIDTH, OR PIPE DIAMETER PLUS 12". THE PIPE SHALL BE LAID ON MDOT CLASS II SAND (A5) A MINIMUM OF 4" WITH RECESSES TO ACCOMMODATE PIPE BELLS OR AS SHOWN ON THE PLANS. 6. ALL TRENCH EXCAVATION, UNDER OR WITHIN THE ONE-ON-ONE INFLUENCE OF THE EXISTING OR PROPOSED PAVING, SHALL BE BACK FILLED WITH COMPACTED MDOT CLASS II SAND (A5). 7. THE CONTRACTOR SHALL RESTRAIN ALL THRUST IN THE SYSTEM BY THE USE OF GDCG-WWS APPROVED RESTRAINED JOINTS AND THRUST BLOCKS. DURING THE INSTALLATION OF WATERMAIN, ALL HYDRANTS, TEES, VERTICAL OR HORIZONTAL BENDS AND FUTURE VALVE CONNECTIONS SHALL BE RESTRAINED. THE RESTRAINT SYSTEM AND LOCATION IN THE FIELD SHALL BE DESIGNATED ON THE PLANS. 8. THE CONTRACTOR SHALL ENCASE THE PRESSURE PIPE IN CONCRETE WHERE THE VERTICAL SEPARATION BETWEEN THE SANITARY SEWER OR STORM SEWER AND THE WATERMAIN IS LESS THAN 18" INCHES. 9. GATE VALVES SHALL BE RESILIENT SEATED CONFORMING TO THE MOST CURRENT VERSION OF AWWA C509 OR C515 STANDARDS. VALVES SHALL HAVE A VERTICAL, NON-RISING STEM, AND OPEN CLOCKWISE, OR AS SPECIFIED BY LOCAL MUNICIPALITY HAVING JURISDICTION. 10. FIRE HYDRANTS SHALL CONFORM TO THE MOST CURRENT VERSION OF AWWA C502 STANDARD. ALL HYDRANTS SHALL BE TRAFFIC MODELS WITH BREAKAWAY FLANGES, AND SHALL HAVE THE DRAIN HOLES FACTORY PLUGGED. ALL THE FIRE HYDRANT ASSEMBLIES FROM THE TEE THROUGH THE HYDRANT, SHALL BE RESTRAINED BY A GDCG-WWS APPROVED METHOD. FIRE HYDRANTS SHALL BE PLACED AT PROPERTY CORNERS AND WITHIN THE RIGHT-OF-WAY WHEN POSSIBLE AND SHALL BE PAINTED YELLOW WITH THE CAP COLOR CODED IN ACCORDANCE WITH THE STANDARD DETAILS. FINAL ELEVATIONS AND ADJUSTMENTS TO GRADE, USING EXTENSION PIECES IF REQUIRED, SHALL BE ACCOMPLISHED BY THE CONTRACTOR AT THE CONTRACTOR'S SOLE EXPENSE. FIRE HYDRANTS SHALL HAVE A 5 1/4" VALVE OPENING. FIRE HYDRANTS SHALL BE EAST JORDAN SDR 250, AMERICAN FLOW CONTROL WATEROUS PACER WB67-250, OR A GDCG-WWS APPROVED ALTERNATE. 11. PRESSURE TAPS TO EXISTING WATERMAIN, AND CONNECTIONS TO EXISTING VALVES, SHALL BE MADE ONLY UNDER GDCG-WWS OR THE LOCAL MUNICIPALITY HAVING JURISDICTION. ALL VALVE OPENING AND CLOSING SHALL BE BY THE OPERATIONAL AUTHORITY. (ONLY A GDCG-WWS APPROVED TAPPING SLEEVE IS ALLOWED FOR ALL PRESSURE TAPS.) A CONCRETE MANHOLE SHALL BE REQUIRED AROUND ALL PRESSURE TAPS. SEE PRESSURE PIPE DETAILS. 12. THE CONTRACTOR SHALL HAVE THE OPTION OF PRESSURE TESTING THE WATERMAIN AGAINST THE EXISTING VALVE AT THE POINT OF BEGINNING OF THE PROJECT OR PLACING A CAP WITHIN 10' OF THE EXISTING VALVE AND STUB. IF TESTING AGAINST THE EXISTING VALVE AND IT LEAKS, THE CONTRACTOR SHALL MAKE REPAIRS AND REPEAT THE PRESSURE TEST AGAINST THE EXISTING VALVE, AT THE CONTRACTOR'S SOLE EXPENSE. IF A CAP HAS BEEN PLACED, THEN THE CONTRACTOR SHALL PERFORM THE SYSTEM TEST, AND IF THE TESTS ARE SATISFACTORY TO GDCG-WWS, THEN THE FINAL CONNECTION SHALL BE MADE. 13. WATERMAIN SHALL BE TESTED IN ACCORDANCE WITH MOST CURRENT VERSION OF AWWA C600 STANDARD, AND CHLORINATED IN ACCORDANCE WITH THE LATEST GENEESE COUNTY STANDARD SPECIFICATIONS. WATERMAIN SHALL BE TESTED TO 150 PSI AS MEASURED AT THE HIGH POINT IN THE WATER LINE. WATERMAIN CHLORINATION SHALL BE OBSERVED AND MONITORED BY GDCG-WWS OR THE LOCAL MUNICIPALITY HAVING JURISDICTION. CHLORINATION AND TESTING SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE. A LETTER OF APPROVAL FROM THE AGENCY HAVING AUTHORITY SHALL BE ISSUED PRIOR TO THE WATER BEING USED FOR HUMAN CONSUMPTION. 14. WHEN SPECIFIED BY THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SUPPLY ALL WATER SERVICE LEADS. THESE LEADS SHALL BE "K" COPPER AND SHALL BE A MINIMUM OF 3/4" IN DIAMETER. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE WATERMAIN STANDARD DETAIL. ALL CORPORATIONS SHALL BE BRONZE. ALL APPURTENANCES THAT COME IN CONTACT WITH PORTABLE WATER SHALL BE LEAD FREE ACCORDING TO NSF/ANSI STANDARD 372. 15. THE CONTRACTOR SHALL INSTALL, AS A MINIMUM, 2" CORPORATIONS ON THE PRESSURE PIPE FOR PRESSURE TESTING, CHLORINE ADDITION, AND FOR BLOW-OFF PURPOSES. THE CORPORATIONS SHALL HAVE COPPER PIPE EXTENDING TO THE GROUND SURFACE. THE CONTRACTOR SHALL REMOVE THE CORPORATIONS AND COPPER LINES UPON A SATISFACTORY TEST AND INSTALL BRONZE PLUGS PRIOR TO FINAL ACCEPTANCE. 16. PRIOR TO REQUESTING ANY FINAL PRESSURE TESTING AND GATHERING THE REQUIRED BACTERIA SAMPLES (FOR WATERMAIN ONLY), THE CONTRACTOR SHALL PERFORM THE FOLLOWING ITEMS: A. CONDUCT A PRELIMINARY PRESSURE TEST ON THE SYSTEM. B. PROVIDE THE RESULTS FROM THE PRELIMINARY TESTS ON THE SYSTEM. C. PROVIDE PROPER CAP COLOR ON THE FIRE HYDRANTS (FOR WATERMAIN ONLY). 17. PRIOR TO FINAL APPROVAL, THE FOLLOWING ITEMS SHALL BE COMPLETED BY THE CONTRACTOR: A. FURNISH A COMPLETED TWO-YEAR MAINTENANCE & GUARANTEE BOND. B. PROVIDE MATERIAL CERTIFICATES. C. COMPLETE FINAL ADJUSTMENTS OF FIRE HYDRANTS (FOR WATERMAIN ONLY), VALVES, AND MANHOLES. D. PROVIDE RESULTS OF DENSITY CHECKS ON COMPACTED SAND BACKFILL FROM A CERTIFIED TESTING AGENCY. E. PROVIDE RECORDED COPIES OF ALL EASEMENTS FOR THE MASTER DEED REFLECTING FINAL PROJECT RECORD DOCUMENT LOCATIONS.		
NO.	DATE	DESCRIPTION	DIVISION OF WATER & WASTE SERVICES					
1	2020	EIGHTH EDITION						
			STANDARD CONSTRUCTION NOTES					
			STANDARD DETAILS					
			For the Construction of Sanitary Sewers & Watermain in Genesee County					
			GENEESE COUNTY  DRAIN COMMISSIONER					